

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2386



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www.waterfordct.org

**Energy Task Force
Minutes — Special Meeting November 10, 2022**

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WATERFORD, CT
2022 NOV 16 A 9:07
ATTEST: *[Signature]*
TOWN CLERK

Members present: Kevin Girard (RTM), Mary Childs (RTM), Jody Nazarchyk (BoS),
Ivan Kuvalanka (elector)

Members absent: Chris Jones (BoE), Baird Welch-Collins (BoF)

Also present: Director of Public Works: Gary Schneider

- 1., 2. **Call to Order/Roll Call:** With a quorum established, the meeting of the Energy Task Force (ETF) was called to order at 5:02 p.m. by Chair Kevin Girard.
3. **Public Comment:** None
4. **Approval of 9/29/2022 meeting minutes:** Motion by Girard, second by Nazarchyk to approve the 9/29/2022 minutes as presented. Voice vote: Unanimous.
5. **Review and discussion of stated charge:** Group discussed 10-year Capital Improvements Plan from the perspective of Public Works. Areas where positive changes might be an option include: road maintenance; trash/recycling route analysis; HVAC replacement (Public Safety Bldg, WPD); Community Center humidity control; Library HVAC; fleet conversion. Energy assessment done by an outside consultant.
6. **New Business:** Group consensus on next steps: Look into Branford clean-energy initiatives as a model; invite Waterford Utility Commission and BOE Maintenance to share areas for energy saving/planning; ask RTM to fill the elector vacant position on this task force. Next ETF meeting is scheduled for 12/12/22 at 5:00 p.m.
7. **Adjournment:** Motion by Nazarchyk, second by Kuvalanka to adjourn at 6:35 p.m. Voice vote: Unanimous.

Submitted by Mary Childs, ETF Secretary

Town of Waterford Property	Measure	kWh savings	Therm Savings	\$ Energy Savings	\$ O&M Savings	Turnkey Price	Incentive by Measure	Customer Cost	Payback by Measure	Payback by building
Community Center	Lighting	90,952	-	\$ 16,826	\$ 4,830	\$ 119,853	\$ 36,381	\$ 83,473	3.85	
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,227	\$ 491	\$ 736	2.76	
	Water Savings (Aerators)	-	103	\$ 134	\$ -	\$ 325	\$ 130	\$ 195	1.46	4.23
	Refrigeration Controls	3,777	-	\$ 699	\$ -	\$ 3,119	\$ 1,248	\$ 1,871	2.68	
	Transformers	14,191	-	\$ 2,625	\$ -	\$ 26,681	\$ 5,676	\$ 21,005	8.00	
Emergency Management	Lighting	51,274	-	\$ 9,486	\$ 2,564	\$ 56,202	\$ 20,510	\$ 35,692	2.96	
	Vending Misers	1,165	-	\$ 216	\$ -	\$ 632	\$ 253	\$ 379	1.76	6.36
	VFDs (with pump replacement)	2,780	-	\$ 514	\$ -	\$ 6,408	\$ 1,112	\$ 5,296	10.30	
Library	Boilers	-	-	\$ 1,703	\$ -	\$ 52,345	\$ 1,600	\$ 50,745	29.80	
	Lighting	43,747	-	\$ 8,093	\$ 3,220	\$ 113,335	\$ 17,499	\$ 95,837	8.47	8.47
	Lighting	141,180	-	\$ 26,118	\$ 7,960	\$ 120,519	\$ 48,208	\$ 72,312	2.12	
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,227	\$ 491	\$ 736	2.76	
	VFDs (with pump replacement)	11,836	-	\$ 2,190	\$ -	\$ 16,245	\$ 4,734	\$ 11,511	5.26	4.78
Police Station	Boilers	-	-	\$ 5,593	\$ -	\$ 120,934	\$ 3,990	\$ 116,944	20.91	
	Water Savings (Aerators)	927	-	\$ 171	\$ -	\$ 162	\$ 65	\$ 97	0.57	0.57
Town Hall	Lighting	15,567	-	\$ 2,880	\$ 2,018	\$ 38,723	\$ 6,227	\$ 32,496	6.63	6.63
Youth Services	Individual Totals:	380,284	103	77,782	20,592	677,939	148,614	529,325	5.38	
				Comprehensive Bonus Incentive:		\$ 85,693				
		Overall:		\$ 77,782	\$ 20,592	\$ 677,939	\$ 234,307	\$ 443,632	4.51	

Lighting Summary

The LED fixtures have an average life of 12 years when they do not have controls imbedded. The majority of fixtures being installed have these controls. The sensors on these fixtures allow for dimming, high-end tuning of light levels and daylight sensors. These daylight sensors dim the lighting down based on ambient light levels in a space. The high-end tuning allows us to trim the light levels down per fixture to obtain more energy savings as well as extend the life of the fixtures. With these controls, manufacturers have stated the life of these LED fixtures to be 18+ years. **We used 12 years for our savings calculations to be conservative.** We will provide a tablet or phone that has the lighting control system software. We will provide training on how to operate the system.

Non-Lighting Summary

We plan to replace the existing hot water pumps with new pumps with high-efficiency electronically commutated motors and integrated VFDs. These pumps run at 100% currently. Adding VFDs will allow us to modulate the pump operating speed to better respond to demand. This will enable it to run at lower speeds thus creating energy savings. VFDs have an average life of 15 years. Aerators will be installed on faucets that do not have them and low flow shower heads where they are not currently. Aerators will reduce the flow of hot water and the gas required to heat that hot water. Vending Misers will reduce the operating power of the vending machines using occupancy sensors. The inefficient boilers are being replaced with high-efficiency condensing boilers resulting in gas consumption savings. The PD will replace it's single boiler with multiple smaller boilers for redundancy. Boilers typically have a life of 20-25 years. High efficiency transformers will replace the existing low efficiency transformers resulting in

60 months of Eversource financed payments:

\$ 7,394 per month \$ 443,632

Payback

4.51

Financial Analysis

\$ 77,782 Annual Energy Savings
\$ 443,632 Total Finance Amount
\$ 443,632 Eversource Financing - 0%

\$ (7,394) Monthly Financing Cost

\$ 6,482 Monthly Energy Savings

\$ (912) Total Monthly Cash Outlay

Total spend of \$46,920 over 5 years
Gets you \$677,939 in
upgraded, energy efficient equipment

Life of LED Lighting 12 Years - See Summary
Life of Boilers 20-25 Years - See Summary
Life of Transformers 25+ Years - See Summary
Life of remaining ECMs 15 Years - See Summary

- 1) Above based on estimated electric and natural gas rates. Need to confirm actual rates to finalize
- 2) All Energy Conservation Measures (ECMs) must be completed in order to qualify for comprehensive incentive bonus
- 3) New Boilers require natural gas to run

