The background features a dynamic blue water splash at the top, with two green leaves and a single water droplet falling from them. Below this, the rest of the background is a textured, wavy blue surface that resembles water ripples or a liquid surface.

Town of Wilmington Wastewater Facilities 20 Year Evaluation

Selectboard Presentation

April 3, 2013

20 Year Evaluation

- Completed in 2012
- Typically required by Discharge Permit
- Recommendations and implementation plan for sewer collection system, pump stations and wastewater treatment facility



Scope of Evaluation

- Summarize and review current operating conditions
- Document recent inspections of sewer collection system
- Assess the pump stations and wastewater treatment facility
- Develop a recommended plan

Wastewater Facilities

- Sewer Collection System
- Pump Stations
- Wastewater Treatment Facility



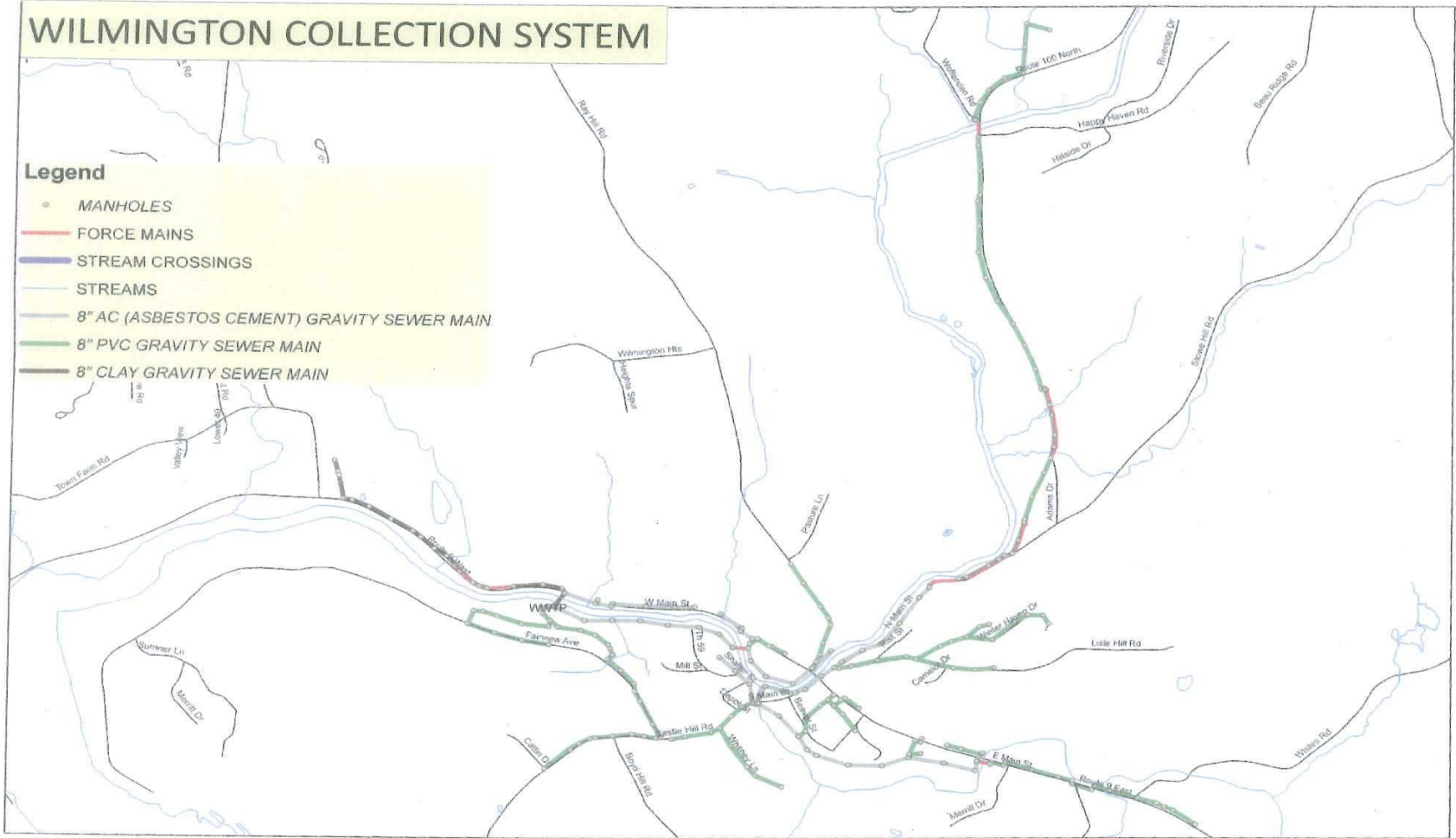
Sewer Collection System

- As required by the State, the Town prepared “Operation, Management and Emergency Response Plan” in January 2009 and amended in June 2010
 - Sewer system mapping
 - Stream crossing inspections
 - Manhole inspections
 - Pipeline cleaning and TV inspection

WILMINGTON COLLECTION SYSTEM

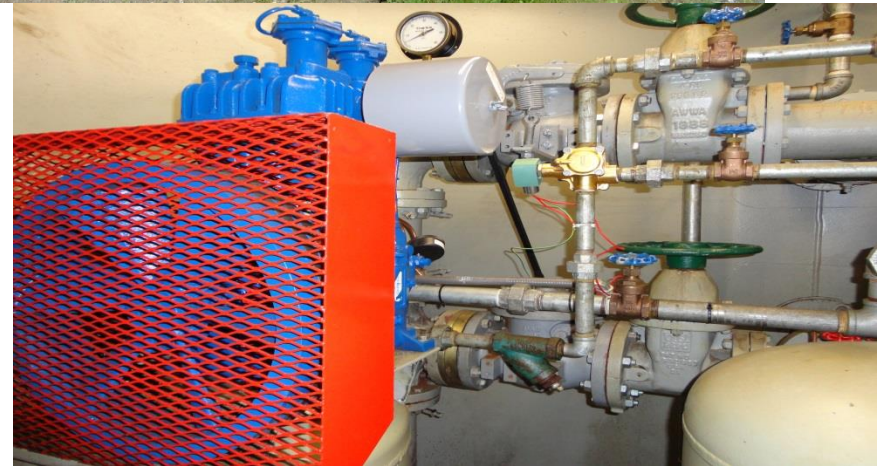
Legend

- MANHOLES
- FORCE MAINS
- STREAM CROSSINGS
- STREAMS
- 8" AC (ASBESTOS CEMENT) GRAVITY SEWER MAIN
- 8" PVC GRAVITY SEWER MAIN
- 8" CLAY GRAVITY SEWER MAIN



Wastewater Pump Stations and Ejector Stations

- PS #1: West Main Street
- PS #2: WWTF Influent
- PS #3: Route 9 West
- PS #4: Woffenden Road
- EJ #1: East Main Street
- EJ #2: Bowling Alley
- EJ #3: Alpine Rental



