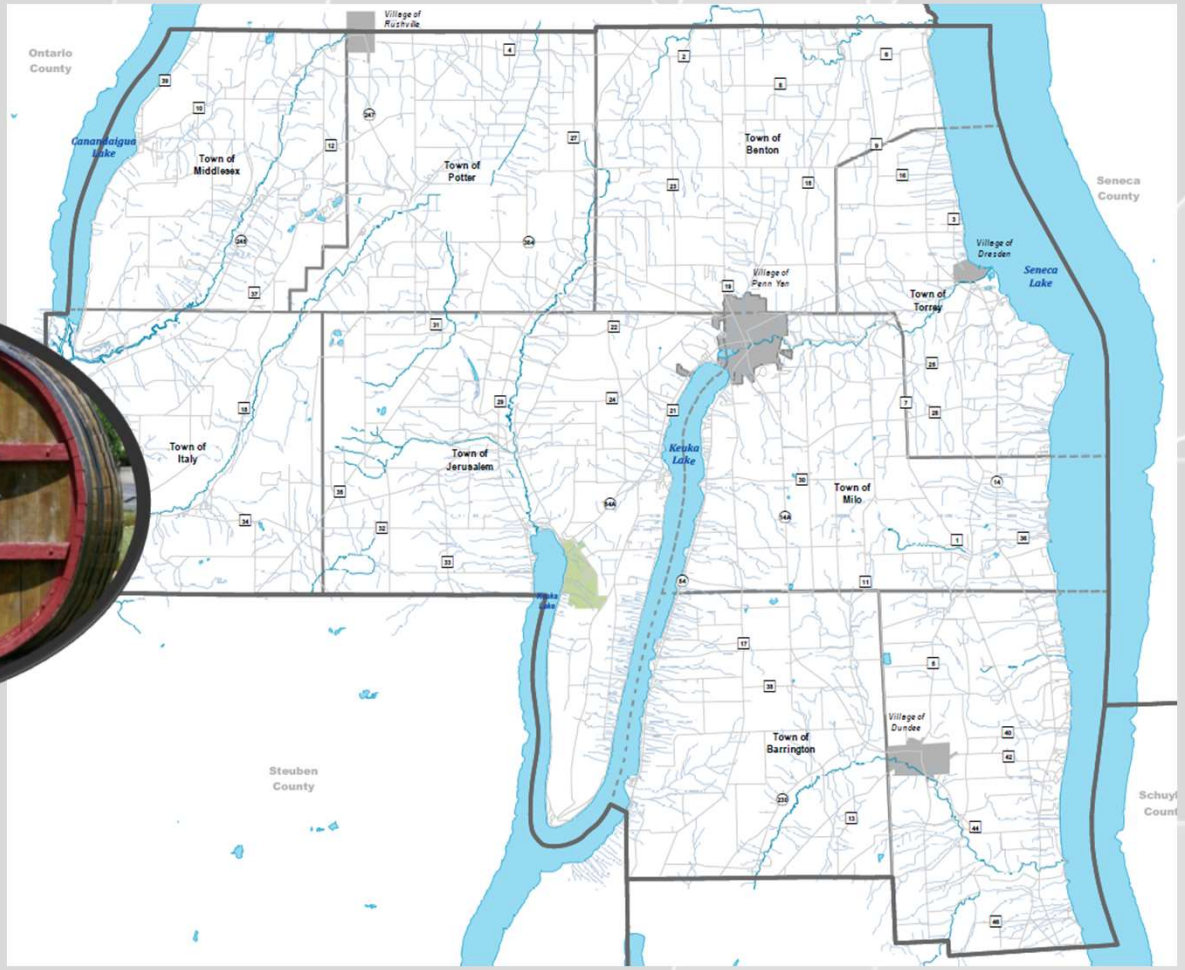
YATES COUNTY
NEW YORK



County Wide Water Feasibility Study

YATES COUNTY
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Agenda

- Population Trends
- Current Water Source Allocation
- Projected Water Demands
- Alternatives
- Combined Project Options
- Potential Funding Opportunities
- Questions

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Yates County Population

Municipality	Total Population			Projected Population				Change (2020-2050)	
	1990	2000	2010	2020	2030	2040	2050	Number	%
Barrington (T)	1,195	1,396	1,681	1,694	1,706	1,715	1,723	29	2%
Benton (T)	2,380	2,640	2,836	2,334	2,349	2,362	2,373	39	2%
Italy (T)	1,120	1,087	1,141	1,151	1,159	1,166	1,173	22	2%
Jerusalem (T)	3,784	4,525	4,469	4,546	4,675	4,786	4,883	337	7%
Middlesex (T)	1,249	1,345	1,495	1,512	1,525	1,537	1,548	36	2%
Milo (T)	7,023	7,026	7,006	2,485	2,521	2,521	2,579	94	4%
Potter (T)	1,617	1,830	1,865	1,414	1,425	1,436	1,444	30	2%
Starkey (T)	3,173	3,465	3,573	1,862	1,874	1,884	1,893	31	2%
Torrey (T)	1,269	1,307	1,282	1,061	1,134	1,197	1,253	192	18%
Dresden (V)*	339	307	308	305	303	301	299	-6	-2%
Dundee (V)*	1,588	1,690	1,725	1,716	1,710	1,704	1,699	-17	-1%
Penn Yan (V)*	5,248	5,219	5,159	4,451	4,356	4,274	4,204	-247	-6%
Rushville (V)*	609	621	677	464	465	466	467	3	1%
Yates County Total	**22,810**	**24,621**	**25,348**	**24,995**	**25,202**	**25,349**	**25,538**	**543**	**2%**

