

# Water Purchase/Supply Agreement

**THIS AGREEMENT** is made this 17<sup>th</sup> day of November, 2015 by and among **County of Chautauqua**, on behalf of a county water district to be formed under County Law Article 5-A entitled *North Chautauqua County Water District*, Gerace Office Building, Mayville, New York 14757 (hereinafter referred to as *District*), the **City of Dunkirk**, 342 Central Avenue, Dunkirk, New York 14048 (hereinafter referred to as *City* and *Supplier*), the **Town of Portland**, 87 Main Street, Brocton, New York 14716 (hereinafter referred to as *Portland*), the **Village of Brocton**, 34 Main Street, P.O. Box B, Brocton, New York (hereinafter referred to as *Brocton*), the **Town of Pomfret**, 9 Day Street, Fredonia, New York 14063 (hereinafter referred to as *Pomfret*), the **Town of Dunkirk**, 4737 Willow Road, Dunkirk, New York 14048 (hereinafter referred to as *Dunkirk Town*), the **Town of Sheridan**, 2773 Route 20, P.O. Box 116, Sheridan, New York 14135 (hereinafter referred to as *Sheridan*), and **North County Industrial Water District No. 1**, a county water district organized and existing under County Law Article 5-A, Gerace Office Building, Mayville, New York 14757 (hereinafter referred to as *Industrial District*) [Portland, Brocton, Pomfret, Dunkirk Town, Sheridan and Industrial District are hereinafter referred to as *Purchasers*]

## WITNESSETH:

**Whereas**, Clark Patterson Lee, engineers licensed by the State of New York, have prepared a Map and Plan dated May, 2015 entitled Northern Chautauqua County Regional Water Supply System (hereinafter referred to as *Map and Plan*) toward the formation of the District, and

**Whereas**, the purposes for which the District would be formed can be achieved only through the agreement of all the parties to this instrument, and

**Whereas**, the proposed boundaries of the District include the northeast portion of Sheridan, the Town of Hanover and the Villages of Silver Creek and Forestville which are anticipated to receive service through the District after the expiration of existing agreements with the Erie County Water Authority (hereinafter referred to as *ECWA*), and the construction of additional facilities by the District, and

**Whereas**, the proposed boundaries of the District include portions of Pomfret which currently receive water from the Village of Fredonia (hereinafter referred to as *Fredonia*) which are anticipated to receive water through the District after the conclusion of negotiations with Fredonia, and

**Whereas**, all costs of the District will be paid by receipts of the District under this agreement, and

**Whereas**, the provision of water under this agreement is contingent upon the completion of the formation of the District and the construction of facilities described in the Map and Plan,

**NOW THEREFORE**, the parties hereto agree as follows:

**1. PURCHASE OF WATER BY THE DISTRICT:** The District agrees to purchase from the Supplier and the Supplier agrees to sell to the District all water distributed by the Purchasers except the water distributed in the northeast part of Sheridan currently received from the ECWA and except the water distributed in Pomfret currently received from Fredonia. The City will be the only supplier of water to the District.

**2. SALE OF WATER BY THE DISTRICT:** The Purchasers agree to purchase and the District agrees to sell all water distributed by the Purchasers except water sold and distributed in Sheridan, Pomfret and Dunkirk under contracts with Fredonia and ECWA.

**3. PRICE OF WATER PURCHASED BY THE DISTRICT:** The District shall pay the Supplier for water received from the Supplier Three and 57/100 Dollars (\$3.57) per One Thousand (1,000) gallons (hereinafter referred to as *Year 1 Rate*) delivered during each calendar quarter within Thirty (30) days after the end of each quarter *provided, however*, that such rate shall be adjusted as set forth in paragraph 4 of this agreement. The District recognizes that the City and Fredonia have agreements with respect to the transfer of water between them and the payment therefor; this agreement has no effect with respect to such agreements.

**4. ANNUAL RATE ADJUSTMENT:** The Rate set forth in paragraph 3 of this agreement shall be adjusted annually for percentage changes in average City cost per thousand gallons of water output, averaged over the prior three years (once three years of District operation data are available). For example, if the average City cost per thousand gallons of water output increased by 2.20%, 3.50% and 2.70% in three succeeding years, the Rate would increase in the following year by 2.80% (the prior three-year average). The Rate adjustment is based on three-year averages (once three years of measurements are available) to foster greater stability in rates since water output volumes (and thus average City cost per thousand gallons because of large fixed costs) regularly vary year-to-year as consumer demand responds to weather and other factors.

Only after each of the first three years of operation, will the Rate adjustment vary from the above general rule for two reasons: 1) three years of operation data to calculate a prior three-year average will not be available until after Year 3, and 2) since the Year 1 Rate set forth in paragraph 3 of this agreement represents calculations that depend on estimates of water usage and distribution losses for Dunkirk Town and the additional treatment cost based on projected water usage for current Brocton-served customers (the area to be newly serviced by City water), the difference between the actual measurements with new master meters and the estimates used to generate the Year 1 Rate of \$3.57 per thousand gallons will be used for a Water Share Adjustment after each of the first three years to account for greater or less District water share volume than estimated.

