

FINAL

**NORTH CHAUTAUQUA COUNTY
REGIONAL WATER SYSTEM
MAP AND PLAN—AMENDMENT # 1**



Prepared By:

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*August
2017*

Summary

This amendment to the “*North Chautauqua County Regional Water Supply System Implementation Plan – May 2015*” replaces Section 7 (pages 67 through 70 of that report), and shall be known as Amendment No. 1 dated August 2017.

7.0 Proposed Project

7.1 Proposed Project Map

Details of the proposed project are shown in the Proposed Project map in Appendix A. The proposed North Chautauqua County Regional Water District map and description are included in Appendix R.

7.2 Project Description

The following provides a summary of the scope of the capital project broken down by municipality:

7.2.1 Village of Brocton

The Village of Brocton currently produces their own water and supplies water to a portion of the Town of Portland. The Regional Water Supply Program will result in the abandonment of the Village water treatment plant and water will be supplied by the District. The work includes the installation of a new pump station, replacement of the supply main from the existing water treatment plant to the Village, a new water main (known as the Town of Pomfret Water Main) to accommodate emergency supply from the Village of Fredonia (should funding be available), and a new water storage tank.

West Side Tank & Pump Station

The pump station will be installed along NYS Route 5 near Park View Lane and will pump water from the City of Dunkirk hydraulic grade to the Village of Brocton hydraulic grade. The station will include two (2) pumps sized to meet the maximum daily demand of the areas currently served by the Village of Brocton. The station will also include a chlorine feed system and generator.

The Village has two (2) buried concrete treated water storage tanks at the water treatment plant that are in need of repair or replacement due to their age and condition. These tanks will be replaced with a new 500,000 gallon water storage tank. The tank will provide storage for the areas currently served by the Village and will also be a redundant source of supply for the other areas in the regional water system.

The Village will finance and “own” the West Side Tank & Pump Station through a financing package with the NYSEFC. The Village will have an IMA with the North Chautauqua County Water District that will specify that the District will be responsible for operation and maintenance and for making the annual debt

payments to the Village for the full amount and the District will assume ownership of the improvements after the term of the loan.

Village of Brocton Transmission

The supply main from the existing water treatment plant to the Village will be replaced with approximately 8,700 linear feet of new water main to appropriately provide for current and future demands. The existing water main is approximately 100 years old and portions are exposed in creek beds. Currently, the main is the only supply to the water storage for the Village and replacement is required to ensure system reliability.

The Village will finance and “own” the Village of Brocton Transmission through a financing package with the NYSEFC. The Village will have an IMA with the North Chautauqua County Water District that will specify that the District will be responsible for operation and maintenance and for making annual debt payments to the Village for a partial amount of the full loan.

In addition, should funding be available, approximately 15,000 linear feet of new water main sized to appropriately provide for current and future demands will be installed along Webster Road from the end of the existing Pomfret water main to Old Mill Road to accommodate supply from the Village of Fredonia. An alternative to this would be the replacement of 7,600 linear feet of water main from the Town of Pomfret to the Village along NYS Route 20. Either of these alternatives is known as the Town of Pomfret Water Main.

7.2.2 Village of Fredonia

The Village of Fredonia produces their own water and supplies water to the Village and a portion of the Town of Pomfret. The system would be maintained under the Regional Water Supply Program.

The original plan under Phase 1 included the replacement of existing water main along Willowbrook Avenue and Central Avenue and a new booster pump station. However, these components will be moved to a future phase should the Village wish to participate in the regional water project.

7.2.3 Town of Portland

The Town of Portland currently buys water from the Village of Brocton and the City of Dunkirk. As a result of the proposed project, the Town will be supplied by the District. The work includes the replacement of up to 9,000 linear feet of existing water main along NYS Route 5.

The existing water main along NYS Route 5 is composed of aging 8-inch cast iron and asbestos cement main with limited fire flow. The main will be replaced with a new water main sized to supply the areas currently serviced by the Village of Brocton.