EVERSOURCE

Town of Waterford Property	Measure	kWh savings	Therm Savings	\$ Energy Savings	\$ O&M Savings	Turnkey Price	Incentive by Measure	Customer Cost	Payback by Measure	Payback by building
Community Center	Lighting	90,952	-	\$ 16,826	\$ 4,830	\$ 119,853	\$ 36,381	\$ 83,473	3.85	
	Vending Misers	1,444	-	\$ 267	-	\$ 1,227	\$ 491	\$ 736	2.76	
	Water Savings (Aerators)	-	103	\$ 134	-	\$ 325	\$ 130	\$ 195	1.46	4.23
	Refrigeration Controls	3,777	-	\$ 699	-	\$ 3,119	\$ 1,248	\$ 1,871	2.68	
	Transformers	14,191	-	\$ 2,625	-	\$ 26,681	\$ 5,676	\$ 21,005	8.00	
Emergency Management	Lighting	51,274	-	\$ 9,486	\$ 2,564	\$ 56,202	\$ 20,510	\$ 35,692	2.96	
	Vending Misers	1,165	-	\$ 216	-	\$ 632	\$ 253	\$ 379	1.76	
	VFDs (with pump replacement)	2,780	-	\$ 514	-	\$ 6,408	\$ 1,112	\$ 5,296	10.30	6.36
	Boilers	-	-	\$ 1,703	-	\$ 52,345	\$ 1,600	\$ 50,745	29.80	
Library	Lighting	43,747	-	\$ 8,093	\$ 3,220	\$ 113,335	\$ 17,499	\$ 95,837	8.47	
Police Station	Lighting	141,180	-	\$ 26,118	\$ 7,960	\$ 120,519	\$ 48,208	\$ 72,312	2.12	
	Vending Misers	1,444	-	\$ 267	-	\$ 1,227	\$ 491	\$ 736	2.76	
	VFDs (with pump replacement)	11,836	-	\$ 2,190	-	\$ 16,245	\$ 4,734	\$ 11,511	5.26	2.31
Town Hall	Water Savings (Aerators)	927	-	\$ 171	-	\$ 162	\$ 65	\$ 97	0.57	
Youth Services	Lighting	15,567	-	\$ 2,880	\$ 2,018	\$ 38,723	\$ 6,227	\$ 32,496	6.63	
	Individual Totals:	380,284	103	72,189	20,592	557,004	144,624	412,381	4.44	
				Comprehensive Bonus Incentive:		\$ 87,933				
Overall:				\$ 72,189	\$ 20,592	\$ 557,004	\$ 232,557	\$ 324,448	3.50	

Lighting Summary

The LED fixtures have an average life of 12 years when they do not have controls imbedded. The majority of fixtures being installed have these controls. The sensors on these fixtures allow for dimming, high-end tuning of light levels and daylight sensors. These daylight sensors dim the lighting down based on ambient light levels in a space. The high-end tuning allows us to trim the light levels down per fixture to obtain more energy savings as well as extend the life of the fixtures. With these controls, manufacturers have stated the life of these LED fixtures to be 18+ years. **We used 12 years for our savings calculations to be conservative.** We will provide a tablet or phone that has the lighting control system software. We will provide training on how to operate the system.

60 months of Eversource financed payments:

\$ 5,407 per month \$ 324,448

Payback

3.50

Financial Analysis

\$	72,189	Annual Energy Savings
\$	324,448	Total Finance Amount
\$	324,448	Eversource Financing - 0%

Monthly Financing Cost

\$	(5,407)	Monthly Financing Cost
\$	6,016	Monthly Energy Savings
\$	608	Total Monthly Cash Positive

Life of LED Lighting	12 Years - See Summary
Life of Boilers	20-25 Years - See Summary
Life of Transformers	25+ Years - See Summary
Life of remaining ECMS	15 Years - See Summary

Non-Lighting Summary

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- 1) Above based on estimated electric and natural gas rates. Need to confirm actual rates to finalize
- 2) All Energy Conservation Measures (ECMs) must be completed in order to qualify for comprehensive incentive bonus
- 3) New Boilers require natural gas to run

EVERSOURCE



Town of Waterford Property	Measure	kWh savings	Therm Savings	\$ Energy Savings	\$ O&M Savings	Turnkey Price	Incentive by Measure	Customer Cost	Payback by Measure	Payback by building
Community Center	Lighting	90,952	-	\$ 16,826	\$ 4,830	\$ 119,853	\$ 36,381	\$ 83,473	3.85	
	Vending Misers	1,444	-	\$ 267	-	\$ 1,227	\$ 491	\$ 736	2.76	
	Water Savings (Aerators)	-	103	\$ 134	-	\$ 325	\$ 130	\$ 195	1.46	4.23
	Refrigeration Controls	3,777	-	\$ 699	-	\$ 3,119	\$ 1,248	\$ 1,871	2.68	
	Transformers	14,191	-	\$ 2,625	-	\$ 26,681	\$ 5,676	\$ 21,005	8.00	
Emergency Management	Lighting	51,274	-	\$ 9,486	\$ 2,564	\$ 56,202	\$ 20,510	\$ 35,692	2.96	
	Vending Misers	1,165	-	\$ 216	-	\$ 632	\$ 253	\$ 379	1.76	3.60
	VFDs (with pump replacement)	2,780	-	\$ 514	-	\$ 6,408	\$ 1,112	\$ 5,296	10.30	
Library	Lighting	43,747	-	\$ 8,093	\$ 3,220	\$ 113,335	\$ 17,499	\$ 95,837	8.47	5.56
	Lighting	141,180	-	\$ 26,118	\$ 7,960	\$ 120,519	\$ 48,208	\$ 72,312	2.12	
	Vending Misers	1,444	-	\$ 267	-	\$ 1,227	\$ 491	\$ 736	2.76	4.77
	VFDs (with pump replacement)	11,836	-	\$ 2,190	-	\$ 16,245	\$ 4,734	\$ 11,511	5.26	
	Boilers	-	-	\$ 5,593	-	\$ 120,934	\$ 3,990	\$ 116,944	20.91	
Town Hall	Water Savings (Aerators)	927	-	\$ 171	-	\$ 162	\$ 65	\$ 97	0.57	4.53
Youth Services	Lighting	15,567	-	\$ 2,880	\$ 2,018	\$ 38,723	\$ 6,227	\$ 32,496	6.63	4.53
	Individual Totals:	380,284	103	\$ 76,079	\$ 20,592	\$ 625,594	\$ 147,014	\$ 478,580	4.95	
Overall:				\$ 76,079	\$ 20,592	\$ 625,594	\$ 238,293	\$ 387,301	4.01	
				Comprehensive Bonus Incentive: \$ 91,279						

Lighting Summary

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60 months of Eversource financed payments:

\$ 6,455 per month

Payback 4.01

Financial Analysis

\$	76,079	Annual Energy Savings
\$	387,301	Total Finance Amount
\$	387,301	Eversource Financing - 0%

\$ (6,455) Monthly Financing Cost

\$ 6,340 Monthly Energy Savings

\$ (115) Total Monthly Cash Outlay

Total spend of \$6,900 over 5 years
Gets you \$625,594 in
upgraded, energy efficient equipment

Life of LED Lighting	12 Years - See Summary
Life of Boilers	20-25 Years - See Summary
Life of Transformers	25+ Years - See Summary
Life of remaining ECMs	15 Years - See Summary

Non-Lighting Summary

We plan to replace the existing hot water pumps with new pumps with high-efficiency electronically commutated motors and integrated VFDs. These pumps run at 100% currently. Adding VFDs will allow us to modulate the pump operating speed to better respond to demand. This will enable it to run at lower speeds thus creating energy savings. VFDs have an average life of 15 years. Aerators will be installed on faucets that do not have them and low flow shower heads where they are not currently. Aerators will reduce the flow of hot water and the gas required to heat that hot water. Vending Mizers will reduce the operating power of the vending machines using occupancy sensors. The inefficient boilers are being replaced with high-efficiency condensing boilers resulting in gas consumption savings. The PD will replace it's single boiler with multiple smaller boilers for redundancy. Boilers typically have a life of 20-25 years. High efficiency transformers will replace the existing low efficiency transformers resulting in

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- 2) All Energy Conservation Measures (ECMs) must be completed in order to qualify for comprehensive incentive bonus
- 3) New Boilers require natural gas to run