The details of these adjustments with examples follows:

In general, the average cost of water output in any year equals the total cost divided by the total volume of water output. Herein, an annual Total Cost Adjustment Factor will be calculated to represent the annual percentage change in total costs and an annual Volume Adjustment Factor will be calculated equal to the annual percentage change in total water volume output. Dividing the Total Cost Adjustment Factor by the Volume Adjustment Factor for any year yields the Average Cost Adjustment Factor for that year which represents the annual percentage change in the average City cost per thousand gallons of water output.

The annual Total Cost Adjustment Factor will be based on the percentage change between the total of the following three elements of City water budget actual expenditures (hereinafter referred to as Core Cost Elements) as compared to the amount which was used as part of computing the Year 1 Rate set forth in paragraph 3 of this agreement. Appendix A details the budget lines from the City water department budget that comprise the three elements: 1) Water Purification and Laboratory, 2) Employee Benefits and 3) Capital Investment Interest and Amortization.

As part of the Year 1 Rate calculation, the estimated additional cost of treating water to supply current Brocton-served customers was added to the average annual City expenditures for the 2013 and 2014 fiscal years (the two most recent fiscal years) for Water Purification and Laboratory to establish a baseline for the first element. Similarly, average annual City expenditures on Employee Benefits for 2013 and 2014 fiscal years form the baseline for the second element. The baseline for the third element was estimated as the projected capital investment debt payment once all Department of Health consent order investments are completed and bond financed. See Appendix A for calculation details for the baseline and later years of each Core Cost Element.

<u>Core Cost Element</u>	<u>Baseline</u>
Water Purification and Laboratory	\$ 1,270,729.20
Employee Benefits	\$ 536,999.29
Capital Investment Interest and Amortization	\$ <u>948,958.22</u>
 Total	 \$ 2,756,686.71

The parties recognize that these elements represent less than all of the costs being shared. They represent a major portion of the costs, exclude discretionary elements and are a reliable basis for adjusting the Rate, which does include all costs being shared, using a percentage calculation.

The annual Volume Adjustment Factor will be based on the percentage change in City treatment plant total annual output (total metered water into distribution system at treatment plant serving all City customers including the District). The 2013-2014 average of reported annual treatment plant output is 1,040,368 thousand gallons per year and serving Brocton customers is projected to add an average of 113,150 thousand gallons per year (see also Appendix A).

The City shall notify the District of the actual expenditure amount for the three elements above and the total treatment plant annual output by January 31 of the succeeding year, revise the Rate and employ the revised Rate in quarterly billings to the District for such succeeding year as follows (with mathematical formulas of below verbal descriptions provided in Appendix B).

- a) Calculate the annual Average Cost Adjustment Factor in any year as follows:
  - i) Determine the annual Total Cost Adjustment Factor to four significant digits by dividing the just completed fiscal year Core Cost Elements by the prior fiscal year Core Cost Elements. For example, if Core Cost Elements in just completed fiscal year are \$2,800,000 and the Core Cost Elements of the prior fiscal year are \$2,700,000, then the annual Total Cost Adjustment Factor is 1.0370 (= \$2,800,000/\$2,700,000) or just completed fiscal year costs are 103.70% of prior fiscal year costs (i.e. a 3.70% increase). After completion of fiscal Year 1 only, use the baseline total of Core Cost Elements \$2,756,686.71

for the prior fiscal year in the above calculation.

- ii) Determine the annual Volume Adjustment Factor to four significant digits by dividing the just completed fiscal year City treatment plant total annual output by the prior fiscal year City treatment plant total annual output. For example, if City treatment plant output is 1,060,000 thousand gallons in just completed fiscal year and 1,070,000 thousand gallons in the prior fiscal year, then the annual Volume Adjustment Factor is 0.9907 ( $= 1,060,000/1,070,000$ ) or just completed fiscal year output volume is 99.07% of prior fiscal year output volume (i.e. a 0.93% decrease in volume). After completion of fiscal Year 1 only, use the baseline total for treatment plant output with Brocton-served customers of 1,153,518 thousand gallons per year for the prior fiscal year in the above calculation.
  - iii) Determine the annual Average Cost Adjustment Factor to four significant digits by dividing the annual Total Cost Adjustment Factor by the annual Volume Adjustment Factor. For example, if the annual Total Cost Adjustment Factor is 1.0370 and the annual Volume Adjustment Factor is 0.9907, then the annual Average Cost Adjustment Factor is 1.0467 ( $= 1.0370/0.9907$ ) or just completed fiscal year average cost of water output is 104.67% of prior fiscal year average cost of water output (i.e. a 4.67% increase).
- b) Determine the Rate for the subsequent year to the nearest whole cent.
- i) For the Rate calculation after Year 4 until the end of the agreement, the Rate for each subsequent year equals the Rate for the prior year times the three-year average of the three most recent annual Average Cost Adjustment Factors. For example, if the prior year Rate is \$3.60 per thousand gallons and the just completed fiscal year annual Average Cost Adjustment Factor is 1.0467 with the prior two years annual Average Cost Adjustment Factors being 1.0344 and 1.0265, then 1.0359 ( $= [1.0467 + 1.0344 + 1.0265]/3$ ) is the three-year average of the three most recent annual Average Cost Adjustment Factors. Therefore, the subsequent year Rate will be \$3.73 per thousand gallons ( $= \$3.60 \times 1.0359$ ).
  - ii) After Year 1, with only the Year 1 Average Cost Adjustment Factor calculated, the Rate for Year 2 will be  $(\$3.57 + \text{Year 1 Share Adjustment Rate})$  times the Year 1 Average Cost Adjustment Factor (with the Year 1 Share Adjustment Rate defined in paragraph 4(c)(i)). For example, if the Year 1 Share Adjustment Rate is +\$0.04 and the Year 1 Average Cost Adjustment Factor is 1.0352, then the Year 2 Rate will be \$3.74 per 1000 gallons  $= (\$3.57 + \$0.04) \times 1.0352$ .
  - iii) After Year 2, Year 1 and 2 Average Cost Adjustment Factors are available, the Rate for Year 3 will be  $(\$3.57 + \text{Year 2 Share Adjustment Rate})$  times the Year 1 Average Cost Adjustment Factor times the Year 2 Average Cost Adjustment Factor (with the Year 2 Share Adjustment Rate defined in paragraph 4(c)(ii)). For example, if the Year 2 Share Adjustment Rate is -\$0.05 and the Year 2