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Water Source Allocation & Production

Source	NYSDEC Permitted Allocation or Municipal Agreement (mgd)	Current Treatment/purchase Capacity (mgd)	Current Max Day Production/Usage (mgd)	Remaining Allocation (mgd)	Remaining Capacity (mgd)
Kashong Wells (Town of Seneca/Geneva)	1.66	1.66	1.20	0.46	0.46
Town of Benton WD#1 & WD#1 Ext. #1	0.05	0.05	0.010	0.04	0.04
Town of Benton WD#3 & Future WD#5	0.044	0.440	0.020	0.02	0.42
Dundee Wells (Village of Dundee WTP)	0.38	0.38	0.38	0.00	0.00
Village of Dundee	0.38	0.38	0.38	0.00	0.00
Canandaigua Lake (Village of Rushville WTP)	0.38	0.38	0.24	0.14	0.14
Village of Rushville	-	0.38	0.231	0.14	0.14
Town of Middlesex WD#1 & WD#1 Ext. #1	No Agreement	No Agreement	0.10	No Agreement	No Agreement
Keuka Lake (Village of Penn Yan WTP)	3.00	2.00	1.55	1.45	0.19
Village of Penn Yan	-	1.10	0.91	1.45	0.19
Town of Benton WD#2	0.035	0.035	0.031	0.004	0.00
Town of Jerusalem	0.506	0.506	0.217	0.289	0.29
Town of Milo	0.150	0.150	0.140	0.010	0.01
Town of Pulteney	0.106	0.106	0.057	0.049	0.05
Village of Dresden	0.103	0.103	0.061	0.042	0.04

Future Public Supply Needs

- Along the eastern shoreline of Keuka Lake in the Town of Barrington (NYS Route 54)
- Along the western shoreline on Seneca Lake in the Towns of Torrey, Milo, and Starkey (NYS Route 14)
- Along the eastern shoreline of Canandaigua in the Town of Middlesex
- Along NYS Route 14a in the Town of Barrington and Milo
- Increase in treatment capacity at the Village of Penn Yan (could require additional operators)
- Potential new supply along the eastern side of the County to supply (NYS Route 14)
- Additional storage capacity as future water develops in the east
- Public supply for Wineries and Breweries with the significance of tourism
- Consideration of secondary/emergency sources

Projected Water Demands

- 2/3rd of each Town's Population with Public Water
- Wineries and Breweries
- Existing & Proposed Industrial/Commercial Facilities
- Farms
- Potential Economic Development

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Projected 2050 Water Usage

Municipality	Current Max Day Usage (mgd)	2050 Max Day Usage (mgd)	Additional Water Required (mgd)
Barrington (T)	N/A	0.207	0.207
Benton (T)	0.506	0.552	0.046
Italy (T)	N/A	N/A	N/A
Jerusalem (T)	0.506	0.552	0.046
Middlesex (T)	0.100	0.199	0.099
Milo (T)	0.150	0.755	0.605
Potter (T)	N/A	0.050	0.050
Starkey (T)	N/A	0.227	0.227
Torrey (T)	N/A	0.150	0.150
Dresden (V)	0.103	0.106	0.003
Dundee (V)	0.380	0.386	0.006
Penn Yan (V)	0.910	0.929	0.019
Rushville (V)	0.231	0.239	0.008
Total	**2.886**	**4.353**	**1.467**