Town of Waterford Property	Measure	kWh savings	Therm Savings	\$ Energy Savings	\$ O&M Savings	Turnkey Price	Incentive by Measure	Customer Cost	Payback by Measure	Payback by building
Community Center	Lighting	90,952	-	\$ 16,826	\$ 4,830	\$ 119,853	\$ 36,381	\$ 83,473	3.85	
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,227	\$ 491	\$ 736	2.76	
	Water Savings (Aerators)	-	103	\$ 134	\$ -	\$ 325	\$ 130	\$ 195	1.46	4.23
	Refrigeration Controls	3,777	-	\$ 699	\$ -	\$ 3,119	\$ 1,248	\$ 1,871	2.68	
Emergency Management	Transformers	14,191	-	\$ 2,625	\$ -	\$ 26,681	\$ 5,676	\$ 21,005	8.00	
	Lighting	51,274	-	\$ 9,486	\$ 2,564	\$ 56,202	\$ 20,510	\$ 35,692	2.96	
	Vending Misers	1,165	-	\$ 216	\$ -	\$ 632	\$ 253	\$ 379	1.76	3.24
	VFDs (with pump replacement)	2,780	-	\$ 514	\$ -	\$ 6,408	\$ 1,112	\$ 5,296	10.30	
Library	Lighting	43,747	-	\$ 8,093	\$ 3,220	\$ 113,335	\$ 17,499	\$ 95,837	8.47	3.76
	Lighting	141,180	-	\$ 26,118	\$ 7,960	\$ 120,519	\$ 48,208	\$ 72,312	2.12	
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,227	\$ 491	\$ 736	2.76	2.31
Police Station	VFDs (with pump replacement)	11,836	-	\$ 2,190	\$ -	\$ 16,245	\$ 4,734	\$ 11,511	5.26	
	Water Savings (Aerators)	927	-	\$ 171	\$ -	\$ 162	\$ 65	\$ 97	0.57	0.57
Town Hall	Lighting	15,567	-	\$ 2,880	\$ 2,018	\$ 38,723	\$ 6,227	\$ 32,496	6.63	6.63
Youth Services	Lighting	380,284	103	70,486	20,592	504,660	143,024	361,636	3.97	
Individual Totals:										
Overall:				\$ 70,486	\$ 20,592	\$ 504,660	\$ 228,717	\$ 275,943	3.03	
Comprehensive Bonus Incentive:							\$ 85,693			

Lighting Summary

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60 months of Eversource financed payments:

\$ 4,599 per month **\$ 275,943**

Payback

3.03

Financial Analysis

\$	70,486	Annual Energy Savings
\$	275,943	Total Finance Amount
\$	275,943	Eversource Financing - 0%

\$ (4,599) Monthly Financing Cost

\$ 5,874 Monthly Energy Savings

\$ **1,275 Total Monthly Cash Positive**

Life of LED Lighting 12 Years - See Summary

Life of Transformers 25+ Years - See Summary

Life of remaining ECMs 15 Years - See Summary

Non-Lighting Summary

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EVERSOURCE



Town of Waterford Property	Measure	kWh savings	Therm Savings	\$ Energy Savings	\$ O&M Savings	Turnkey Price	Incentive by Measure	Customer Cost	Payback by Measure	Payback by building
Community Center	Lighting	90,952	-	\$ 16,826	\$ 4,830	\$ 119,853	\$ 36,381	\$ 83,473	3.85	4.23
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,227	\$ 491	\$ 736	2.76	
	Water Savings (Aerators)	-	103	\$ 134	\$ -	\$ 325	\$ 130	\$ 195	1.46	
	Refrigeration Controls	3,777	-	\$ 699	\$ -	\$ 3,119	\$ 1,248	\$ 1,871	2.68	
	Transformers	14,191	-	\$ 2,625	\$ -	\$ 26,681	\$ 5,676	\$ 21,005	8.00	
Emergency Management	Lighting	51,274	-	\$ 9,486	\$ 2,564	\$ 56,202	\$ 20,510	\$ 35,692	2.96	6.36
	Vending Misers	1,165	-	\$ 216	\$ -	\$ 632	\$ 253	\$ 379	1.76	
	VFDs (with pump replacement)	2,780	-	\$ 514	\$ -	\$ 6,408	\$ 1,112	\$ 5,296	10.30	
	Boilers	-	-	\$ 1,703	\$ -	\$ 52,345	\$ 1,600	\$ 50,745	29.80	
Library	Lighting	43,747	-	\$ 8,093	\$ 3,220	\$ 113,335	\$ 17,499	\$ 95,837	8.47	8.47
Police Station	Lighting	141,180	-	\$ 26,118	\$ 7,960	\$ 120,519	\$ 48,208	\$ 72,312	2.12	4.78
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,227	\$ 491	\$ 736	2.76	
	VFDs (with pump replacement)	11,836	-	\$ 2,190	\$ -	\$ 16,245	\$ 4,734	\$ 11,511	5.26	
	Boilers	-	-	\$ 5,593	\$ -	\$ 120,934	\$ 3,990	\$ 116,944	20.91	
Town Hall	Water Savings (Aerators)	927	-	\$ 171	\$ -	\$ 162	\$ 65	\$ 97	0.57	0.57
Youth Services	Lighting	15,567	-	\$ 2,880	\$ 2,018	\$ 38,723	\$ 6,227	\$ 32,496	6.63	6.63
Cohanzie Fire House	Lighting	30,378	-	\$ 5,620	\$ 1,185	\$ 44,937	\$ 12,151	\$ 32,786	4.82	6.87
	VFDs (with pump replacement)	2,268	-	\$ 420	\$ -	\$ 19,792	\$ 907	\$ 18,885	45.01	
	Water Savings (Aerators)	-	-	\$ 161	\$ -	\$ 292	\$ 117	\$ 175	1.09	
	Vending Misers	1,165	-	\$ 216	\$ -	\$ 619	\$ 247	\$ 371	1.72	
Goshen Fire House	Lighting	4,908	-	\$ 908	\$ 370	\$ 13,719	\$ 1,963	\$ 11,756	9.20	7.21
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 619	\$ 247	\$ 371	1.39	
	Water Savings (Aerators)	-	-	\$ 161	\$ -	\$ 292	\$ 117	\$ 175	1.09	
Oswegatchie Fire House	Lighting	27,046	-	\$ 5,004	\$ 1,463	\$ 50,849	\$ 10,818	\$ 40,030	6.19	12.52
	Boilers	-	-	\$ 628	\$ -	\$ 53,014	\$ 1,078	\$ 51,937	82.70	
	VFDs (with pump replacement)	5,558	-	\$ 1,028	\$ -	\$ 16,434	\$ 2,223	\$ 14,211	13.82	
	Water Savings (Aerators)	-	-	\$ 161	\$ -	\$ 292	\$ 117	\$ 175	1.09	
Quaker Hill Fire House	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,202	\$ 481	\$ 721	2.70	11.86
	Lighting	34,685	-	\$ 6,417	\$ 1,137	\$ 48,171	\$ 13,874	\$ 34,297	4.54	
	Boilers	-	-	\$ 205	\$ -	\$ 53,014	\$ 726	\$ 52,288	255.07	
	VFDs (with pump replacement)	1,418	-	\$ 262	\$ -	\$ 13,960	\$ 567	\$ 13,393	51.06	
	Vending Misers	1,165	-	\$ 216	\$ -	\$ 619	\$ 247	\$ 371	1.72	
Quaker Hill Fire House	Water Savings (Aerators)	-	-	\$ 242	\$ -	\$ 398	\$ 159	\$ 239	0.99	
Individual Totals:		491,763	103	99,963	24,747	996,160	194,654	801,507	6.43	

Comprehensive Bonus Incentive:		\$ 110,601								
Overall:	\$ 99,963	\$ 24,747	\$ 996,160	\$ 305,255	\$ 690,905				5.54	

Lighting Summary

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60 months of Eversource financed payments:

\$ 11,515 per month **\$ 690,905**

Payback 5.54

Financial Analysis

\$ 99,963	Annual Energy Savings
\$ 690,905	Total Finance Amount
\$ 690,905	Eversource Financing - 0%

\$ (11,515)	Monthly Financing Cost
\$ 8,330	Monthly Energy Savings
\$ (3,185)	Total Monthly Cash Outlay