Average Cost Adjustment Factor is 1.0198 with the Year 1 Average Cost Adjustment Factor of 1.0352 above, then the Year 3 Rate will be \$3.72 per 1000 gallons =  $(\$3.57 - \$0.05) \times 1.0352 \times 1.0198$ .

- iv) After Year 3, Year 1 through Year 3 Average Cost Adjustment Factors are available, the Rate for Year 4 will be  $(\$3.57 + \text{Year 3 Share Adjustment Rate})$  times the Year 1 Average Cost Adjustment Factor times the Year 2 Average Cost Adjustment Factors times the average of the Year 1 through 3 Average Cost Adjustment Factors (with the Year 3 Share Adjustment Rate defined in paragraph 4(c)(iii)). For example, if the Year 3 Share Adjustment Rate is +\$0.02 and the Year 3 Average Cost Adjustment Factor is 1.0288 with the Year 1 and 2 Average Cost Adjustment Factors of 1.0352 and 1.0198 above, then the Year 3 Rate will be \$3.90 per 1000 gallons =  $(\$3.57 + \$0.02) \times 1.0352 \times 1.0198 \times 1.0279$  with 1.0279 being the three-year average of the annual Average Cost Adjustment Factors.
- c) Share Adjustment Rate: The Year 1 Rate set forth in paragraph 3 of this agreement represents calculations that depend on estimates of water usage and distribution losses for Dunkirk Town and the additional treatment cost based on projected water usage for current Brocton-served customers, the area to be newly serviced by City water. Under District operation master meters will measure water usage (prior to local distribution losses) for Dunkirk Town. Water usage will also be measured by the District for current Brocton-served areas. The difference between the actual measurements and the estimates used to generate the Year 1 Rate of \$3.57 per thousand gallons will be used to calculate the Share Adjustment Rates for Years 1 through 3 as follows to account for greater or less District volume than estimated. Since total volume regularly varies from year to year as consumer demand responds to weather and other factors, these adjustments will be based on the proportion of District water usage expressed as a percent of the total water output by the City treatment plant (total metered water into distribution system at treatment plant serving all City customers including the District) and be averaged over multiple years as measurements become available over the first three years of District operations to reduce the effects of annual variations. Greater (less) District volume generates both more (less) City revenues and more (less) City treatment costs. These adjustments take into account both the average revenue and treatment cost effects arising when the measured District water usage proportion differs from pre-agreement estimates (that depend on estimates for both Dunkirk Town and current Brocton-served water usage).

Projected District water usage is 23.54% of City treatment plant total annual output (total metered water into distribution system at treatment plant serving all City customers including the District – see Appendix A). This will be the common comparison point for the Share Adjustment Rate of \$0.06 per thousand gallons for each 1.00% that the average measured District water usage percent differs from this comparison point for the first three years of the agreement. The Share Adjustment Rate is then escalated along with the Year 1 Rate of \$3.57 per thousand gallons in paragraphs 4(b)(ii-iv).

Determine the District water usage percent to two significant digits by dividing District water usage by City treatment plant total annual output with averaging as additional annual measurements become available. If District water usage percent in Year 1, 2 or 3 is less than 23.54%, then for each 1.00% less than 23.54%, Share Adjustment Rate for that year is positive \$0.06 per thousand gallons calculated to nearest cent. If District water usage percent in Year 1, 2 or 3 is greater than 23.54%, then for each 1.00% greater than 23.54%, Share Adjustment Rate for that year is negative \$0.06 per thousand gallons calculated to nearest cent. Details and examples for Years 1 through 3 follow:

- i) After Year 1, divide District water usage in Year 1 by City treatment plant total annual output in Year 1. For example, if annual District water usage is 275,000 thousand gallons out of 1,200,000 thousand gallons output by the City in Year 1, then Year 1 District water usage percent is 22.92% ( $= 275,000/1,200,000$ ). Therefore, Year 1 Share Adjustment Rate = \$0.04 per 1000 gallons =  $(23.54 - 22.92) \times \$0.06$ .
- ii) After Year 2, divide the average of District water usage in Years 1 and 2 by the average of City output in Years 1 and 2. For example, if annual District water usage is 285,000 thousand gallons and City output is 1,100,000 thousand gallons in Year 2, with Year 1 volumes above, then Year 2 District water usage percent is 24.35% ( $= \text{average Year 1 and 2 water usage of } 280,000 / \text{average Year 1 and 2 output of } 1,150,000$ ). Therefore, Year 2 Share Adjustment Rate =  $-\$0.05$  per 1000 gallons =  $(23.54 - 24.35) \times \$0.06$ .
- iii) After Year 3, divide the average of District water usage in Years 1, 2 and 3 by the average of City output in Years 1, 2 and 3. For example, if the result of this calculation is 23.21%, then the Year 3 Share Adjustment Rate =  $+\$0.02$  per 1000 gallons =  $(23.54 - 23.21) \times \$0.06$ .