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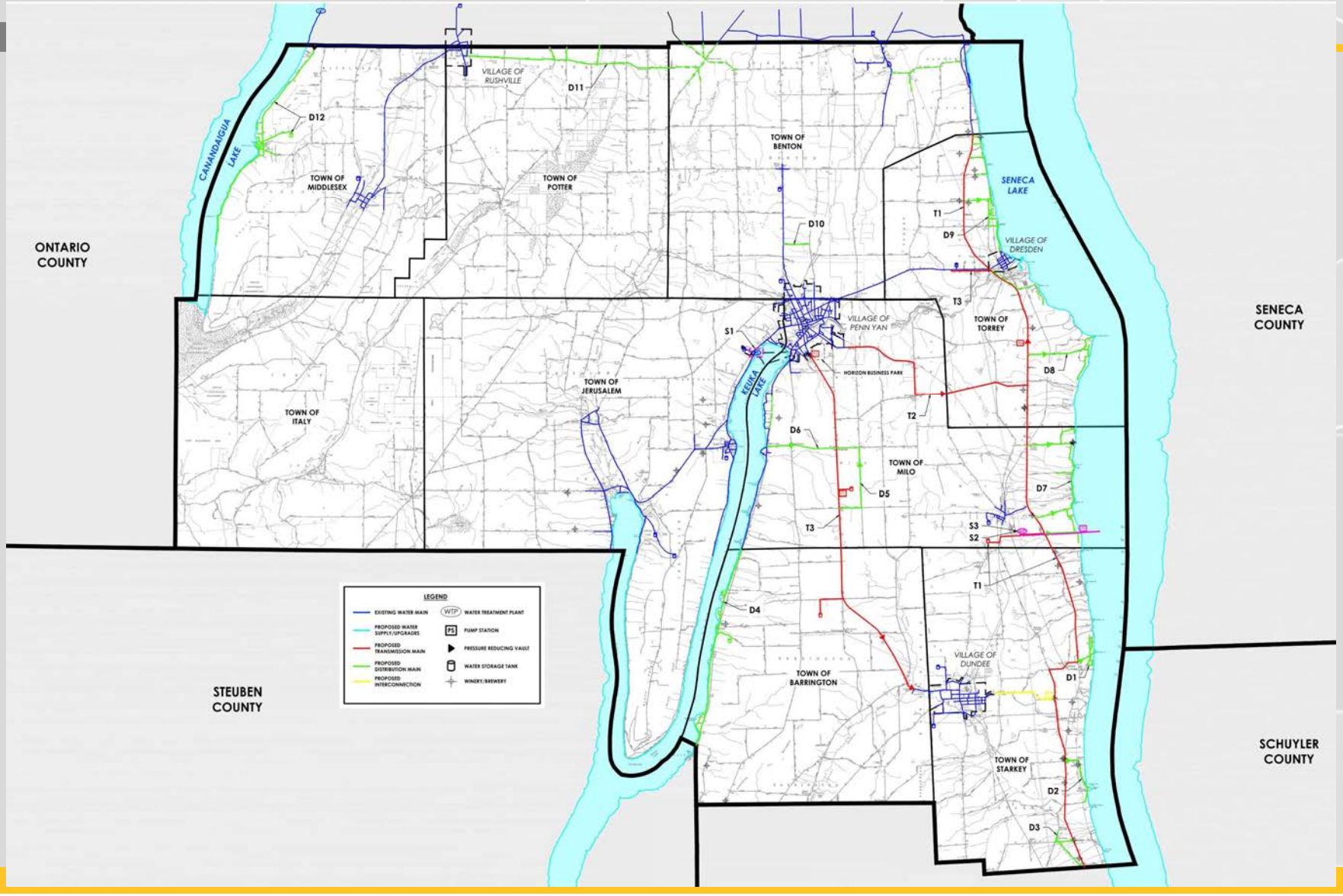
Water Supply Alternatives



County Wide Water Feasibility Study

Water Source Alternatives

S1: Upgrade the Village of Penn Yan WTP to 3.0 mgd

Estimated Capital Cost = $2,000,000 - $3,000,000

S2: New 0.5 mgd Capacity WTP at Seneca Lake

Estimated Capital Cost = $7,000,000

S3: New 1.0 mgd Capacity WTP at Seneca Lake

Estimated Capital Cost = $8,500,000

Transmission Main Alternatives

T1: New Transmission Main - NYS Route 14
Estimated Capital Cost = $15,100,000

T2: New Transmission Main - Penn Yan to NYS Route 14
Estimated Capital Cost = $3,400,000

T3: New Transmission Main - NYS Route 54
Estimated Capital Cost = $650,000 to $1,450,000

T4: New Transmission Main - NYS Route 14a
Estimated Capital Cost = $9,000,000

Distribution System Alternatives

D1 (Town of Starkey): New Distribution System at Starkey Point
Estimated Capital Cost = $1,100,000
Equivalent Dwelling Units = 50

D2 (Town of Starkey): New Distribution System in the Hamlet of Glenora
Estimated Capital Cost = $1,400,000
Equivalent Dwelling Units = 50

D3 (Town of Starkey): New Distribution System in the Hamlet of Rock Stream
Estimated Capital Cost = $860,000
Equivalent Dwelling Units = 30

Distribution System Alternatives

D4 (Town of Barrington): New Distribution System along NYS Route 54

Estimated Capital Cost = $5,200,000

Equivalent Dwelling Units = 400

D5 (Town of Milo): New Distribution System along Co. Rd 30, Hoyt, & Baker Rd

Estimated Capital Cost = $1,400,000

Equivalent Dwelling Units = 50

D6 (Town of Milo): New Distribution System along Co. Rd 30 from NYS Route 14a to WD#1.

Estimated Capital Cost = $940,000

Equivalent Dwelling Units = 25

Distribution System Alternatives

D7 (Town of Milo): New Distribution System at the Severne, Plum & Rose Point
Estimated Capital Cost = $3,900,000
Equivalent Dwelling Units = 225

D8 (Town of Torrey): New Distribution System at Long Point
Estimated Capital Cost = $1,700,000
Equivalent Dwelling Units = 80

D9 (Town of Torrey): New Distribution System at the Rockhaven Beach area
Estimated Capital Cost = 2,100,000
Equivalent Dwelling Units = 140

Distribution System Alternatives

D10 (Town of Benton): New Distribution System along Clark Rd

Estimated Capital Cost = $360,000

Equivalent Dwelling Units = 20

D11 (Town of Potter): New Distribution System along Co Rd 4, connecting to the Village of Rushville.