Total spend of \$191,100 over 5 years

Gets you \$996,160 in

upgraded, energy efficient equipment

Life of LED Lighting	12 Years - See Summary
Life of Boilers	20-25 Years - See Summary
Life of Transformers	25+ Years - See Summary
Life of remaining ECMs	15 Years - See Summary

- 1) Above based on estimated electric and natural gas rates. Need to confirm actual rates to finalize
- 2) All Energy Conservation Measures (ECMs) must be completed in order to qualify for comprehensive incentive bonus
- 3) New Boilers require natural gas to run
- 4) Firehouse boiler and aerator savings are based on heating oil reduction

EVERSOURCE



Town of Waterford Property	Measure	kWh savings	Therm Savings	\$ Energy Savings	\$ O&M Savings	Turnkey Price	Incentive by Measure	Customer Cost	Payback by Measure	Payback by building
Community Center	Lighting	90,952	-	\$ 16,826	\$ 4,830	\$ 119,853	\$ 36,381	\$ 83,473	3.85	4.23
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,227	\$ 491	\$ 736	2.76	
	Water Savings (Aerators)	-	103	\$ 134	\$ -	\$ 325	\$ 130	\$ 195	1.46	
	Refrigeration Controls	3,777	-	\$ 699	\$ -	\$ 3,119	\$ 1,248	\$ 1,871	2.68	
	Transformers	14,191	-	\$ 2,625	\$ -	\$ 26,681	\$ 5,676	\$ 21,005	8.00	
Emergency Management	Lighting	51,274	-	\$ 9,486	\$ 2,564	\$ 56,202	\$ 20,510	\$ 35,692	2.96	6.36
	Vending Misers	1,165	-	\$ 216	\$ -	\$ 632	\$ 253	\$ 379	1.76	
	VFDs (with pump replacement)	2,780	-	\$ 514	\$ -	\$ 6,408	\$ 1,112	\$ 5,296	10.30	
	Boilers	-	-	\$ 1,703	\$ -	\$ 52,345	\$ 1,600	\$ 50,745	29.80	
Library	Lighting	43,747	-	\$ 8,093	\$ 3,220	\$ 113,335	\$ 17,499	\$ 95,837	8.47	8.47
Police Station	Lighting	141,180	-	\$ 26,118	\$ 7,960	\$ 120,519	\$ 48,208	\$ 72,312	2.12	4.78
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,227	\$ 491	\$ 736	2.76	
	VFDs (with pump replacement)	11,836	-	\$ 2,190	\$ -	\$ 16,245	\$ 4,734	\$ 11,511	5.26	
	Boilers	-	-	\$ 5,593	\$ -	\$ 120,934	\$ 3,990	\$ 116,944	20.91	
Town Hall	Water Savings (Aerators)	927	-	\$ 171	\$ -	\$ 162	\$ 65	\$ 97	0.57	0.57
Youth Services	Lighting	15,567	-	\$ 2,880	\$ 2,018	\$ 38,723	\$ 6,227	\$ 32,496	6.63	6.63
Cohanzie Fire House	Lighting	30,378	-	\$ 5,620	\$ 1,185	\$ 44,937	\$ 12,151	\$ 32,786	4.82	4.64
	Water Savings (Aerators)	-	-	\$ 161	\$ -	\$ 292	\$ 117	\$ 175	1.09	
	Vending Misers	1,165	-	\$ 216	\$ -	\$ 619	\$ 247	\$ 371	1.72	
Goshen Fire House	Lighting	4,908	-	\$ 908	\$ 370	\$ 13,719	\$ 1,963	\$ 11,756	9.20	7.21
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 619	\$ 247	\$ 371	1.39	
	Water Savings (Aerators)	-	-	\$ 161	\$ -	\$ 292	\$ 117	\$ 175	1.09	
Oswegatchie Fire House	Lighting	27,046	-	\$ 5,004	\$ 1,463	\$ 50,849	\$ 10,818	\$ 40,030	6.19	5.94
	Water Savings (Aerators)	-	-	\$ 161	\$ -	\$ 292	\$ 117	\$ 175	1.09	
	Vending Misers	1,444	-	\$ 267	\$ -	\$ 1,202	\$ 481	\$ 721	2.70	
Quaker Hill Fire House	Lighting	34,685	-	\$ 6,417	\$ 1,137	\$ 48,171	\$ 13,874	\$ 34,297	4.54	4.36
	Vending Misers	1,165	-	\$ 216	\$ -	\$ 619	\$ 247	\$ 371	1.72	
	Water Savings (Aerators)	-	-	\$ 242	\$ -	\$ 398	\$ 159	\$ 239	0.99	
Individual Totals:		482,519	103	97,420	24,747	839,944	189,152	650,792	5.33	
Comprehensive Bonus Incentive:							\$ 105,100			
Overall:		\$ 97,420	\$ 24,747	\$ 839,944	\$ 294,252	\$ 545,692	4.47			

Lighting Summary

The LED fixtures have an average life of 12 years when they do not have controls imbedded. The majority of fixtures being installed have these controls. The sensors on these fixtures allow for dimming, high-end tuning of light levels and daylight sensors. These daylight sensors dim the lighting down based on ambient light levels in a space. The high-end tuning allows us to trim the light levels down per fixture to obtain more energy savings as well as extend the life of the fixtures. With these controls, manufacturers have stated the life of these LED fixtures to be 18+ years. **We used 12 years for our savings calculations to be conservative. ** We will provide a tablet or phone that has the lighting control system software. We will provide training on how to operate the system.

Non-Lighting Summary

We plan to replace the existing hot water pumps with new pumps with high-efficiency electronically commutated motors and integrated VFDs. These pumps run at 100% currently. Adding VFDs will allow us to modulate the pump operating speed to better respond to demand. This will enable it to run at lower speeds thus creating energy savings. VFDs have an average life of 15 years. Aerators will be installed on faucets that do not have them and low flow shower heads where they are not currently. Aerators will reduce the flow of hot water and the gas required to heat that hot water. Vending Misers will reduce the operating power of the vending machines using occupancy sensors. The inefficient boilers are being replaced with high-efficiency condensing boilers resulting in gas consumption savings. The PD will replace its single boiler with multiple smaller boilers for redundancy. Boilers typically have a life of 20-25 years. High efficiency transformers will replace the existing low efficiency transformers resulting in

60 months of Eversource financed payments:

\$ 9,095 per month \$ 545,692

Payback 4.47

Financial Analysis

\$ 97,420	Annual Energy Savings
\$ 545,692	Total Finance Amount
\$ 545,692	Eversource Financing - 0%
\$ (9,095)	Monthly Financing Cost
\$ 8,118	Monthly Energy Savings
\$ (977)	Total Monthly Cash Outlay

Total spend of \$58,620 over 5 years

Gets you \$839,944 in

upgraded, energy efficient equipment

Life of LED Lighting	12 Years - See Summary
Life of Boilers	20-25 Years - See Summary
Life of Transformers	25+ Years - See Summary
Life of remaining ECMs	15 Years - See Summary

- 1) Above based on estimated electric and natural gas rates. Need to confirm actual rates to finalize
- 2) All Energy Conservation Measures (ECMs) must be completed in order to qualify for comprehensive incentive bonus
- 3) New Boilers require natural gas to run