The District and the City shall meet on the second Tuesday of February of such succeeding year at 10:00 o'clock a.m. at the Dunkirk City Hall or at such other time and place as the parties may agree to review sources of changing costs and water volumes to assure transparency of operation between the District and the City. Although the parties recognize that all such sources are public information subject to disclosure under the Freedom of Information Act, the City affirmatively agrees to be fully forthcoming regarding all raw data, computations concerning it, and compilation of information relating thereto without assertion of privilege or exception from disclosure to simplify and expedite such review.

**5. PRICE OF WATER SOLD BY THE DISTRICT:** Each of the Purchasers shall pay the District for water purchased by such Purchaser during each calendar quarter within Thirty (30) days after the end of each quarter at a rate per 1000 gallons which is the sum of the following elements (A) the rate per 1000 gallons payable by the District for water purchased under paragraph 3 of the agreement adjusted in accordance with paragraphs 4 and 5 of this agreement and (B) the rate per 1000 gallons determined by dividing the annual expenses of the District reasonably estimated by the District for all matters including but not limited to interest, amortization, repairs, operation, maintenance, reserves and professional and administration expenses by the annual amount of water to be sold by the District reasonably estimated by the District to all Purchasers for such year. The District shall provide each of the Purchasers with notice in August of each year of the reasonably estimated rate for

water delivered during the succeeding calendar year. Any excess or deficiency of actual revenue compared to estimated revenue shall be applied in future computations. All revenue received by the District shall be applied to the expenses of the District.

**6. IMPLEMENTATION OF PROJECT DESCRIBED IN MAP AND PLAN:** The parties hereto assign, transfer and convey to the District facilities and related property rights required to implement the project described in the Map and Plan at such time and manner as required therefor. Appendix C sets forth some, but not all, of the facilities and property rights identified by the owners of such property (a) to be transferred to the District and (b) not to be transferred to the District. Otherwise, the Supplier and the Purchasers shall continue to administer, operate, maintain, repair and replace their respective water treatment and distribution systems. Purchasers agree to enact restrictions on connections by newly developed uses upon properties in agricultural districts which may connect directly to District lines as required by the Agricultural and Markets Law of the State of New York. Purchasers providing service by direct connection to lines built by the District shall form local water districts in connection with the provision of such service or shall have in place equivalent legal structures for the administration of such service and the protection of the lines of the District before permitting individual connections to the lines of the District. Brocton shall shutter its water treatment plant upon the commencement of operations under paragraph 10 of this agreement.

**7. MEASUREMENT OF WATER PURCHASED AND SOLD BY THE DISTRICT:** The District shall operate, maintain, repair and replace water meters at points of interconnection between the Supplier and Purchasers to accurately measure water conveyed for the administration of this agreement and shall install such meters where they do not currently exist *provided, however* that the readings of individual property water meters can be used where the interconnection serves three or less properties and the line between the point of intersection and individual meters is sound. Each party to this agreement shall have full access to facilities and properties pertinent to the measurement of water in connection with the agreement. Appendix D sets forth a listing by the City of some, but not all, of the existing points of interconnection stating particulars regarding the lines and meters in place and to be installed; the ultimate configuration of points of interconnection may be modified by the District consistent with the requirements set forth in this paragraph.

**8. SUPERSEDING AUTHORITY:** This agreement and all actions and operations performed pursuant to the terms hereof are subject to all Federal and New York State statutes, rules, regulations, mandates, directives and orders concerning the transportation, treatment and consumption of water including but not limited to financing the construction, operation and maintenance thereof, and provisions relating to water quality and conservation, now in effect, or hereafter adopted. This agreement and the actions and operations performed pursuant to its terms shall be modified from time to time as required in order to conform at all times with all Federal and New York State requirements.

**9. EXISTING AGREEMENTS SUPERSEDED:** Existing agreements between and among the Supplier and the Purchasers are superseded to the extent required to implement this agreement. If provisions superseded are integrated with functions not superseded (e.g. the performance by the Supplier of billing or distribution system maintenance as part of the cost of supply of water), the affected parties agree to negotiate in good faith a contract for the separate performance of such function. Anything herein to the contrary notwithstanding, this agreement shall not prevent (1) the continuation of water service within the District from Fredonia and ECWA distribution systems in areas with existing distribution lines for all uses and (2) the extension of such distribution lines for residential and commercial (but not industrial) uses, and consumers currently receiving water through

the Fredonia distribution system shall receive water under this agreement only with the consent of Fredonia; contracts for such service by Fredonia and ECWA are necessarily not superseded by the first sentence of this paragraph both because Fredonia and ECWA are not parties to this agreement and because their supercession is not required to implement this agreement..

