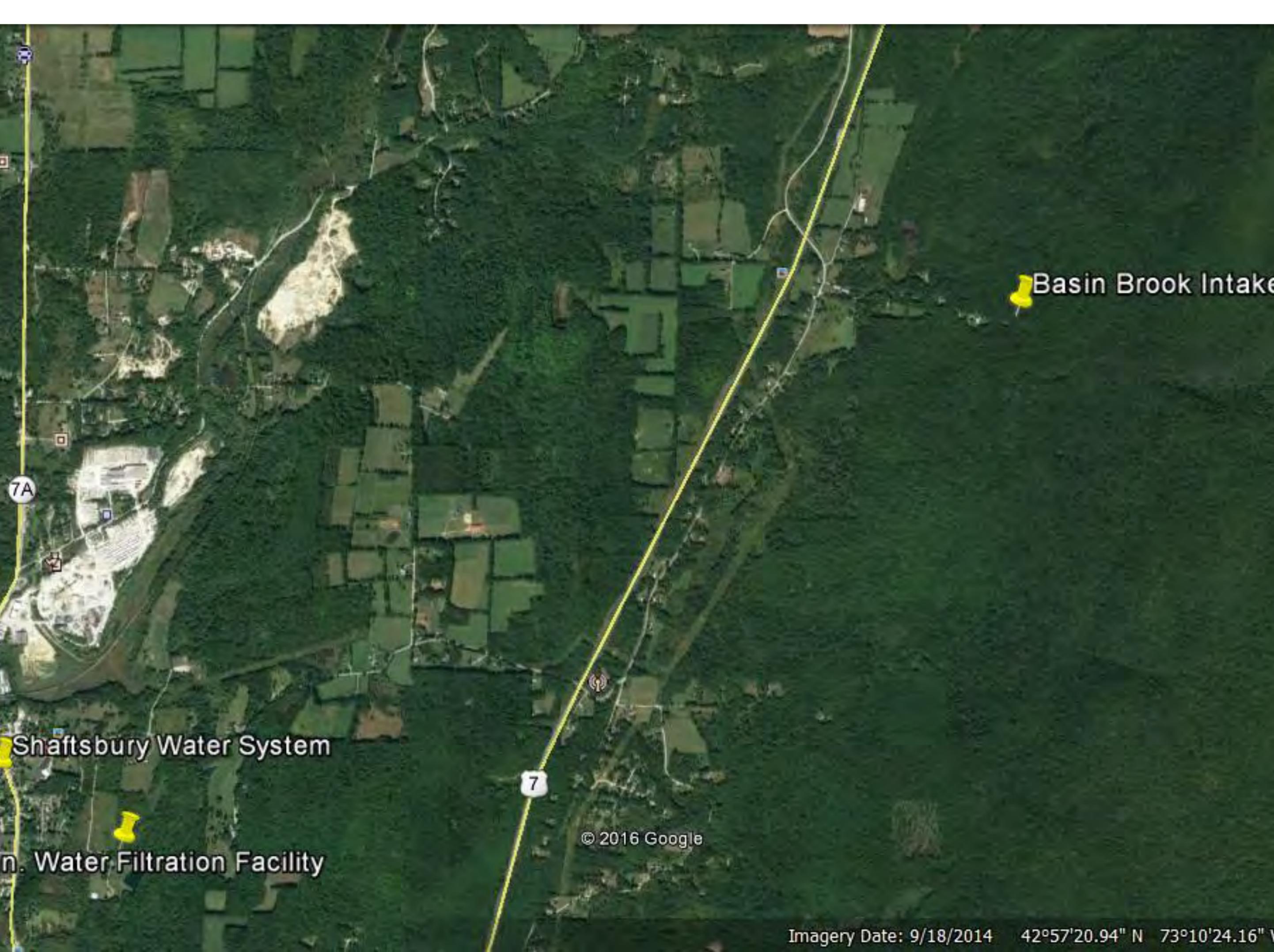


NORTH BENNINGTON WATER MAIN EXTENSIONS TO PFOA CONTAMINATED WELLS

July 27, 2016 Public Meeting



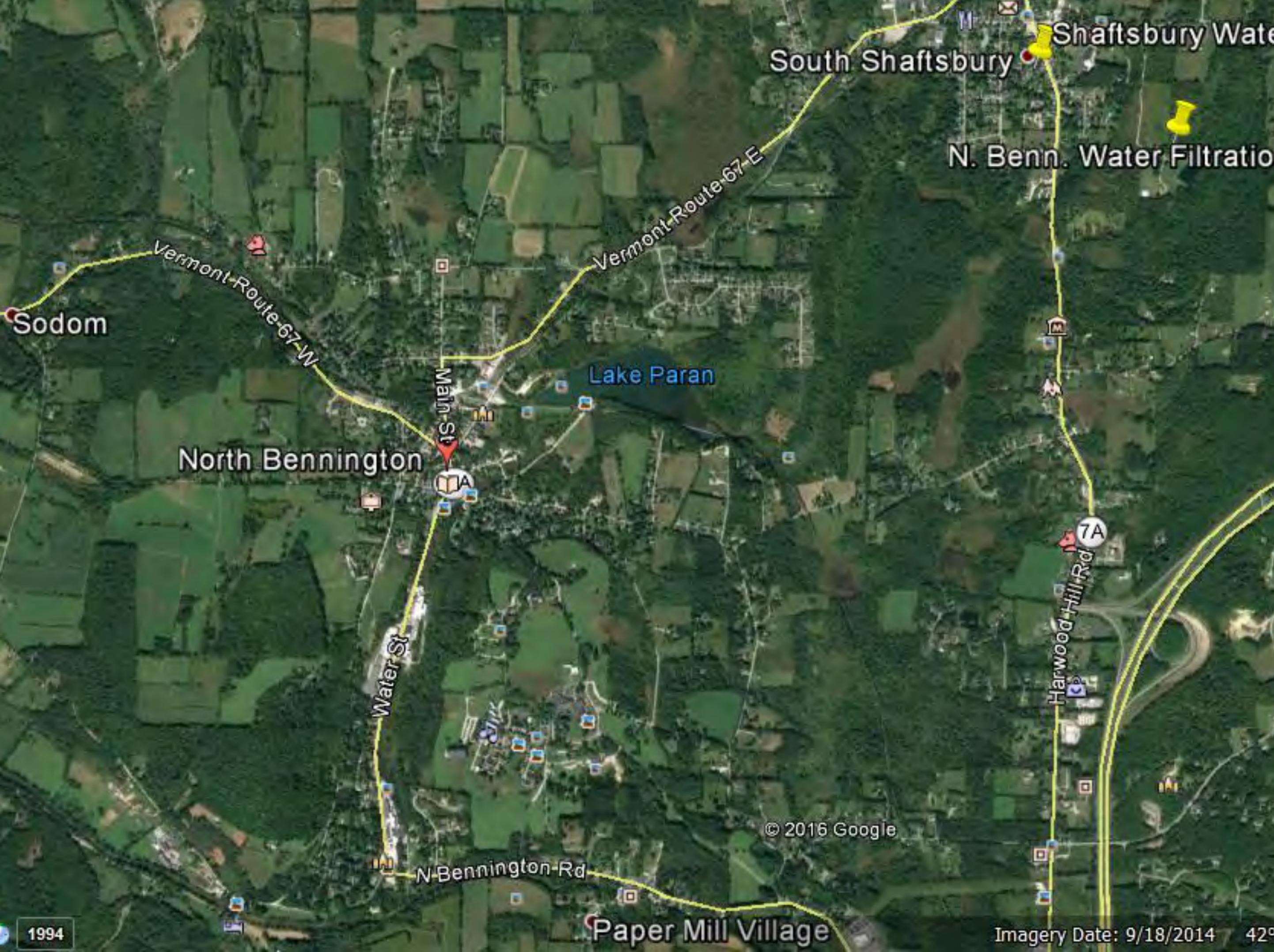
Basin Brook Intake

Shaftsbury Water System

n. Water Filtration Facility

© 2016 Google

Imagery Date: 9/18/2014 42°57'20.94" N 73°10'24.16" W



Shaftsbury Water

South Shaftsbury

N. Benn. Water Filtration

Sodom

Vermont-Route-67-W

Vermont-Route-67-E

Lake Paran

North Bennington

Main St

Water St

Harwood Hill Rd 7A

N Bennington Rd

© 2016 Google

Paper Mill Village

1994

Imagery Date: 9/18/2014 42°







1

Pipe No. 2

BACKWASH WASTE

AIR SOURCE

Flow meters and control valves for the water treatment system.