Estimated Capital Cost = $1,500,000

Equivalent Dwelling Units = 40

D12 (Town of Middlesex): New Distribution System along Co Rd 39

Estimated Capital Cost = $5,400,000

Equivalent Dwelling Units = 230

Implementation Strategy

- Regional Efforts
  - Supply
  - Transmission
- Local Efforts
  - Distribution
- Overlap
  - Distribution

Regional Effort Options

- Regional Supply
- Route 14 Corridor
- Distribution Consideration
- Target Charge Range
  - $887 to $1,200 per year

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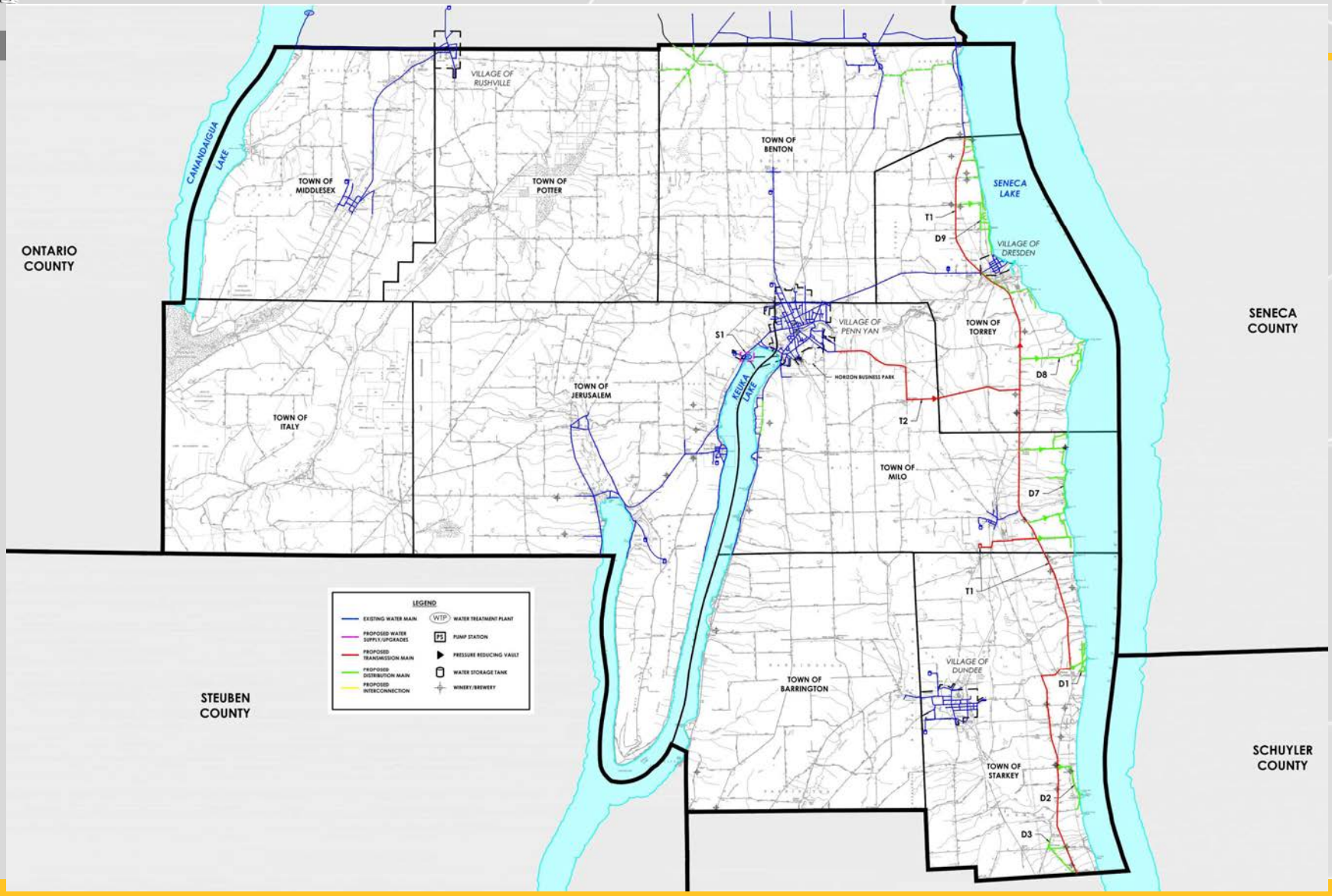
Option #1a & #1b