**10. TERM:** The delivery of water under this agreement shall commence after the completion of the construction of facilities described in the Map and Plan and notice by the District to the other parties to this agreement that it is commencing operations hereunder. This agreement shall be effective for forty (40) years after said notice of commencement (hereinafter referred to as *Primary Term*) and shall continue in force thereafter until terminated by any party to this agreement as provided herein. Any party may terminate this agreement as of any date after the Primary Term by providing notice of termination to the other parties stating a date of termination after the Primary Term at least five (5) years after the giving of such notice.

**11. ADDITIONAL AREAS TO BE SERVED HEREUNDER:** The District may add the Town of Hanover, the Village of Silver Creek and the Village of Forestville as parties to this agreement with respect to areas within the boundaries of the District if they subscribe to the terms of this agreement and if the cost of additional improvements constructed to distribute water to them causes the parties to this agreement to pay no more than would have been payable without the addition of such parties. The District, Sheridan (with respect to the portion of Sheridan currently receiving water from ECWA), and Pomfret (with respect to the portion of Pomfret currently receiving water from Fredonia) may add such areas to those receiving water under this agreement if the cost of additional improvements constructed to distribute water to them causes the parties to this agreement to pay no more than would have been payable without the addition of such parties.

**12. NOTICES:** All notices required or permitted to be given by this agreement shall be deemed to be duly given if delivered in writing personally or sent by certified mail, return receipt requested at the address for the party receiving the notice designated in this agreement or to such other addresses as may be furnished by any party to the other in writing. The date of mailing shall be deemed the date of giving such notice.

**13. WAIVER:** No waiver by any party of any breach of any of the covenants or conditions herein contained to be performed by the other party shall be construed as a waiver of any succeeding breach of the same or any other covenant or condition.

**14. SEVERABILITY OF PROVISIONS:** It is not the intention of either party to violate public policy or statutory law or common law; if any sentence, paragraph, cause or combination of same of this agreement is in violation of any law, such sentences, paragraphs, clauses or combinations of same shall be inoperative and the remainder of this agreement shall be binding.

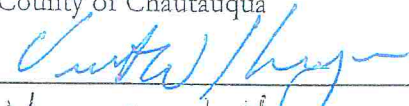
**15. GOVERNING LAW:** This agreement shall be governed by, and construed in accordance with the laws of the State of New York.


**16. ENTIRE AGREEMENT:** This agreement contains the entire agreement and understanding between the parties hereto pertaining to the subject matter of this agreement, and there are no oral representations, stipulations or understandings, relating thereto which are not fully set forth herein. No amendment, addition to, or alteration, modification or waiver of any provision of this contract shall be any force or effect unless in writing and signed by the parties to this agreement.

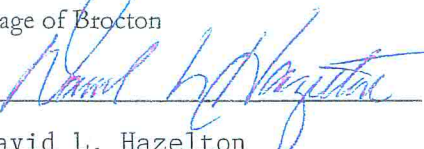


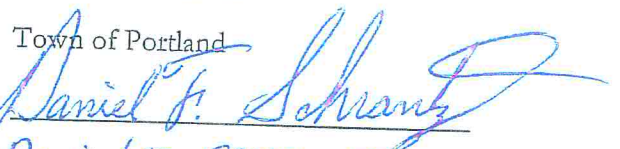
17. HEADINGS: The headings of the paragraphs of this agreement are for convenience only and do not in any way limit, amplify or otherwise affect the covenants and agreements contained in this instrument.

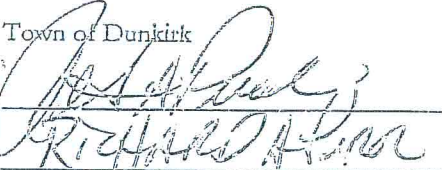
IN WITNESS WHEREOF, the parties have caused their duly authorized officer to execute this agreement.

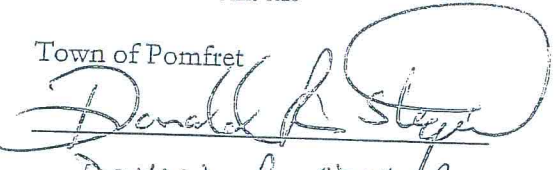
County of Chautauquia  
By:   
Vincent W. Harrigan  
Print Name  
County Executive  
Print Title


City of Dunkirk  
By:   
Anthony J. Dolce  
Print Name  
Mayor  
Print Title


Village of Brocton  
By:   
David L. Hazelton  
Print Name  
Mayor  
Print Title

Town of Portland  
By:   
DANIEL F. SCHRANTZ  
Print Name  
TOWN OF PORTLAND SUPERVISOR  
Print Title

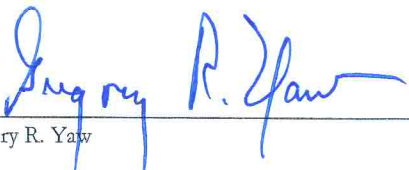
Town of Dunkirk  
By:   
Richard A. Puro  
Print Name  
Town Supervisor  
Print Title

Town of Pomfret  
By:   
DONALD R. STEBB  
Print Name  
SUPERVISOR  
Print Title

North County Industrial Water  
District No. 1  
By:   
BRIAN R. PUROL  
Print Name  
CHAIRMAN  
Print Title

Town of Sheridan  
By:   
Louis S. DeMonte Sr.  
Print Name  
Supervisor  
Print Title

Gregory R. Yaw, an attorney at law admitted to practice in the courts of the State of New York certifies pursuant to New York Civil Practice Law and Rules that this copy has been compared by him with the original Water Purchase/Supply Agreement dated November 17, 2015 consisting of nine pages together with attached Appendix A, three pages; Appendix B, three pages; Appendix C, one page and Appendix D, one page and found it to be a true and complete copy.