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7/1/2019	BLDG MAINT	CIP	31120-55851	ADA IMPROVEMENTS PD	87,000		ADA Police Entrance proposals received. Project to be rebid as scope of work has changed.	9/22/2022
7/1/2020	BLDG MAINT	CIP	31121-55851	ADA IMPROVEMENTS YSB	62,061		DPW Director is reviewing needs for outside YSB for ADA improvements. Will bid work for front door and ramp improvements.	9/22/2022
7/1/2021	BLDG MAINT	CIP	31122-57857	CIVIC TRIANGLE UPGRADES	860		First phase is dredging pond. Once dredging is completed, project will move onto other project phases.	9/22/2022
2/7/2021	BLDG MAINT	CNR	20511-57872	ROOF & HVAC REPLACEMENT OF PUBLIC SAFETY BUILDING	186,363		Contract awarded. Work to begin week of 9/26/22.	9/22/2022
2/7/2021	BLDG MAINT	CNR	20511-57874	RECONDITION ELEVATORS (TOWN HALL & YSB)	35		Legal reviewing contract and price increases after PO opened. Work to begin after legal review.	9/22/2022
7/1/2017	BLDG MAINT	CNR	20511-57788	COMMUNITY CENTER HVAC CONTROL SEPARATION	49,800		Project Complete and will be closed.	9/22/2022
7/1/2022	BLDG MAINT (Priority 1)	CIP	33123-55905	UST REPLACEMENT (LIBRARY & PUBLIC SAFETY)	400,000		Library ready to move forward. Public Safety work to be bid in February 2023 after heating season.	9/22/2022
7/1/2022	BLDG MAINT (Priority 1)	CIP	33123-55904	UST REPLACEMENT (EUGENE O'NEILL)	260,000		2 parts to the project - Part 1 (tank removal - working to remove asphalt above tank so that tank can be emptied and then investigation as to if there was any spill contamination); Part 2 (tank replacement - temporary tank installed. New tank replacement to be bid in Dec 2022).	9/22/2022
7/1/2021	BLDG MAINT (Priority 1)	CIP	31122-55819	UNDERGROUND TANK REPLACEMENT (at Police Dept.)	181,000		Bid distributed to replace oil burner with gas. Once this part of the project is completed; a second bid will be posted for the tank replacement.	9/22/2022
7/1/2021	BLDG MAINT (Priority 2)	CIP	31122-55892	AC UNIT REPLACEMENT AT EMERGENCY RADIO SITES	54,000		Preparing bid with assistance of on-call engineer. Plan to distribute bid in November 2022.	9/22/2022
7/1/2021	BLDG MAINT (Priority 3)	CIP/ARPA	31122-55893	EUGENE O'NEILL MANSION ROOF REPLACEMENT (co-funded with Eugene O'Neill)	58,418		RFP is distributed. Received proposals for architect; being reviewed and then will be forwarded to BOS for contract award approval.	9/22/2022
7/1/2019	BLDG MAINT (Priority 6)	CIP	31120-55852	TOWN HALL BATHROOMS	72,910		DPW to submit request for merging this project with 31121-55852 and then request project be moved to CNR.	9/22/2022
7/1/2020	BLDG MAINT (Priority 6)	CIP	31121-55852	TOWN HALL BATHROOMS	25,000		DPW to submit request for merging this project with 31120-55852 and then request project be moved to CNR.	9/22/2022
8/9/2021	BLDG MAINT (Priority 6)	CNR	20511-57839	TOWN HALL EMERGENCY EGRESS	41,275		On hold as other projects have taken priority.	9/22/2022
7/1/2021	BLDG MAINT (Priority 6)	CNR	20511-57866	TOWN HALL FRONT DOOR	29,886		No proposals received from bid process. DPW Director reviewing how to move forward.	9/22/2022
7/1/2016	BLDG MAINT (Priority 8)	CIP	31117-55803	PARKING LOT - YOUTH SERVICES	292,800		DPW director is working on plan for project in conjunction with Police and EOC parking lots. Working on quote to pave and line entire lots.	9/22/2022
7/1/2017	BLDG MAINT (Priority 8)	CIP	31118-55803	PARKING LOT - YSB & POLICE	138,320		DPW director is working on plan for project in conjunction with Police and EOC parking lots. Working on quote to pave and line entire lots.	9/22/2022

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7/1/2022	BLDG MAINT/ PLANNING	CIP	33123- 55903	FISH LADDER UPGRADES	16,000		Matching funds required as part of the NFWF grant received to repair the fish ladder. Maureen Fitzgerald is working with contractor to complete work.	8/18/2022
7/1/2022	BLDG MAINT/ PLANNING	CIP	33123- 57857	CIVIC TRIANGLE UPGRADES	246,209		First phase is dredging pond. Once dredging is completed, project will move onto other project phases.	9/22/2022
7/1/2019	BOE	CNR	20560- 57841	BUS LOT OFFICE	0	150,000	Funds can be released, we have relocated the bus company to the old IT area on the high school grounds (J building)	9/22/2022
7/1/2017	BOE	CNR	20560- 57822	IT LEARNING BOARDS-END OF LIFE	15,075	438,068	Delivery of the Great Neck boards is underway and they should arrive over the next week with installation occurring in the evenings over the next 5 weeks. We are awaiting a quote for the final project at WHS which should be in tomorrow, after which a request will begin to work its way through the boards.	9/22/2022
7/1/2019	BOE	CNR	20560- 57828	QH 1-YEAR RETRO COMMISSIONING		30,000	We tossed that on the backburner and honestly I forgot about it with Covid. We'll have to start on this with the expectation of this being done over the summer.	9/22/2022
7/1/2019	BOE	CNR	20560- 57833	TENNIS COURTS		52,300	This project is morphing, we did some repairs on BOE's dime as it was an acute need. We'll be putting forward a larger dollar amount on this effort. It's a full tear and replace.	9/22/2022
7/1/2020	BOE	CNR	20560- 57842	SCHOOL SECURITY	32,175		We're working with the first selectman's office on school security, this is the final piece. Will submit a joint request for town and school security upgrades.	9/22/2022
7/1/2016	EMERGENCY MGMT	CNR	20522- 57794	MOBILE & PORTABLE RADIO REPLACEMENT PROGRAM		740,165	Chief of Police, Emergency Operations Manager and Fire Services Administrator working to review all town radios and needs to prepare request for appropriation.	9/22/2022
7/1/2015	FINANCE	CIP	30716- 55793	FINANCIAL SOFTWARE UPGRADE	9,692		Will be doing a server and software upgrade early November 2022 with testing through January 2023 with a "go live" date of February 2023.	9/16/2022
8/3/2022	FIRE	ARPA	23507- 54019	FIRST RESPONDER ESO FIRE RMS	13,750		Project complete and can be closed.	9/14/2022
7/1/2022	FIRE	CIP	32323- 55900	COHANZIE EMERGENCY GENERATOR	55,000		Met with vendor to review project. Will seek approval as a cooperative purchase.	9/14/2022
7/1/2019	FIRE	CNR	20523- 57733	OSWEGATCHIE FIRE BUILDING IMPROVEMENTS	500	2,990,000	Project being discussed at RTM Ad Hoc Committee.	
7/1/2019	FIRE	CNR	20523- 57751	ELECTICAL UPGRADE JORDAN	28,688		Contract awarded. Work is 60% complete. Town has inspected and approved and it is now in the hands of Eversource to complete their share of the work.	9/14/2022
7/1/2019	FIRE	CNR	20523- 57836	FIRE SERVICES CARPET REPLACEMENT		30,000	On hold - asbestos in flooring will need larger plan to complete. Has a lower priority in relation to other projects	9/14/2022