Blue piping system with labels "RAW WATER" and "RAW WATER" indicating the flow direction.

Large black and white components, likely part of the filtration or dosing system.

Control panel for the cpc-microfloc TRIDENT water system. It features three digital flow meters (FLOW UNIT 1, 2, 3) and a total flow meter (TOTAL FLOW) showing 755 GPM. The panel includes various control buttons and switches for "FLUSHING", "FLUSH RETIRE", "UNIT SELECTOR", "BACKWASH RETIRE", "BACKWASHING", "BACKWASH INHIBIT", "UNIT NO. 1 FILTERING", "UNIT NO. 2 FILTERING", "UNIT NO. 3 FILTERING", "UNIT NO. 1 OPERATION", "UNIT NO. 2 OPERATION", and "UNIT NO. 3 OPERATION". A red warning label reads "WARNING DISCONNECT POWER BEFORE SERVICING".

HACH PS1201 Power Supply unit.

Water distribution pipes and valves on the right side of the panel.

North Bennington Potential Water Customer Survey

Total Potential New Customers Due To PFOA

Contamination 55

Surveys Received 34

PFOA Detected

Yes 34

No 4

GAC Filters Installed 31

PFOA Samples taken to Date 2-6 avg. 3

Drinking Water

Bottled 32

Filtered 2

Cooking Water

Bottled 31

Filtered 3

Connect to N. Benn Water System?