  
Gregory R. Yaw

## Appendix A

### Water Purchase/Supply Agreement

#### City Budget Expenditures and Treatment Plant Water Output

Two years of fiscal and water data were used in the development of the cost allocation and Rate for the District. City of Dunkirk budget expenses for operations in 2013 and 2014 were averaged for each department in the budget. Since capital investment spending of the estimated \$20 million improvements to the water system are not completed, and some of the investment that has been completed has not been bond financed long term, an estimate of the debt payment for the full \$20 million assuming 30-year financing at 3% was used rather than the incomplete investment and financing listed in the budget for 2014.

**City of Dunkirk Water Budget Expenses**

Dept		2013	2014	2013-2014 Average
1900	General Services	\$ 378,960.44	\$ 390,514.30	\$ 384,737.37
8310	Water Administration	\$ 60,419.88	\$ 56,799.86	\$ 58,609.87
8320	Water Purification	\$ 1,182,494.50	\$ 1,086,750.73	\$ 1,134,622.62
8330	Laboratory	\$ 70,204.44	\$ 83,530.72	\$ 76,867.58
8340	Water Distribution System	\$ 289,006.86	\$ 434,888.66	\$ 361,947.76
8350	Water Meter Division	\$ 13,417.77	\$ 14,396.84	\$ 13,907.31
9010	Municipal State Retirement	\$ 132,546.07	\$ 136,984.00	\$ 134,765.04
9030	Employer SS	\$ 69,574.48	\$ 69,090.53	\$ 69,332.51
9040	Workers Compensation	\$ 45,223.56	\$ 46,912.86	\$ 46,068.21
9045	Life Insurance	\$ 1,628.80	\$ 1,749.45	\$ 1,689.13
9055	Disability	\$ 348.04	\$ 463.00	\$ 405.52
9060	Medical	\$ 273,969.42	\$ 261,832.86	\$ 267,901.14
9089	Medical	\$ 13,731.24	\$ 19,944.24	\$ 16,837.74
9722	Meter Replacement Project	\$ 51,847.94	\$ 57,925.04	
9723	DOH Improvement Project	\$ 251,929.00	\$ 404,598.60	
9725	Water Improvement Project	\$ -	\$ -	
	<b>Total</b>	\$ 2,835,302.44	\$ 3,066,381.69	

Source: City of Dunkirk Budget Preparation Publication dated 12/12/14

The *Water Purification and Laboratory Core Cost Element* is the sum of expenditures for departments 8320 and 8330. The Baseline amount for the Water Purification and Laboratory Core Cost Element in the table below is calculated by adding the 2013-2014 average of departments 8320 and 8330 to the estimated additional variable cost of \$59,239.00 for treating water for current Brocton-served customers.

The *Employee Benefits Core Cost Element* is the sum of expenditures for departments 9010, 9030, 9040, 9045, 9055, 9060 and 9089. The baseline Employee Benefits Core Cost Elements in the table below is calculated using the 2013-2014 average City expenditures.

The *Capital Investment Interest and Amortization Core Cost Element* is the sum of expenditures for departments 9723, 9725 and future treatment plant investments and the share of distribution investments attributable to District transmission that occur during the term of this agreement that are required beyond the current Department of Health consent order investments, which will be bonded in either department 9723 or 9725. Department 9722 expenditures for the \$1.4 million meter replacement project was part of the consent order but is wholly distribution related (it was partially paid out of operating revenues and partially bonded). The remaining \$18.6 million of the original projected \$20 million consent order investment is estimated to consist mostly of a \$16 million investment in the treatment plant with expected \$2.6 million distribution related. Since these treatment and distribution investments will be jointly bonded in departments 9723 and 9725, the estimated debt payment of \$948,958.22 on \$18.6 million at 3% over 30 years is used as the baseline for the Capital Investment Interest and Amortization Core Cost Element in the below table, matching the bonding assumptions used to develop the Year 1 Rate.

Core Cost Element	Baseline
Water Purification and Lab	\$1,270,729.20
Employee Benefits	\$536,999.29
Capital Investment Interest and Amortization	\$948,958.22
<b>Total Core Costs</b>	<b>\$2,756,686.71</b>

City treatment plant total annual output prior to adding Brocton-served customers is also determined by the 2013-2014 average of reported annual treatment plant output of 1,040,368 thousand gallons per year.

**City of Dunkirk Treatment Plant Total Annual Output**

	2013	2014	2013-2014 Average
Treatment plant output (1000 gal/year)	1,035,408	1,045,328	1,040,368

Source: Output volume data from Susan Franklin via Anthony Gugino 30Jan15 email.