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7/1/2019	FIRE	CNR	20523-57838	FIRE SERVICES PRE EMPTION LIGHT REPAIRS	-	50,000	Project on hold per Director. New London is using our equipment to test their lights before Waterford can test and develop a plan for the project.	9/14/2022
8/3/2022	FIRE	ARPA	23507-54018	FIRST RESPONDER EQUIP/SOFTWARE	80,750		Project Completed.	8/18/2022
8/3/2022	IT	ARPA	23507-55016	Broadband/Security Upgrades at Pump Stations	680,322		We are in design discussions and project evaluations working toward a quote and statement of work.	9/20/2022
7/1/2020	IT	CNR	20547-57846	FIBER UPGRADE (Priority 1)	5,380	22,620	2nd year of 2-year program. FY22 upgrades to include Civic Triangle and surrounding area. Bids received were above approved project amount. Reviewing for steps forward.	9/20/2020
7/1/2021	IT	CNR	20547-57861	SWITCHES	20,242	2,258	Equipment ordered. Delays due to supply chains. Estimated time of delivery is December 2022.	9/20/2022
7/1/2021	IT	CNR	20547-57860	PHONE SYSTEM UPGRADE (SOFTWARE & HARDWARE) (Priority 4)	0	16,000	Equipment is at end of life and is becoming a higher priority. Working with BOE and vendors for quotes. BOE is taking lead as they have the larger portion of the project.	9/20/2022
7/1/2021	IT	CNR	20547-57847	TOWN WIDE CAMERA SYSTEM (Priority 5)	0	85,000	Requesting a bid waiver to use current vendor. Once approved, an appropriation request will be submitted to allow the project to move forward.	9/20/2022
7/1/2021	LIBRARY	CNR	57848	LIBRARY HVAC UPGRADE		1,091,200	Project is at the State Bonding Commission. Once bond is received, project will move forward.	8/17/2022
8/3/2022	PLANNING	ARPA	23507-58021	ECONOMIC ASSISTANCE TO SMALL BUSINESSES	300,000		Program announced. 2nd community event via webinar on 9/28/22; applications due 10/11/22.	9/15/2022
8/3/2022	PLANNING	ARPA	23507-55015	GIS UPDATES	37,500		Completed.	9/15/2022
4/1/2022	PLANNING	ARPA	23507-55018	CIVIC TRIANGLE	950,000		Contract awarded to Kent and Forest. Wetlands public meeting on 10/6/22; Army Corps visit on 9/21/22; awaiting permits from Wetlands committee and state of CT to begin dredging.	9/15/2022
7/1/2020	PLANNING	CNR	20511-57857	CIVIC TRIANGLE PROJECT	0	0	Contract awarded to Kent and Forest. Wetlands public meeting on 10/6/22; Army Corps visit on 9/21/22; awaiting permits from Wetlands committee and state of CT to begin dredging.	9/15/2022
7/1/2014	PLANNING	CNR	20501-57740	COHANZIE SCHOOL REMEDIATION & DEMO	63,574		Demolition work completed. Project to be closed.	9/15/2022
7/1/2017	PLANNING	CNR	20510-57830	THAMES RIVER MARINA DOCK	0		Project complete and can be closed.	9/15/2022
7/1/2020	PLANNING	CNR	20510-57865	CRYSTALL MALL REDEVELOPMENT FEASIBILITY STUDY	250,000		Grant not awarded. Project to be closed.	9/15/2022
7/1/2019	PLANNING	CNR	20511-57840	POCD	99,783		Contract awarded to consultant. Public Surveys being distributed for input to document.	9/15/2022

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7/1/2019	PLANNING	CNR	20511-57767	NEVINS COTTAGE	20,715	100,000	Need updated cost estimates to apply for next grant round in December 2022.	9/15/2022
7/1/2019	PLANNING	CNR	20541-57328	ALEWIFE COVE		37,500	Determine matching fund sources and review grant opportunities or further CIP funding necessary to complete project. Funding availability will drive project completion. Have requested a joint project with New London and awaiting response.	9/15/2022
7/1/2022	POLICE	CIP	32923-55897	CELL BENCH SAFETY OVERLAY	17,100		Additional funds requested (\$2,496). Approved by the BOS on 8/16/22 and BOF on 9/7/22. Walkthrough with vendor scheduled and then work to begin.	9/14/2022
7/1/2022	POLICE	CIP	32923-55898	DE-ESCALATION & COMMUNICATION TECHNOLOGY	22,085		Additional funds request (\$775). Approved by the BOS on 7/19/22 and approved by BOF on 7/20/22. Items ordered and received. Awaiting final invoice before closing out project.	9/14/2022
7/1/2022	POLICE	CIP	32923-55899	ELECTRONIC CONTROL WEAPON TRANSITION	0		Items purchased. Project complete.	9/14/2022
7/1/2021	POLICE	CIP	32922-55878	IMPOUND YARD IMPROVEMENTS	28,500		Project is under review by Chief of Police.	9/14/2022
7/1/2021	POLICE	CIP	32921-55879	MARINE OUTBOARD MOTORS	0		Motors received. East Lyme's share of payment received. Project complete and ready to close.	9/14/2022
7/1/2019	POLICE	CIP	32920-55859	POLICE BLDG ARCHITECTURAL PLAN	15,000		New Chief of Police has reviewed this project and has requested it be closed. Current space being reutilized without the need for an architectural plan.	9/14/2022
7/1/2019	POLICE	CIP	32920-55846	POLICY DIRECTIVES REVAMP	0		Final draft/plans to be completed during FY23 after visits.	9/14/2022
7/1/2019	PUBLIC WORKS	CIP	33020-55850	CROSS ROAD	2,754,000		Project 90% complete. Working to complete punch list items: manhole covers and raising fire hydrant before final invoicing and closing project.	9/22/2022
7/1/2020	PUBLIC WORKS	CIP	33021-55867	REMOVE UST COHANZIE FIRE	299,000		Tank removed. Some contaminated soils found. Requested additional funds (\$38,500), approved by the BOS on 8/14/22; approved by BOF on 9/7/22; awaiting RTM approval.	9/22/2022
7/1/2021	PUBLIC WORKS	CIP	33022-55889	PAVING: Section A, Area 1(P) - (Olive, Vivian Ct, Orient, Louise, Monroe)	68,332		Project complete awaiting final punch list completion.	9/22/2022
7/1/2021	PUBLIC WORKS	CIP	33022-55890	PAVING: Eversource Affected - (Milton, Dunbar & Rainbow)	215,813		Project completed.	9/22/2022
7/1/2021	PUBLIC WORKS	CIP	33022-55891	Transfer Station (Scale & Scale House)	225		Scale scheduled to arrive 10/19/22. 2-Day installation once received.	9/22/2022
7/1/2021	PUBLIC WORKS	CNR	20511-57856	JORDAN VILLAGE SIDEWALKS	80,240		Work to start week of 9/26/22 and to be completed within 30 days.	9/22/2022
7/1/2019	PUBLIC WORKS	CNR	20523-57791	JORDAN TRAFFIC LIGHT UPGRADE	-	25,000		