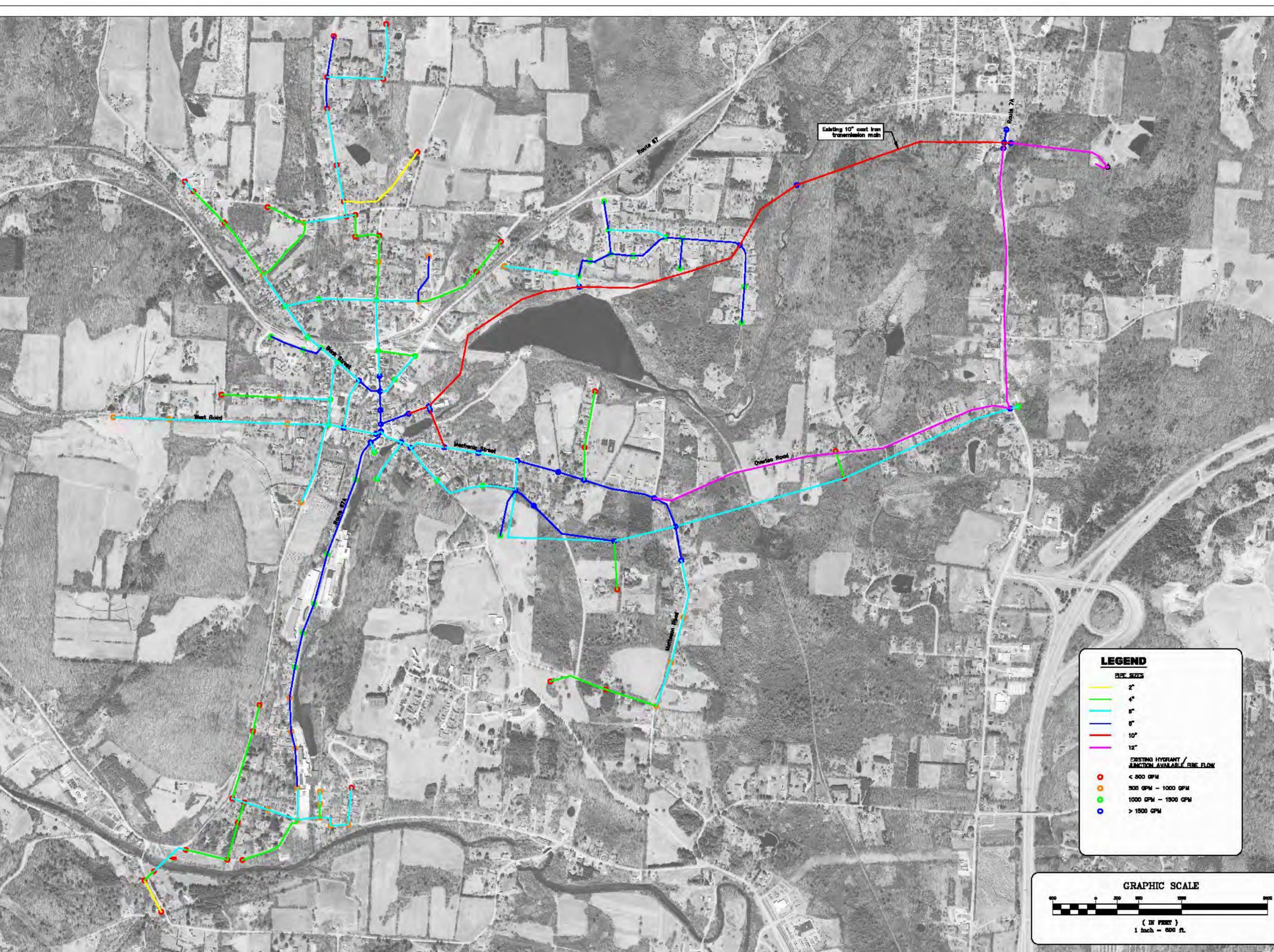
Yes 27

No 2

Unsure 7

*Unsure,
why?*

*Taste & Odor concerns,
chlorine,
cost of municipal water,
want to be "off
grid"*



Existing 10" cast iron transmission main

LEGEND

PIPE SIZES

- 2"
- 4"
- 6"
- 8"
- 10"
- 12"