The breakdown of output water usage (prior to distribution losses) based on individual town data and assuming Dunkirk Town losses equal to City losses is presented in the following table.

	Water Usage (1000 gallons/year)	Share of Water Usage
<b>City</b>	882,018	84.78%
<b>Non-City</b>	158,350	15.22%
<b>Total</b>	<b>1,040,368</b>	<b>100.00%</b>

Adding Brocton average treatment plant output of 113,150 thousand gallons per year to current non-City water usage yields estimated District water usage and percent share of total water

usage. Total baseline City treatment plant output is 1,153,518 thousand gallons per year including supply to current Brocton-served customers.

	Water Usage (1000 gallons/year)	Share of Water Usage
City	882,018	76.46%
District	271,500	23.54%
Total	1,153,518	100.00%

Appendix B  
Water Purchase/Supply Agreement

Rate Calculation Formulas

**Formulas from paragraph 4(a):**

- i) Determine the annual Total Cost Adjustment Factor (TCAF) to four significant digits by dividing the just completed fiscal year (hereinafter label with subscript T for Year T) Core Cost Elements (CCE) total by the prior fiscal year (hereinafter Year T – 1) Core Cost Elements total.

$$TCAF_T = \frac{CCE_T}{CCE_{T-1}}$$

After completion of fiscal Year 1 only, use the baseline total of Core Cost Elements \$2,756,686.71 (see Appendix A) for the *prior fiscal year* in the above calculation.

- ii) Determine the annual Volume Adjustment Factor (VAF) to four significant digits by dividing the just completed fiscal year City treatment plant output (TPO) by the prior fiscal year City treatment plant total annual output.

$$VAF_T = \frac{TPO_T}{TPO_{T-1}}$$

After completion of fiscal Year 1 only, use the baseline treatment plant output with current Brocton-served customers of 1,153,518 thousand gallons per year for the *prior fiscal year* in the above calculation.

- iii) Determine the annual Average Cost Adjustment Factor (ACAF) to four significant digits by dividing the annual Total Cost Adjustment Factor by the annual Volume Adjustment Factor for the just completed fiscal year.

$$ACAF_T = \frac{TCAF_T}{VAF_T}$$

**Formulas from paragraph 4(b):**

- i) For the Rate calculation after Year 4 until the end of the agreement, the Rate for each subsequent year equals the Rate for the just completed year times the three-year average of the three most recent annual Average Cost Adjustment Factors' (subscript "T + 1" for subsequent year, subscript "T" for just completed year, subscript "T – 1" for prior year and subscript "T – 2" for year immediately before prior year).

$$\text{Rate}_{T+1} = \text{Rate}_T \times \left( \frac{\text{ACAF}_T + \text{ACAF}_{T-1} + \text{ACAF}_{T-2}}{3} \right)$$

- ii) After Year 1, with only the Year 1 Average Cost Adjustment Factor calculated, the Rate for Year 2 (Rate<sub>2</sub>) will be (\$3.57 + Year 1 Share Adjustment Rate) times the Year 1 Average Cost Adjustment Factor (with the Year 1 Share Adjustment Rate (SAR<sub>1</sub>) defined in paragraph 4(c)(i)).

$$\text{Rate}_2 = (\$3.57 + \text{SAR}_1) \times \text{ACAF}_1$$

- iii) After Year 2, Year 1 and 2 Average Cost Adjustment Factors are available, the Rate for Year 3 will be (\$3.57 + Year 2 Share Adjustment Rate) times the Year 1 Average Cost Adjustment Factor times the Year 2 Average Cost Adjustment Factor (with the Year 2 Share Adjustment Rate defined in paragraph 4(c)(ii)).

$$\text{Rate}_3 = (\$3.57 + \text{SAR}_2) \times \text{ACAF}_1 \times \text{ACAF}_2$$

- iv) After Year 3, Year 1 through Year 3 Average Cost Adjustment Factors are available, the Rate for Year 4 will be (\$3.57 + Year 3 Share Adjustment Rate) times the Year 1 Average Cost Adjustment Factor times the Year 2 Average Cost Adjustment Factors times the average of the Year 1 through 3 Average Cost Adjustment Factors (with the Year 3 Share Adjustment Rate defined in paragraph 4(c)(iii)).

$$\text{Rate}_4 = (\$3.57 + \text{SAR}_3) \times \text{ACAF}_1 \times \text{ACAF}_2 \times \left( \frac{\text{ACAF}_1 + \text{ACAF}_2 + \text{ACAF}_3}{3} \right)$$

**Formulas from paragraph 4(c):**

Projected District water usage is 23.54% of City treatment plant output (total metered water into distribution system at treatment plant serving all City customers including the District – see Appendix A). This will be the common comparison point for the Share Adjustment Rate (SAR) of \$0.06 per thousand gallons for each 1.00% that the average measured District water usage percent differs from this comparison point for the first three years of the agreement.