County Wide Water Feasibility Study

YATES COUNTY
NEW YORK

Option #1a & #1b

Item	Description	Aggressive	Conservative	Aggressive	Conservative
S1	Water Supply Alternative #1: 1.0 mgd Upgrade at the Village of Penn Yan WTP	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000
S2	Water Supply Alternative #2: New Surface Water Packaged WTP (0.5 mgd)	$ -	$ -	$ -	$ -
S3	Water Supply Alternative #3: New Surface Water Packaged WTP (1.0 mgd)	$ -	$ -	$ -	$ -
T1	Transmission Main Alternative #1: NYS Route 14	$ 15,047,100	$ 15,047,100	$ 15,047,100	$ 15,047,100
T2	Transmission Main Alternative #2: Penn Yan Connection to NYS Route 14 (Town of Milo)	$ 3,334,500	$ 3,334,500	$ 3,334,500	$ 3,334,500
T3	Transmission Main Alternative #3: Penn Yan Connection to NYS Route 14 (NYS Route 54)	$ -	$ -		$ -
D	Distribution	$ -	$ -	$ 11,799,000	$ 11,799,000
	Total Estimated Capital Cost =	**$ 20,881,600**	**$ 20,881,600**	**$ 32,680,600**	**$ 32,680,600**
	Estimated Grant and Local Contrubutions =	$ 17,433,287	$ 14,644,341	$ 23,093,649	$ 15,339,862
	Net Local project Cost =	**$ 3,448,313**	**$ 6,237,259**	**$ 9,586,951**	**$ 17,340,738**
	Estimated Annual Debt Service =	$ 125,001	$ 226,101	$ 347,527	$ 628,601
	Number of EDU's =	323	323	898	898
	Estimated Debt Service per Year per EDU =	**$ 387**	**$ 700**	**$ 387**	**$ 700**
	Estimated Yearly Water Cost =	**$ 500**	**$ 500**	**$ 500**	**$ 500**
	Total Unit Cost =	**$ 887**	**$ 1,200**	**$ 887**	**$ 1,200**

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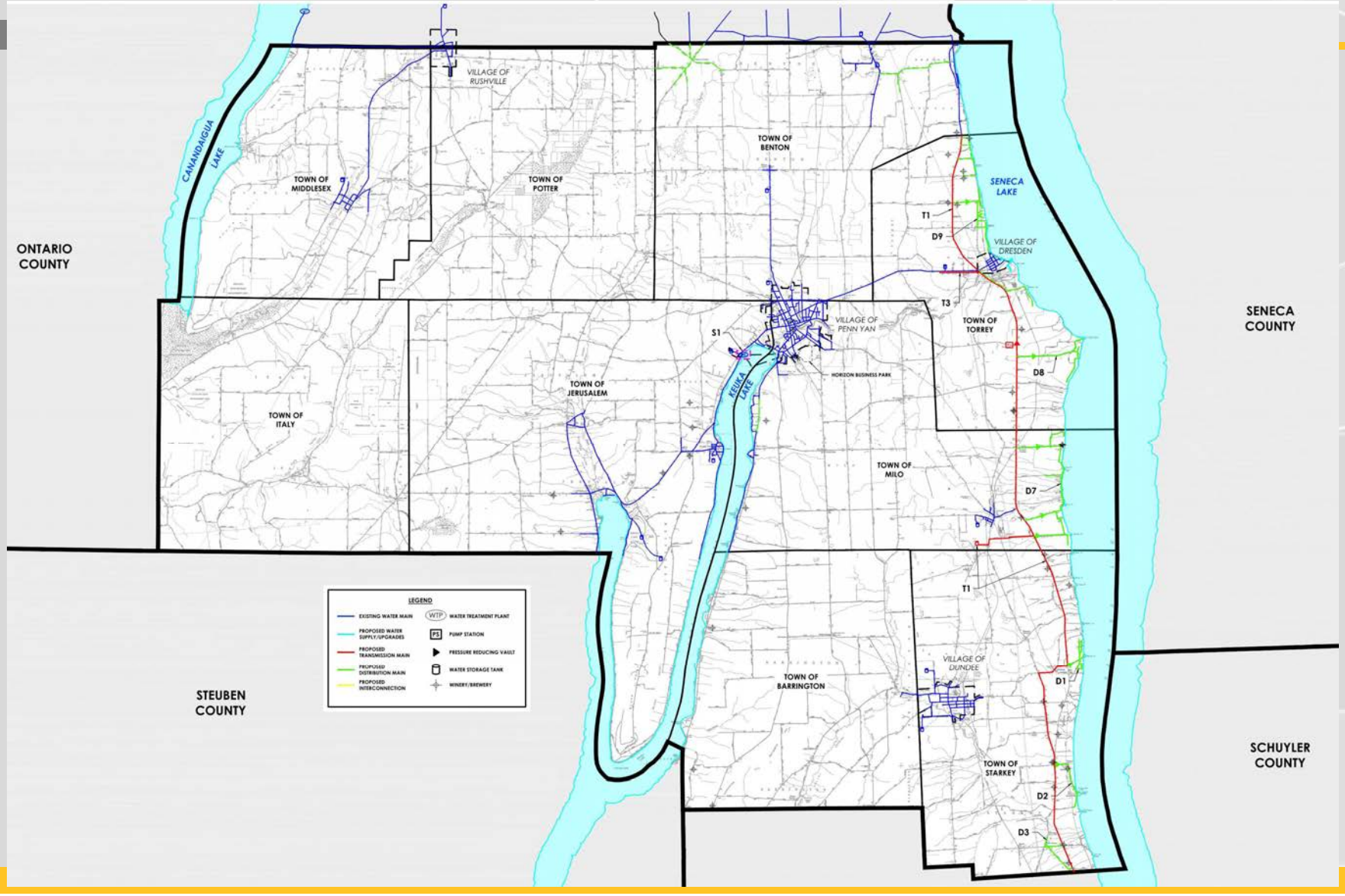
Option #2a & #2b