EXISTING HYDRANT / JUNCTION AVAILABLE FIRE FLOW

- < 800 GPM
- 800 GPM - 1000 GPM
- 1000 GPM - 1500 GPM
- > 1500 GPM

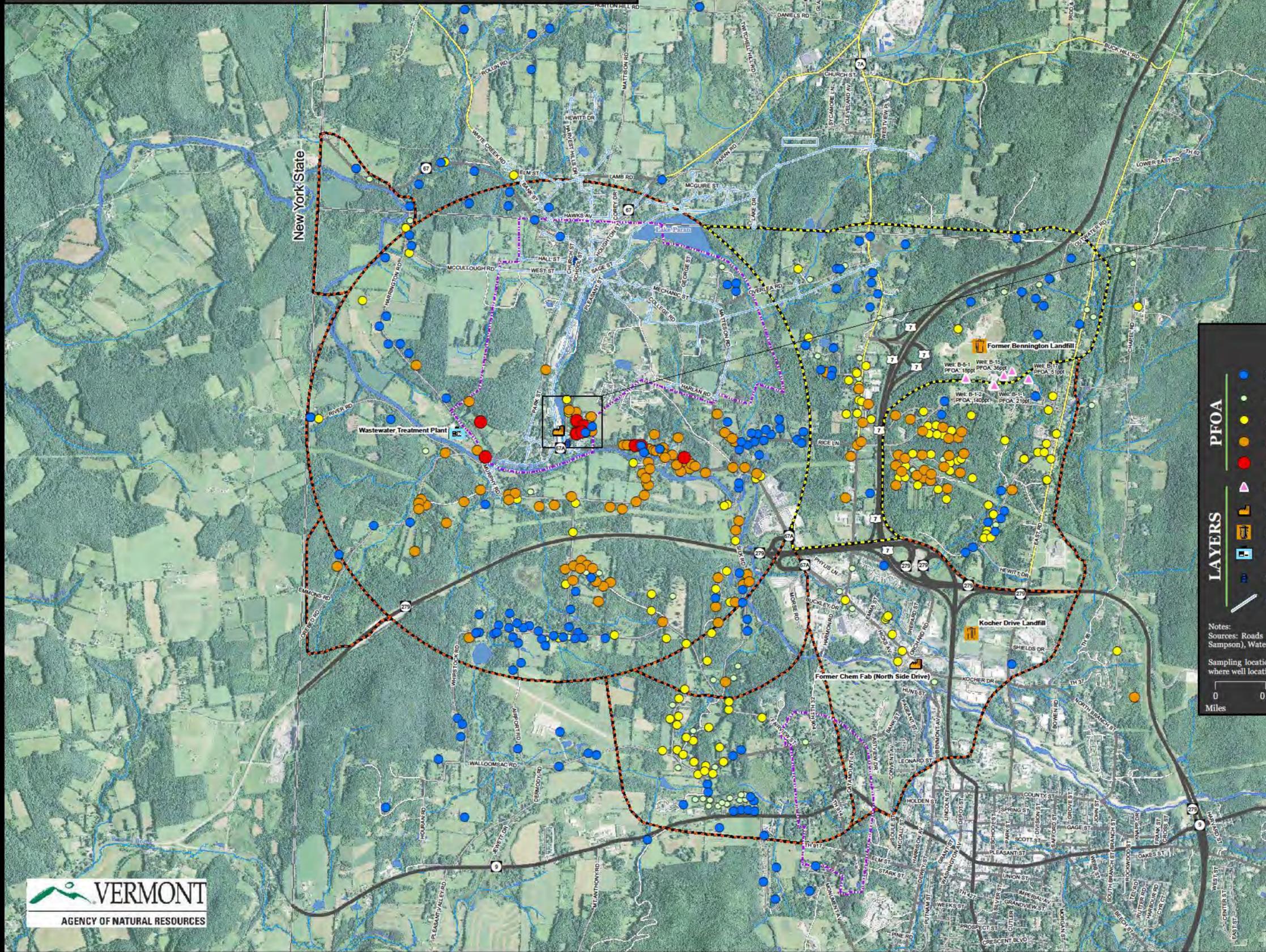
GRAPHIC SCALE

(IN FEET)

1 inch = 600 ft.

North Bennington PFOA

Water Sampling Test Results - June 8, 2016



MAP LEGEND

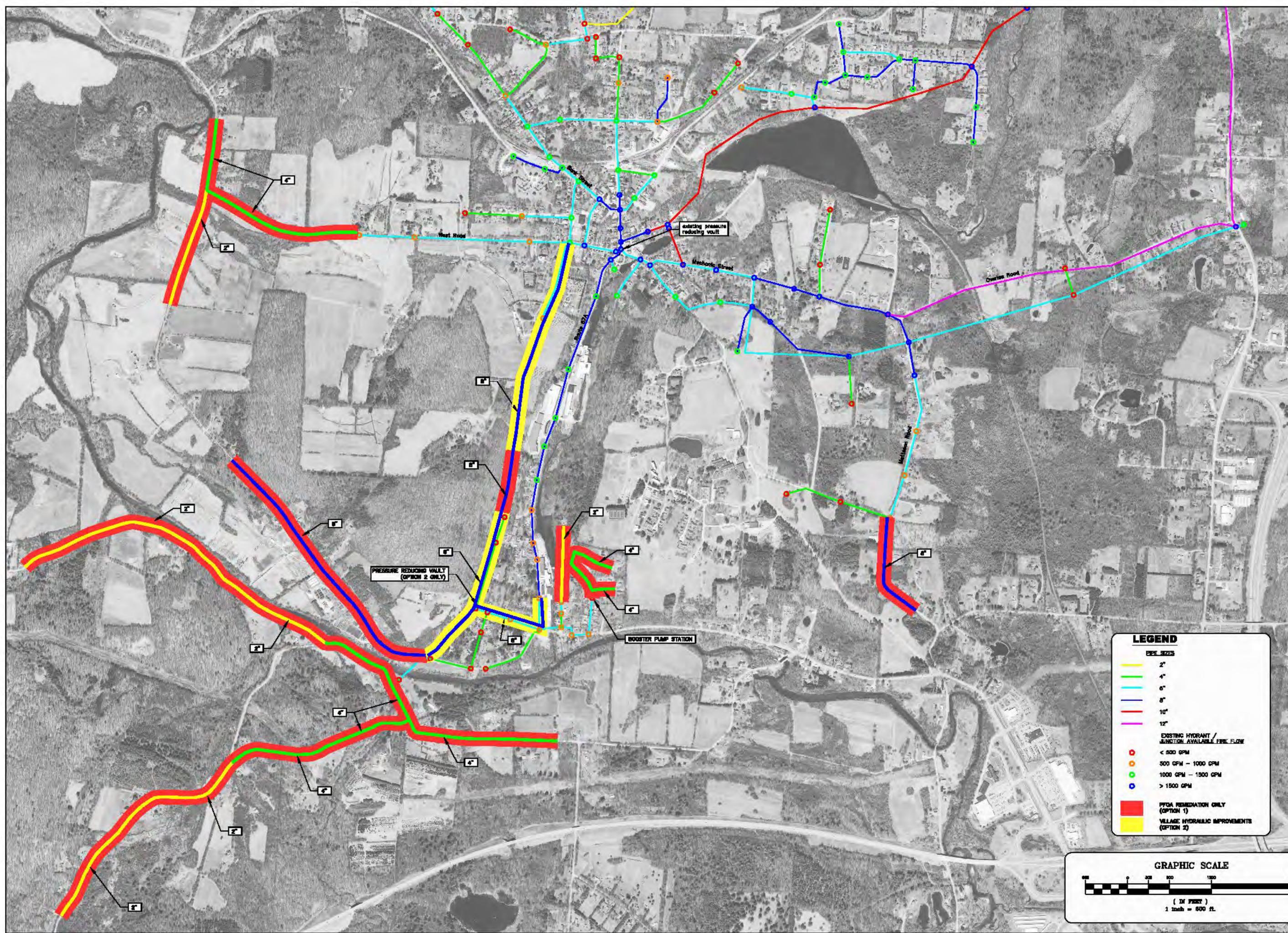
- | | | | | | |
|---------------|--|----------------------------|-------------------|--|----------------------------|
| PFOA | | Non-Detect (ND) | BOUNDARIES | | Village Boundary (VCGI) |
| | | <20 ppt (VDH Advisory) | | | Sampling Boundary |
| | | 20-100 ppt | | | 5/24/16 Sampling Extension |
| | | 100 - 1000 ppt | | | Town Boundary |
| | | >1000 ppt | | | |
| LAYERS | | Landfill Monitoring | | | |
| | | Factory | | | |
| | | Landfill | | | |
| | | Wastewater Treatment Plant | | | |
| | | Town Water Sample | | | |
| | | WaterLine | | | |