Determine the District water usage percent to two significant digits by dividing District water usage (DWU) by City treatment plant output (TPO) with averaging as additional annual measurements become available. If District water usage percent in Year 1, 2 or 3 is less than 23.54%, then for each 1.00% less than 23.54%, Share Adjustment Rate for that year is positive \$0.06 per thousand gallons calculated to nearest cent. If District water usage percent in Year 1, 2 or 3 is greater than 23.54%, then for each 1.00% greater than 23.54%, Share Adjustment Rate for that year is negative \$0.06 per thousand gallons calculated to nearest cent. Details and examples for Years 1 through 3 follow:

- i) After Year 1, divide District water usage in Year 1 (DWU<sub>1</sub>) by City treatment plant output (TPO<sub>1</sub>) in Year 1.

$$SAR_1 = \$0.06 \times \left( 23.54 - \frac{DWU_1}{TPO_1} \times 100 \right)$$

(Note: “×100” in formula just converts decimal expression of District water usage percent into a whole number percent, i.e. .2544×100 = 25.44.)

- ii) After Year 2, divide the average of District water usage in Years 1 and 2 by the average of City treatment plant output in Years 1 and 2.

$$SAR_2 = \$0.06 \times \left( 23.54 - \frac{[DWU_1 + DWU_2]/2}{[TPO_1 + TPO_2]/2} \times 100 \right)$$

- iii) After Year 3, divide the average of District water usage in Years 1, 2 and 3 by the average of City treatment plant output in Years 1, 2 and 3.

$$SAR_3 = \$0.06 \times \left( 23.54 - \frac{[DWU_1 + DWU_2 + DWU_3]/3}{[TPO_1 + TPO_2 + TPO_3]/3} \times 100 \right)$$

## Appendix C- Infrastructure Transfer

- a) The City of Dunkirk herewith transfers to The District any and all of its ownership in and to:
- 1) all existing drinking water infrastructure located outside the now-existing boundary lines of the City of Dunkirk, except as reserved in Item (b)-2 below, and 2) all existing drinking water infrastructure located partially within the existing boundary lines of the City of Dunkirk for the specific area that is easterly of the easterly right-of-way of Stegelske Avenue southerly of the Stegelske Avenue culvert over Hyde Creek and northerly along Stegelske Avenue from the CSX Railroad, and 3) all existing drinking water infrastructure located partially within the existing boundary lines of the City of Dunkirk for the specific area that is along Greenhurst Avenue easterly of Franklin Avenue, and 4) all the specific leased telephone telemetry lines that transmit drinking water infrastructure system supervisory control and data acquisition from specific locations listed above to the City of Dunkirk water treatment plant.
- b) The City of Dunkirk hereby retains any and all ownership in and to: 1) all existing drinking water infrastructure located within the now-existing boundary lines of the City of Dunkirk, except as released in Item (a)-2 and Item (a)-3 and Item (a)-4 above listed, 2) existing electronic telemetry equipment, but not the leased lines and not the future maintenance cost of said existing electronic telemetry equipment, that provide supervisory control and data acquisition from specific locations listed in Items (a) above to the City of Dunkirk water treatment plant. The City recommends that supervisory control and data acquisition from new master meters and from all new system-wide distribution facilities be sent by District- installed telemetry to match City telemetry and have such sent to the Dunkirk water treatment plant to continue to monitor functions to benefit production and distribution.



Appendix D - Master Meter Locations and Discussion:

- 1) 8-inch drinking water line master meter with new check valve on Vineyard Drive into the Town of Dunkirk easterly of the Village of Fredonia's existing pump station from the City of Dunkirk drinking water system into the Village of Fredonia drinking water system.
- 2) 8-inch drinking water line master meter with new check valve near the City boundary at the Main Street Booster Station for the line easterly into the Town of Dunkirk.
- 3) 6-inch drinking water line master meter on New York State Route 60 southerly of the existing check valve into the Town of Dunkirk near the City boundary.
- 4) 6-inch drinking water line master meter with new check valve on Franklin Avenue northerly of Greenhurst Avenue feeding into the Town of Dunkirk.
- 5) 16-inch drinking water line two-way master meter near the City boundary on Roberts Road for the line into the Town of Dunkirk.
- 6) 8-inch drinking water line master meter for the line into the Town of Dunkirk southerly of the southerly end of Stegelske Avenue near the CSX railroad.
- 7) 12-inch drinking water line master meter for the line easterly of Stegelske Avenue toward the Town of Dunkirk.
- 8) 6-inch drinking water line master meter for the line easterly of Stegelske Avenue toward the Town of Dunkirk.
- 9) Additional drinking water master meters, and with new check valves as may be required, for other existing lines easterly of Stegelske Avenue, such as for the Town of Dunkirk's Stegelske Avenue industrial area fire protection tank and pump station.
- 10) 8-inch drinking water master meter with new check valve from East Chestnut Street to the Town of Dunkirk.
- 11) 8-inch drinking water master meter with new check valve on New York State Route 5 at the City boundary for the line easterly into the Town of Dunkirk.
- 12) 12-inch drinking water line two-way master meter on New York State Route 5 at the City boundary for the line westerly into the Town of Dunkirk.
- 13) 20-inch drinking water line with new check valve for the proposed new line on Willow Road at the City boundary westerly into the Town of Dunkirk.
- 14) Drinking water master meter(s) for line(s) southerly into the Town of Dunkirk on Brigham Road at the City boundary.
- 15) Master meter for proposed new pipe south on Roberts Road from Tenney Street.