Wastewater Treatment Facility Background

- Original plant constructed in 1960's
- Upgraded to secondary treatment in 1987

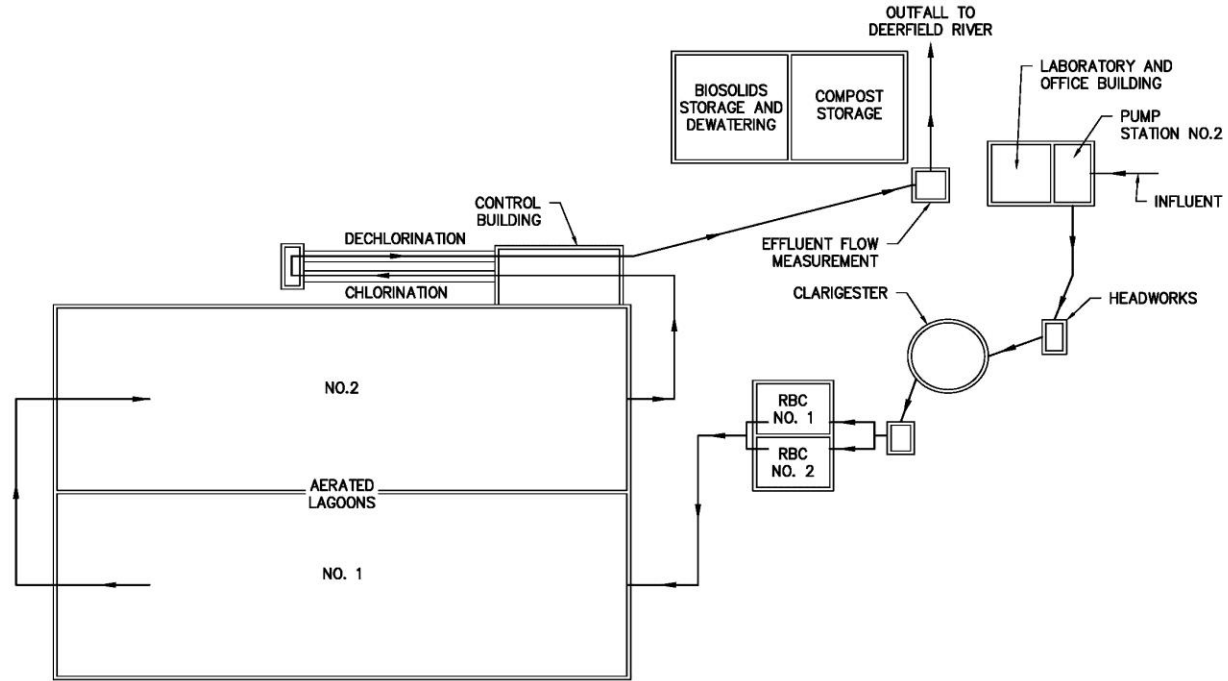


Flow and Effluent Quality

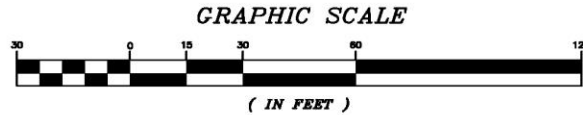
- Flows
 - Permitted: 0.135 mgd
 - 2011 Actual: 0.0859 mgd (64%)
- Effluent Quality
 - Consistent compliance



V:\2016 WILMINGTON 20-YEAR EVALUATION\12016-1.dwg; 2/25/2013 9:56:45 AM; DWG TO PDF.pcf



PLAN
SCALE: 1"=30'



6 Market Place, Suite 2
Essex, VT 05442
P: 802.879.7733
Aldrich+Elliott.com

WASTEWATER TREATMENT FACILITY EXISTING PLAN		DESIGNED BY	PROJECT NO.
		CHECKED (P.D.)	12016
20 YEAR EVALUATION		SCALE	FIGURE NO.
		AS SHOWN	1
TOWN OF WILMINGTON		DATE	DECEMBER 2012
		VERMONT	

Assessment Example for RBC's

Item	Ranking of Existing Condition					Projected Remaining Life (years)	Notes
	Poor		Fair		Good		
	1	2	3	4	5		
Influent flow splitter			X			20	Installed in 1987
RBC unit #1		X				< 5	Installed in 1987
RBC unit #2		X				< 5	Installed in 1987
Concrete tanks			X			20+	Installed in 1987
Grating			X			< 10	
Fiberglass enclosures			X			< 10	Installed in 1987