Notes:
Sources: Roads (VTRANS), Basemap (VCGI), Geocoding Service (VCGI), Sampling Results (VTDEC/Weston & Sampson), Waterline (Otter Creek Engineering), Streams and Waterbodies (NHD).

Sampling locations are determined by geocoded addresses as provided. Latitude/Longitude used in instances where well locations were recorded.

0 0.3 0.6 1.2 1.8 2.4
Miles





LEGEND

PIPE SIZES

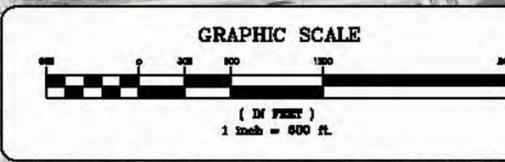
- 2"
- 4"
- 6"
- 8"
- 10"
- 12"

EXISTING HYDRANT / JUNCTION AVAILABLE FIRE FLOW

- < 500 GPM
- 500 GPM - 1000 GPM
- 1000 GPM - 1500 GPM
- > 1500 GPM

PFOR REMEDIATION ONLY (OPTION 1)

VILLAGE HYDRAULIC IMPROVEMENTS (OPTION 2)



Estimated Project Cost
Proposed Village of North Bennington Water Distribution System
Option 1 - PFOA Remediation Only