County Wide Water Feasibility Study

YATES COUNTY
NEW YORK

Option #2a & #2b

Item	Description	Aggressive	Conservative	Aggressive	Conservative
S1	Water Supply Alternative #1: 1.0 mgd Upgrade at the Village of Penn Yan WTP	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000
S2	Water Supply Alternative #2: New Surface Water Packaged WTP (0.5 mgd)	$ -	$ -	$ -	$ -
S3	Water Supply Alternative #3: New Surface Water Packaged WTP (1.0 mgd)	$ -	$ -	$ -	$ -
T1	Transmission Main Alternative #1: NYS Route 14	$ 15,047,100	$ 15,047,100	$ 15,047,100	$ 15,047,100
T2	Transmission Main Alternative #2: Penn Yan Connection to NYS Route 14 (Town of Milo)	$ -	$ -	$ -	$ -
T3	Transmission Main Alternative #3: Penn Yan Connection to NYS Route 14 (NYS Route 54)	$ 1,421,888	$ 1,421,888	$ 1,421,888	$ 1,421,888
D	Distribution	$ -	$ -	$ 11,799,000	$ 11,799,000
	Total Estimated Capital Cost =	**$ 18,968,988**	**$ 18,968,988**	**$ 30,767,988**	**$ 30,767,988**
	Estimated Grant and Local Contrubutions =	$ 15,926,358	$ 13,465,524	$ 21,586,720	$ 14,161,044
	Net Local project Cost =	**$ 3,042,629**	**$ 5,503,464**	**$ 9,181,267**	**$ 16,606,943**
	Estimated Annual Debt Service =	$ 110,295	$ 199,501	$ 332,821	$ 602,001
	Number of EDU's =	285	285	860	860
	Estimated Debt Service per Year per EDU =	**$ 387**	**$ 700**	**$ 387**	**$ 700**
	Estimated Yearly Water Cost =	**$ 500**	**$ 500**	**$ 500**	**$ 500**
	Total Unit Cost =	**$ 887**	**$ 1,200**	**$ 887**	**$ 1,200**

YATES COUNTY
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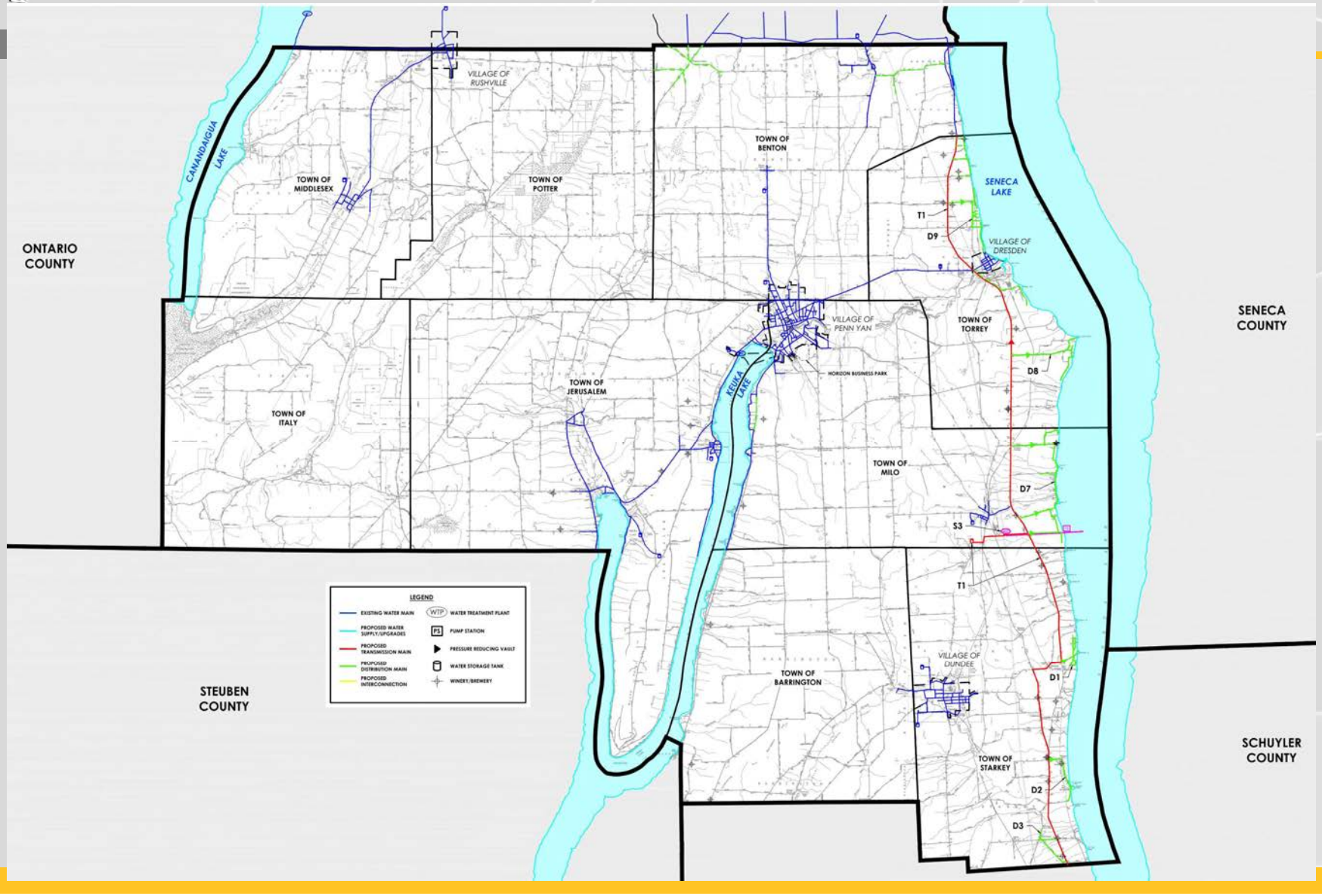
Option #3a & #3b