Influent Pump Station Major Deficiencies

- Pump #1
- Pump control system



Headworks

Major Deficiencies

- Concrete structure
- Gates
- Lack of handrails



Clarigester

Major Deficiencies

- Handrails
- Weirs
- Skimmer and rake arms
- Concrete structure
- Scum box



RBC's

Major Deficiencies

- RBC units
- Fiberglass covers



Control Building Major Deficiencies

- Roof
- Exterior
- Heating/ventilation
- Motor control center



Office Building

Major Deficiencies

- Lab furnishings
- Exterior
- Roof
- Heating/ventilation
- Motor control center



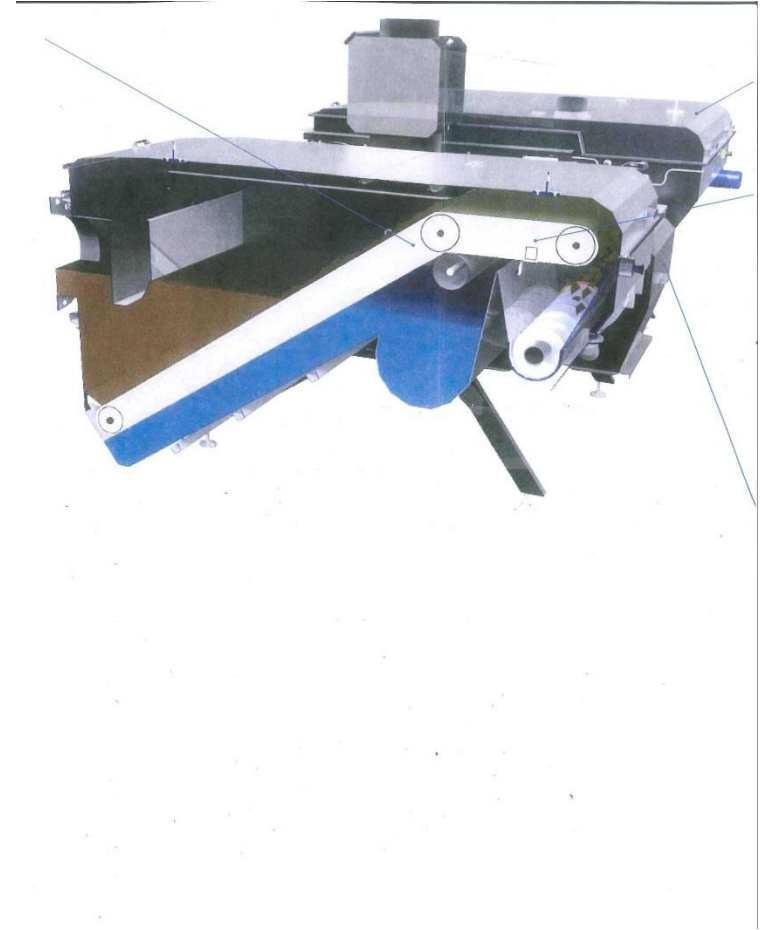
Evaluation of Primary Treatment Alternatives

- No. 1: Upgrade Existing Clarigester Tank
- No. 2: Primary Clarifiers – Circular
- No. 3: Primary Clarifiers – Rectangular
- No. 4: Salsnes Filter



Technical and Economic Evaluation

- Develop preliminary design criteria
- Advantages/
Disadvantages
- Estimated Construction Costs:
 - \$285,000 to \$580,000



Capital Planning

- Sewer Collection
 - Prioritize manhole and sewerline rehab
- Pump and Ejector Stations
 - PS #1: West Main Street
 - PS #4: Woffenden Road
 - EJ #3: Alpine Rentals
- Wastewater Treatment Facility
 - Small equipment replacement; influent pump, valves, mixers



Future Planning

- Pump Stations
 - Ejector Station #1: Mobile Station
- Wastewater Treatment Facility
 - Influent Pump Station controls
 - Clarigester and primary treatment upgrades
 - RBC's
 - Control Building
 - Office Building

Next Steps

- January 2013: A priority list application was submitted
- 2014: Begin preliminary engineering study for wastewater treatment facility upgrades