	Description	Total Qty.	Unit Cost	Total Cost
1.0	Matteson Road - 8" water main	1,500 lf.	\$125 / lf.	\$187,500
2.0	Park Street - 8" water main	900 lf.	\$125 / lf.	\$112,500
3.0	Harrington Road - 8" water main	4,200 lf.	\$125 / lf.	\$525,000
4.0	Scarey Lane - 2" water main	900 lf.	\$70 / lf.	\$63,000
5.0	Asa's Way - 4" water main	1,500 lf.	\$110 / lf.	\$165,000
6.0	Susan Taylor Lane - 2" water main	300 lf.	\$70 / lf.	\$21,000
7.0	Murphy Road - 4" water main	2,000 lf.	\$110 / lf.	\$220,000
8.0	McCullough Road - 4" water main	3,100 lf.	\$110 / lf.	\$341,000
9.0	Orebed Road - 4" water main	3,200 lf.	\$110 / lf.	\$352,000
10.0	Water Services	53	\$7,500 / ea.	\$397,500
11.0	Fire / Flushing Hydrants	16	\$5,500 / ea.	\$88,000
12.0	Gate Valves	12	\$1,500 / ea.	\$18,000
13.0	Ledge (Estimate)	1,000	\$150 / c.y.	\$150,000
14.0	Booster Pump Station	1	\$200,000 / ls.	\$200,000
15.0	Orebed Road - 2" water main	3,600 lf.	\$70 / lf.	\$252,000
16.0	Riverside Drive - 4" water main	1,100 lf.	\$110 / lf.	\$121,000
17.0	Riverside Drive - 2" water main	5,400 lf.	\$70 / lf.	\$378,000
Subtotal				\$3,591,500
	Contingency, 20%			\$718,300
Estimated Construction Cost				\$4,309,800
Technical Services				
	Preliminary Engineering			\$10,000
	Survey / Aerial Photography and Ground Control Survey			\$4,500
	Final Design / Permitting /Additional Survey / Borings			\$215,000
	Bid Phase Services/Construction Phase Services			\$400,000
	Legal and Fiscal			\$10,000
	Administrative			\$5,000
	Land Acquisition / Easements			\$10,000
ESTIMATED TOTAL PROJECT COST				\$4,964,300

Estimated Project Cost
Proposed Village of North Bennington Water Distribution System
Option 2 - PFOA Remediation and Improvements to Village Distribution System

	Description	Total Qty.	Unit Cost	Total Cost
1.0	Matteson Road - 8" water main	1,500 lf.	\$125 / lf.	\$187,500
2.0	Park Street - 8" water main	900 lf.	\$125 / lf.	\$112,500
3.0	Harrington Road - 8" water main	4,200 lf.	\$125 / lf.	\$525,000
4.0	Scarey Lane - 2" water main	900 lf.	\$70 / lf.	\$63,000
5.0	Asa's Way - 4" water main	1,500 lf.	\$110 / lf.	\$165,000
6.0	Susan Taylor Lane - 2" water main	300 lf.	\$70 / lf.	\$21,000
7.0	Murphy Road - 4" water main	2,000 lf.	\$110 / lf.	\$220,000
8.0	McCullough Road - 4" water main	3,100 lf.	\$110 / lf.	\$341,000
9.0	Orebed Road - 4" water main	3,200 lf.	\$110 / lf.	\$352,000
10.0	Park Street - 8" water main	5,400 lf.	\$125 / lf.	\$675,000
11.0	Hillside/Water Street - 8" water main	1,300 lf.	\$125 / lf.	\$162,500
12.0	Water Services	55	\$7,500 / ea.	\$412,500
13.0	Fire / Flushing Hydrants	22	\$5,500 / ea.	\$121,000
14.0	Gate Valves	16	\$1,500 / ea.	\$24,000
15.0	Ledge (Estimate)	1,500	\$150 / c.y.	\$225,000
16.0	Pressure Reducing Vault	1	\$35,000 / ls.	\$35,000
17.0	Orebed Road - 2" water main	3,600 lf.	\$70 / lf.	\$252,000
18.0	Riverside Drive - 4" water main	1,100 lf.	\$110 / lf.	\$121,000
19.0	Riverside Drive - 2" water main	5,400 lf.	\$70 / lf.	\$378,000
	Subtotal			\$4,393,000
	Contingency, 20%			\$878,600
	Estimated Construction Cost			\$5,271,600
	Technical Services			
	Preliminary Engineering			\$10,000
	Survey/Aerial Photography and Ground Control Survey			\$4,500
	Final Design/Permitting			\$260,000
	Bid Phase Services/Construction Phase Services			\$480,000
	Legal and Fiscal			\$10,000
	Administrative			\$5,000
	Land Acquisition / Easements			\$10,000
	ESTIMATED TOTAL PROJECT COST			\$6,051,100