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7/1/2019	PUBLIC WORKS	CNR	20530-55850	CROSS RD DESIGN WORK	5,481		Project complete and to be closed.	9/22/2022
7/1/2017	PUBLIC WORKS	CNR	20530-57815	RECONSTRUCTION GARDINERS WOOD RD	83,447		Project complete and to be closed.	9/22/2022
6/6/2022	PUBLIC WORKS	CNR	20530-57877	Road Resurfacing Lakes Pond Road, Butlertown Road, Daniels Avenue, Niantic River Road and Gardiner's Wood Road	980,215		Daniels Avenue, Niantic River and Gardiner's Wood paving all complete. Work to begin on remaining roads within 60 days.	9/22/2022
6/6/2022	PUBLIC WORKS (Priority 1)	CNR	20511-57875	Temporary Oil Tank --Eugene O'Neill	1,094		Installed and will remain in use until permanent tank installed early spring 2023.	9/22/2022
6/6/2022	PUBLIC WORKS (Priority 1)	CNR	20511-57876	Southwest School Underground Tank Removal	117,500		Tank is empty of fuel. Removal project to be bid by 9/30/22.	9/22/2022
8/3/2022	PUBLIC WORKS (Priority 3)	ARPA	23507-58022	EUGENE O'NEILL THEATER	588,765		RFP is distributed. Received proposals for architect; being reviewed and then will be forwarded to BOS for contract award approval.	9/22/2022
7/1/2020	PUBLIC WORKS (Priority 3)	CNR	20511-57859	EUGENE O'NEILL ROOF REPLACEMENT			RFP is distributed. Received proposals for architect; being reviewed and then will be forwarded to BOS for contract award approval.	9/22/2022
7/1/2022	PUBLIC WORKS (Priority 5)	CIP	33023-55902	PAVING: EVERSOURCE AFFECTED 2 (Kingfisher Way, Woodlawn Ave, Sandy Hollow Drive, Mackenzie Road, Kestrel Lane)	315,951		Work to begin in Spring 2023.	9/22/2022
7/1/2022	PUBLIC WORKS (Priority 5)	CIP	33023-55902	PAVING: SECTION A, AREA 3 (TIFFANY, SAVI, CHERRY, WILLOW, CEDAR, EAST BROOK)	325,915		Work to begin in Spring 2023.	9/22/2022
7/1/2022	PUBLIC WORKS (Priority 7)	CIP	33023-55901	SANDY HOLLOW & SHORE ROADS CONCRETE CURB REPLACEMENT	219,300		Working on specifications to prepare bid for late fall 2022	9/22/2022
7/1/2021	PUBLIC WORKS (Priority 7)	CIP/LoCIP	33022-55882	SEWALK REPLACEMENT: Norman/Concrete Panels	60,678		Design contract awarded. Partially funded as a LoCIP project. To be bid in February 2023 with job completion by June 30, 2023.	9/22/2022
7/1/2021	PUBLIC WORKS (Priority 7)	CIP/LoCIP	33022-55883	SEWALK REPLACEMENT: William Street/Concrete Sidewalk	32,732		Design contract awarded. Partially funded as a LoCIP project. To be bid in February 2023 with job completion by June 30, 2023.	9/22/2022
7/1/2021	PUBLIC WORKS (Priority 7)	CIP/LoCIP	33022-55884	SEWALK REPLACEMENT: Summer Street/Concrete Sidewalk	25,874		Design contract awarded. Partially funded as a LoCIP project. To be bid in February 2023 with job completion by June 30, 2023.	9/22/2022
7/1/2021	PUBLIC WORKS (Priority 7)	CIP/LoCIP	33022-55885	SEWALK REPLACEMENT: David Street/Concrete Sidewalk	34,114		Design contract awarded. Partially funded as a LoCIP project. To be bid in February 2023 with job completion by June 30, 2023.	9/22/2022
7/1/2021	PUBLIC WORKS (Priority 7)	CIP	33022-55886	SEWALK REPLACEMENT: Cross Road/Asphalt	69,800		Project added to a FY23 LOTCIP project request. If approved, these funds will not be needed. Researching grants as a possible source of funding if not approved at a LOTCIP project.	9/22/2022
7/1/2021	PUBLIC WORKS (Priority 7)	CIP	33022-55857	SEWALK REPLACEMENT: Rope Ferry Road (Federal Grant Funds)	304,000		Work to start week of 9/26/22 and to be completed within 30 days.	9/22/2022

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7/1/2022	PUBLIC WORKS (Priority 7)	CNR	20530-57867	NIANTIC RIVER SIDEWALK PLAN		35,000	Working with on-call contractor to finalize scope of project.	9/22/2022
7/1/2022	PUBLIC WORKS (Priority 8)	CNR	20530-57868	BRIDGE ENGINEERING PLAN		35,000	Working with on-call contractor to finalize scope of project.	9/22/2022
7/1/2022	PUBLIC WORKS (Priority 8)	CNR	20530-57869	CROSS ROAD TRAFFIC SIGNAL STUDY		20,000	Was on hold pending economic development of airport property. Working with Planning Director to develop scope of work to move forward.	9/22/2022
7/1/2022	PUBLIC WORKS/FACILITIES (Priority 6)	CNR	25011-57871	PUBLIC SAFETY BLDG HVAC		62,045	Work to be completed after building roof and tank projects are completed before moving onto building roof project.	9/22/2022
7/1/2022	PUBLIC WORKS/PLANNING	CNR	20511-57870	MAGO POINT IMPROVEMENTS		400,000	Finalizing MOU to be forwarded to State of CT to outline design and responsibilities of state and town.	9/15/2022
7/1/2022	REC&PARK	CIP	33723-55838	CHILDREN'S PLAYGROUND EQUIPMENT	40,000		CIP funds will be joined with Contributed Gift Fund to complete project (\$50,486). Project to be completed with Civic Triangle to ensure park integrates into overall plan. Received \$10,000 Gardiner donation in FY23 and expect one more donation of \$10,000 in FY24.	9/15/2022
7/1/2021	REC&PARK	CIP	33722-55896	EQUIPMENT STORAGE PLAN	21,000		Using an "on-call" contractor to review and provide concept before beginning work on specifications for bidding process.	9/15/2022
7/1/2018	REC&PARK	CIP	33719-55822	LEARY PARK IRRIGATION	47,300		An irrigation contractor has provided an updated budgetary quote of \$53,000. Plans are in hand for this project. Finance Director advised to distribute RFP for both Leary Park and Veteran's projects so that a contract and additional appropriation request can be submitted.	9/15/2022
7/1/2018	REC&PARK	CIP	33719-55835	VETERAN'S FIELD IRRIGATION	13,700		An irrigation contractor has provided an updated budgetary quote of \$16,000. Plans are in hand for this project. Finance Director advised to distribute RFP for both Leary Park and Veteran's projects so that a contract and additional appropriation request can be submitted.	9/15/2022
7/1/2019	REC&PARK	CIP	33720-55854	LEARY BASKETBALL COURT REPAIRS	55,000		Director will be reviewing costs to replace with post tension concrete versus repairing current court.	9/15/2022
7/1/2019	REC&PARK	CIP	33720-55855	TOWN HALL BASKETBALL COURT REPAIRS	16,000		Director will be reviewing costs to replace with post tension concrete versus repairing current court.	9/15/2022
7/1/2021	REC&PARK	CNR	20537-57854	WATERFORD BEACH PARK IMPROVEMENTS (Amphitheater Plan)	0	30,000	Director has recommended to close this project. A request for a mobile unit versus a permanent structure will be submitted at a later date.	9/15/2022
	REC&PARK	CNR	20537-57735	LEARY PARK ROAD/PARKING LOG	0	20,000	On hold. To be completed after Leary Park Irrigation Project.	9/15/2022
8/3/2022	WUC	ARPA	23507-55011	CROSS ROAD PS UPGRADE	564,650		Bids received above approved budget. Because Old Norwich Road is priority, this Project will be removed from the ARPA list.	9/27/2022