County Wide Water Feasibility Study

YATES COUNTY
NEW YORK

Option #3a & #3b

Item	Description	Aggressive	Conservative	Aggressive	Conservative
S1	Water Supply Alternative #1: 1.0 mgd Upgrade at the Village of Penn Yan WTP	$ -	$ -	$ -	$ -
S2	Water Supply Alternative #2: New Surface Water Packaged WTP (0.5 mgd)	$ -	$ -	$ -	$ -
S3	Water Supply Alternative #3: New Surface Water Packaged WTP (1.0 mgd)	$ 8,490,150	$ 8,490,150	$ 8,490,150	$ 8,490,150
T1	Transmission Main Alternative #1: NYS Route 14	$ 15,047,100	$ 15,047,100	$ 15,047,100	$ 15,047,100
T2	Transmission Main Alternative #2: Penn Yan Connection to NYS Route 14 (Town of Milo)	$ -	$ -	$ -	$ -
T3	Transmission Main Alternative #3: Penn Yan Connection to NYS Route 14 (NYS Route 54)	$ -	$ -	$ -	$ -
D	Distribution	$ -	$ -	$ 11,799,000	$ 11,799,000
	Total Estimated Capital Cost =	**$ 23,537,250**	**$ 23,537,250**	**$ 35,336,250**	**$ 35,336,250**
	Estimated Grant and Local Contrubutions =	$ 20,494,621	$ 18,033,786	$ 26,154,983	$ 18,729,307
	Net Local project Cost =	**$ 3,042,629**	**$ 5,503,464**	**$ 9,181,267**	**$ 16,606,943**
	Estimated Annual Debt Service =	$ 110,295	$ 199,501	$ 332,821	$ 602,001
	Number of EDU's =	285	285	860	860
	Estimated Debt Service per Year per EDU =	**$ 387**	**$ 700**	**$ 387**	**$ 700**
	Estimated Yearly Water Cost =	**$ 500**	**$ 500**	**$ 500**	**$ 500**
	Total Unit Cost =	**$ 887**	**$ 1,200**	**$ 887**	**$ 1,200**