Note, this work is part of the West Side Transmission Main. Also, the Village of Brocton will finance and “own” the West Side Transmission Main through a financing package with the NYSEFC. The Village will have an IMA with the North Chautauqua County Water District that will specify that the District will be responsible for operation and maintenance and for making the annual debt payments to the Village for the full amount and the District will assume ownership of the improvements after the term of the loan.

7.2.4 Town of Pomfret

The Town of Pomfret currently buys water from the Village of Fredonia and the City of Dunkirk. As a result of the proposed project, the Town will buy water from the District. The work includes the replacement of existing water main along NYS Route 5.

The existing water main along NYS Route 5 is composed of aging 8-inch cast iron and asbestos cement main with limited fire flow, and will be replaced with approximately 6,100 linear feet of new water main to appropriately provide for current and future demands. The proposed size will be based on the continued supply of the Town of Pomfret, portions of the Town of Portland, and the areas currently serviced by the Village of Brocton.

Note, this work is part of the West Side Transmission Main. Also, the Village of Brocton will finance and “own” the West Side Transmission Main through a financing package with the NYSEFC. The Village will have an IMA with the North Chautauqua County Water District that will specify that the District will be responsible for operation and maintenance and for making the annual debt payments to the Village for the full amount and the District will assume ownership of the improvements after the term of the loan.

7.2.5 Town of Dunkirk

The Town of Dunkirk currently buys water from the City of Dunkirk. As a result of the proposed project, the Town will be supplied by the District. The work includes the replacement of the existing water main along NYS Route 5 and the installation of a new water main along Willow Road connecting to the 20-inch supply main in the City of Dunkirk.

The existing water main along NYS Route 5 is composed of aging 8-inch cast iron and asbestos cement main with limited fire flow. The main from the Town of Pomfret to Willow Road will be replaced with approximately 8,000 linear feet of new water main sized to appropriately provide for current and future demands. The main east of Willow

Road and along Willow Road will be replaced with approximately 14,500 linear feet of new water main to appropriately provide for current and future demands. The proposed sizes will be based on the continued supply of the Town of Dunkirk, Town of Pomfret, portions of the Town of Portland, and the areas currently serviced by the Village of Brocton.

Note, this work is part of the West Side Transmission Main. Also, the Village of Brocton will finance and “own” the West Side Transmission Main through a financing package with the NYSEFC. The Village will have an IMA with the North Chautauqua County Water District that will specify that the District will be responsible for operation and maintenance and for making the annual debt payments to the Village for the full amount and the District will assume ownership of the improvements after the term of the loan.

In addition, should funding be available, the project will include the construction of an elevated water storage tank in the southeast corner of the Town of Dunkirk. Note the tank project assumes that the Town will construct the water main along Roberts Road to the tank site under a separate Town project. Note, this work is known as the Dunkirk Water Storage.

7.2.6 Town of Sheridan

The work includes the installation of approximately 3,200 linear feet of new water main along NYS Route 5 from the Town of Dunkirk to Harrington Road sized to appropriately provide for current and future demands.

The project will also include the installation of approximately 12,000 linear feet of new water main along NYS Route 5 from the Eagle Bay to the Village of Silver Creek sized to appropriately provide for current and future demands.

Note, this work is known as the East Side Transmission Main.

7.2.7 Village of Silver Creek

The Village of Silver Creek currently buys water from the Erie County Water Authority (ECWA).

7.2.8 Town of Hanover

The Town of Hanover currently buys water from the Erie County Water Authority (ECWA).

7.2.9 City of Dunkirk

The City currently uses Lake Erie as the sole source of water for its system. The entire population of the City (as well as areas in the Towns of Dunkirk, Sheridan, Portland, and Pomfret) are served by the Dunkirk system. The City of Dunkirk is in the midst of significant improvements and will maintain its current service and system.