TOWN OF WATERFORD
GENERAL FUND
2023 - 2027 CAPITAL IMPROVEMENT PLAN (CIP, CNR & ARPA)
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8/3/2022	WUC	ARPA	23507-55012	OLD NORWICH PS UPGRADE	587,650		Bids received above approved budget. Will be rebid separated from Cross Road PS Upgrade.	9/27/2022
7/1/2020	WUC	CNR	20531-57816	OLD NORWICH/EVERGREEN & HARVEY PUMP STATION REHABS	5,438	544,000	Startup of Evergreen Station occurred on 8/30/22. Minor punch list remains. Materials have arrived for the Harvey Station and work will commence once Evergreen punch list is complete.	9/29/2022
7/1/2020	WUC	CIP	33121-55871	EVERGREEN PUMP STATION (4TH PUMP INSTALLATION)	4,700		Pump is installed and awaiting delivery of the variable frequency drive unit; obtaining quotes to repair/replace station's main gate valve.	9/29/2022
8/3/2022	WUC	ARPA	23507-55014	FARGO LANE WATER TOWER	1,200,000		Bid preparation continues. Expect bid to be advertised mid October 2022.	9/29/2022
7/1/2021	WUC	CIP	33122-55870	CCTV CAMERA & LATERAL LAUNCHING SYSTEM	630		Equipment received and installed on CCTV Truck. Project complete and will be closed.	9/29/2022
8/3/2022	WUC	ARPA	23507-55013	GORMAN-RUPP CONTROL PANELS	163,750		Work in progress. 4 (Dock Rd, Richards Grove Rd, Old Barry Rd and Quaker Hill Center) out of 9 completed. Currently working on Oil Mill Road Station. Remaining upgrades to be completed at Oswegatchie Rd, Shore Rd, Niantic River Rd and Ridgewood Ave. WUC staff performing all work.	9/29/2022
7/1/2021	WUC	CIP	33122-55894	CONTROL PANEL RETRO-FIT (GORMAN-RUPP STATION)	30,000		Work to include replacing existing pump control panels. Project to commence upon completion of upgrades currently underway at 10 of the lift stations.	9/29/2022
7/1/2021	WUC	CIP	33122-55895	ROOF & SIDING REPLACEMENT (Bolles Court, Niantic River Rd, Waterford Village Stations)	16,840		Niantic River roof scheduled to be replaced within next 2 weeks; WUC Staff currently removed existing siding at Bolles and work began 9/26; Waterford Village roof and siding project is complete and awaiting delivery of new entry door.	9/29/2022
7/1/2022	WUC	CIP	33123-55895	ROOF & SIDING REPLACEMENT (Bolles Court, Niantic River Rd, Waterford Village Stations)	50,000		Niantic River roof scheduled to be replaced within next 2 weeks; WUC Staff currently removed existing siding at Bolles and work began 9/26; Waterford Village roof and siding project is complete and awaiting delivery of new entry door.	9/29/2022
7/1/2019	WUC	CIP	33120-55821	IN-LINE WASTEWATER SOLID GRINDERS	8,436		5 in-line sewage grinders purchased (Evergreen 2 @ Bolles, 2 @ Harvey). Evergreen unit installed and remainder to be installed by dept. staff over upcoming winter months.	9/29/2022
7/1/2022	WUC	CIP	33123-55906	NEW BILLING SOFTWARE	130,000		Staff have received demonstrations on 3 software billing package sand has chosen the one that best meets the department's needs. A recommendation will be submitted for approval after consultation with IT and Finance.	9/29/2022

TOWN OF WATERFORD

GENERAL FUND

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7/1/2014	WUC	CNR	20531-55771	HARVEY AVENUE PUMP STATION REHAB	19,422		All pumps, drives and motor control center replaced. Remaining funding to supplement funding (already approved) for the upcoming HVAC improvements at the station. Once HVAC is completed, unexpended funds will be returned.	9/29/2022
7/1/2018	WUC	CNR	20531-57685	MITIGATION & CONTROL	310,986		Continuous 1/1 mitigation program. 1/1 locations are assessed and deficiencies are located, graded and catalogued based on severity. Corrective repairs are generally conducted during the Spring.	9/29/22
7/1/2018	WUC	CNR	20531-57802	FORCE MAIN AIR RELEASE VALVES (EVALUATE AND REPLACE)		43,000	Valves being replaced with WUC operating funds. A request will be submitted to reallocate these funds to the purchase of a new by-pass pump for the main Pump Station.	9/29/2022

PUBLIC WORKS/FACILITIES PRIORITY AREAS

- 1 Underground Storage Tanks
- 2 Public Safety Facilities
- 3 Roofs
- 4 ADA
- 5 Roads
- 6 Building Renovations, General Government
- 7 Sidewalks
- 8 Misc.

Baseline (2015)										Current (2016)										Goal (2017)										
Property Name	Property Floor Area (ft²)	Site Energy Use (kBtu)	Electricity (kBtu)	Fuel Oil Use (kBtu)	Natural Gas Use (kBtu)	Propane Use (kBtu)	Site EUI (kBtu/ft²)	With Site EUI (kBtu/ft²)	% Improvement	Property Name	Property Floor Area (ft²)	Site Energy Use (kBtu)	Electricity (kBtu)	Fuel Oil Use (kBtu)	Natural Gas Use (kBtu)	Propane Use (kBtu)	Site EUI (kBtu/ft²)	With Site EUI (kBtu/ft²)	% Improvement	Property Name	Property Floor Area (ft²)	Site Energy Use (kBtu)	Electricity (kBtu)	Fuel Oil Use (kBtu)	Natural Gas Use (kBtu)	Propane Use (kBtu)	Site EUI (kBtu/ft²)	With Site EUI (kBtu/ft²)	% Improvement	
Westerford High School	70,000	18,817,121	5,001,545	8,615,575			268.8	71.8	70.0	Westerford High School	70,000	21,344,025	13,217,171	8,937,445				303.5	81.3	86.5	Westerford High School	70,000	21,344,025	13,217,171	8,937,445				303.5	81.3
Clark Lane School	21,000	5,932,324	1,512,726	4,115,955			282.5	65.7	62.4	Clark Lane School	21,000	13,571,244	4,526,250	525,297				646.3	59.3	64.8	Clark Lane School	21,000	13,571,244	4,526,250	525,297				646.3	59.3
Madison Complex	47,500	4,775,660	1,448,785	453,712	2,711,905		101.6	110.4	110.4	Madison Complex	47,500	7,216,913	2,454,885	336,681				152.0	104.6	101.6	Madison Complex	47,500	7,216,913	2,454,885	336,681				152.0	104.6
Overseas School	70,000	3,478,485	3,174,557				49.7	55.3	55.3	Overseas School	70,000	3,301,081	2,871,232					47.2	51.2	76.1	Overseas School	70,000	3,301,081	2,871,232					47.2	51.2
Greenbush School	70,000	3,447,244	2,039,272				49.2	54.6	54.6	Greenbush School	70,000	2,456,563	1,972,132					35.1	50.5	90.5	Greenbush School	70,000	2,456,563	1,972,132					35.1	50.5
Senior Services	27,250	2,587,885	1,137,441	1,870,445			95.0	105.7	105.3	Senior Services	27,250	2,459,229	1,062,812	1,377,248				89.9	103.1	96.3	Senior Services	27,250	2,459,229	1,062,812	1,377,248				89.9	103.1
Police Department	21,000	1,338,444	334,134	600,555			63.8	51.6	51.6	Police Department	21,000	1,338,444	618,626					63.8	51.6	0.0	Police Department	21,000	1,338,444	618,626					63.8	51.6
Public Safety Complex	21,000	1,338,444	334,134	600,555			63.8	51.6	51.6	Public Safety Complex	21,000	1,338,444	618,626					63.8	51.6	0.0	Public Safety Complex	21,000	1,338,444	618,626					63.8	51.6
Youth Services	21,000	1,338,444	334,134	600,555			63.8	51.6	51.6	Youth Services	21,000	1,338,444	618,626					63.8	51.6	0.0	Youth Services	21,000	1,338,444	618,626					63.8	51.6
Animal Control	4,500	275,160	59,324	215,836			61.1	65.1	115.4	Animal Control	4,500	156,230	53,237					34.7	41.3	41.3	Animal Control	4,500	156,230	53,237					34.7	41.3
Madison Park House	7,500	823,338	11,825	811,513			109.8	71.8	71.8	Madison Park House	7,500	823,338	8,717					109.8	61.4	41.3	Madison Park House	7,500	823,338	8,717					109.8	61.4
Westerford Branch Garage	1,700	12,250	2,250				7.2	2.1	3.4	Westerford Branch Garage	1,700	12,250	15,546					7.2	5.0	5.2	Westerford Branch Garage	1,700	12,250	15,546					7.2	5.0
Other	18,248	1,506,316	750,362				82.6	84.5	102.5	Other	18,248	1,506,316	750,362					82.6	70.2	102.5	Other	18,248	1,506,316	750,362					82.6	70.2
Baseline Total (2015)	403,460	59,312,504	20,713,801	13,217,171	8,937,445	0	146.3	70.0	-	Current Total (2016)	403,460	62,793,025	33,571,439	11,835,511	17,074,992	0	155.6	73.0	-1.0%	Goal Total (2017)	403,460	59,312,504	20,713,801	13,217,171	8,937,445	0	146.3	70.0	-1.0%	