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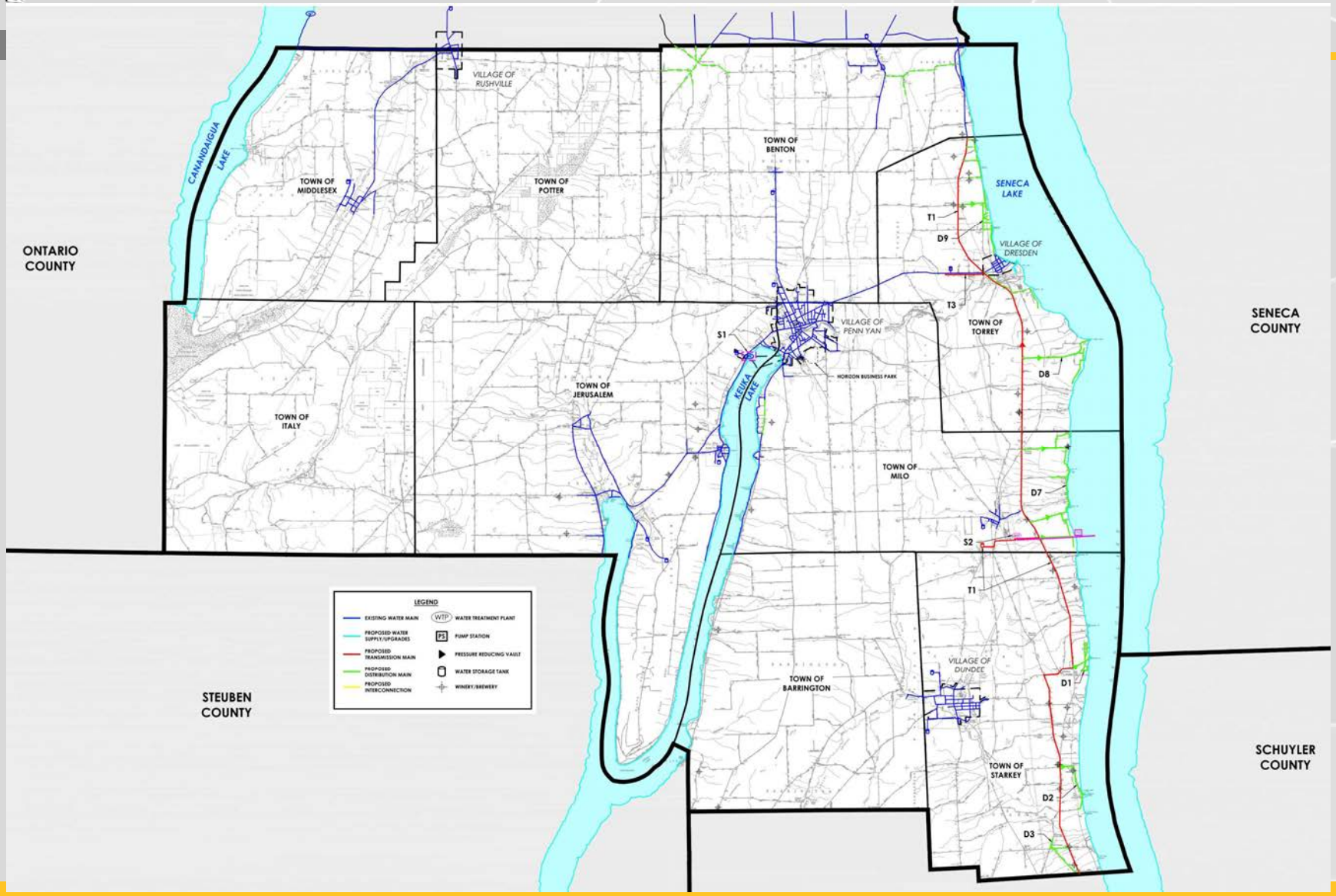
Option #4a & #4b



County Wide Water Feasibility Study

YATES COUNTY
NEW YORK

Option #4a & #4b

Item	Description	Aggressive	Conservative	Aggressive	Conservative
S1	Water Supply Alternative #1: 1.0 mgd Upgrade at the Village of Penn Yan WTP	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000
S2	Water Supply Alternative #2: New Surface Water Packaged WTP (0.5 mgd)	$ 6,987,600	$ 6,987,600	$ 6,987,600	$ 6,987,600
S3	Water Supply Alternative #3: New Surface Water Packaged WTP (1.0 mgd)	$ -	$ -	$ -	$ -
T1	Transmission Main Alternative #1: NYS Route 14	$ 15,047,100	$ 15,047,100	$ 15,047,100	$ 15,047,100
T2	Transmission Main Alternative #2: Penn Yan Connection to NYS Route 14 (Town of Milo)	$ -	$ -	$ -	$ -
T3	Transmission Main Alternative #3: Penn Yan Connection to NYS Route 14 (NYS Route 54)	$ 642,938	$ 642,938	$ 642,938	$ 642,938
D	Distribution	$ -	$ -	$ 11,799,000	$ 11,799,000
	Total Estimated Capital Cost =	**$ 25,177,638**	**$ 25,177,638**	**$ 36,976,638**	**$ 36,976,638**
	Estimated Grant and Local Contrubutions =	$ 22,135,008	$ 19,674,174	$ 27,795,370	$ 20,369,694
	Net Local project Cost =	**$ 3,042,629**	**$ 5,503,464**	**$ 9,181,267**	**$ 16,606,943**
	Estimated Annual Debt Service =	$ 110,295	$ 199,501	$ 332,821	$ 602,001
	Number of EDU's =	285	285	860	860
	Estimated Debt Service per Year per EDU =	**$ 387**	**$ 700**	**$ 387**	**$ 700**
	Estimated Yearly Water Cost =	**$ 500**	**$ 500**	**$ 500**	**$ 500**
	Total Unit Cost =	**$ 887**	**$ 1,200**	**$ 887**	**$ 1,200**

Potential Funding Opportunities

- USDA – Rural Development
- NYS – Environmental Facilities Corporation
  - Drinking Water State Revolving Loan Fund
  - Water Infrastructure Improvement Act
  - Senate Environment & Public Works Committee
    - $35 billion with Bipartisan Support
- Empire State Development
- Community Development Block Grant
- NYSAC – COVID Relief
  - $7.5 million Allocated
- Federal Infrastructure Bill

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Additional Considerations

- Redundant Supplies
- Strategic Allocation
  - Center – Keuka Lake Supply
  - East Side –Seneca Lake Supply
  - West Side – Canandaigua Lake Supply
- Regional Water Operations

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Questions

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