Costs will be associated with the installation of master meter pits to account for all water leaving the City to the District, estimated to be \$450,000.

7.3 Project Cost

Table 7.3.1 below identifies the estimated costs associated with the proposed project construction. This includes capital costs for upgrades, improvements, and the installation of new transmission lines between communities to develop the regional system.

Table 7.3.1 – Proposed Project Capital Costs

Description	Total Estimated Cost
West Side Tank & Pump Station	\$1,600,000
West Side Transmission Main	\$5,750,000
Dunkirk Water Storage ¹	\$1,600,000
Village of Brocton Transmission	\$1,964,000
East Side Transmission	\$1,300,000
Master Meters	\$450,000
Soft Costs & Contingencies	\$2,404,000
TOTAL COSTS	\$15,068,000

¹ Will be completed based on funding availability.

The Town of Pomfret Water Main, discussed under 7.2.1, is assumed to be not greater than \$1,200,000 and is not included in the table above. However, should the actual costs for the work in the table above be lower than the estimates then all or a portion of the Town of Pomfret Water Main would be installed.

Table 7.3.2 summarizes the total project construction capital costs, anticipated grants, bonding and the expected first year payment for the District.

Table 7.3.2 – Proposed Project Financial Summary

Total Capital Cost	Grants & Contributions ¹	Net Bond ²	Annual District Payment ³
\$15,068,000	\$6,660,000	\$8,408,000	\$292,500

¹ Assumes an additional contribution through the Village of Brocton from the DOCCS of \$1,600,000

² Financing will include 0% interest, subsidized, and market rate for certain portions of the project

³ Assumes the Village of Brocton is responsible for approximately \$34,600 of the overall debt, but specifically related to the Village of Brocton Transmission

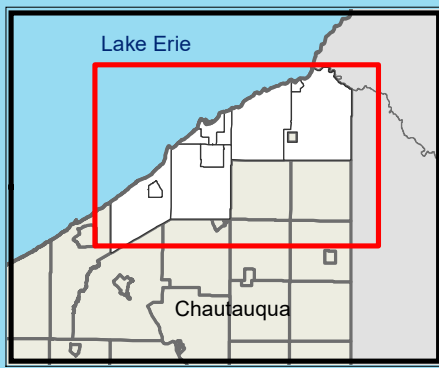
As a water supply District, no assessments will be made against properties or user charges to consumers of water. All income for the District will be from individual municipalities by agreement. Therefore, the cost to the typical property in the District is \$0.

7.4 Hydraulic Analysis

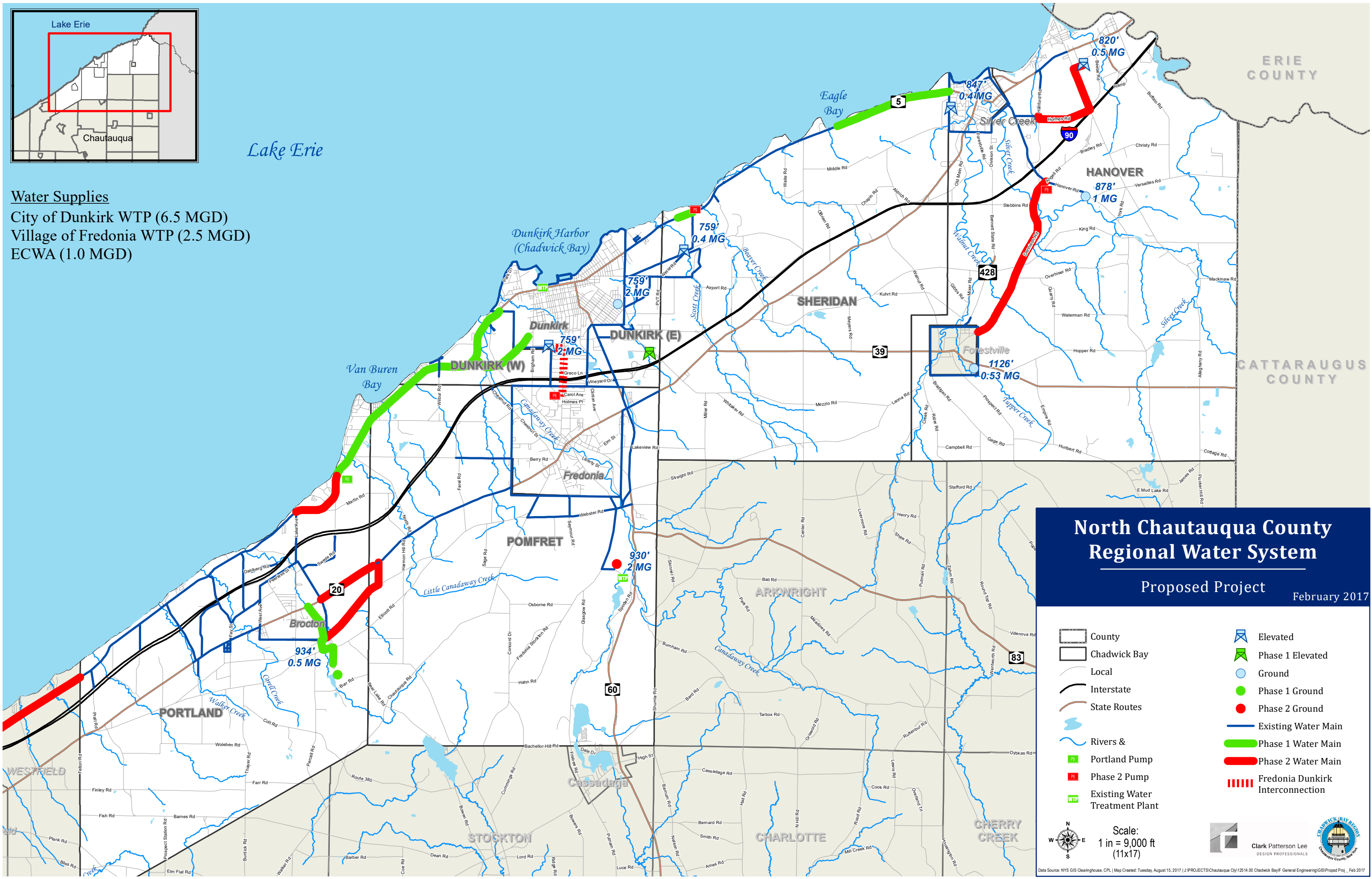
An engineering report, including a detailed hydraulic analysis, will be completed as part of the design engineering tasks for the proposed project.

7.5 Implementation

It is recommended that the proposed project be implemented as a phased project as described in previous sections of this report. The Region is committed to providing safe and reliable potable water supply and fire protection to its residents. Phase I of this project will be the first step in achieving that goal.



Water Supplies
 City of Dunkirk WTP (6.5 MGD)
 Village of Fredonia WTP (2.5 MGD)
 ECWA (1.0 MGD)



North Chautauqua County Regional Water System

Proposed Project February 2017

<ul style="list-style-type: none"> County Chadwick Bay Local Interstate State Routes Rivers & Creeks Portland Pump Phase 2 Pump Existing Water Treatment Plant 	<ul style="list-style-type: none"> Elevated Phase 1 Elevated Ground Phase 1 Ground Phase 2 Ground Existing Water Main Phase 1 Water Main Phase 2 Water Main Fredonia Dunkirk Interconnection
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Scale:
1 in = 9,000 ft
(11x17)

Clark Patterson Lee
DESIGN PROFESSIONALS

Data Source: NYS GIS Clearinghouse, CPL | Map Created: Tuesday, August 15, 2017 | I:\PROJECTS\Chautauqua Cty\12514.00 Chadwick Bay\F General Engineering\GIS\Propd Proj_Feb 2017