

HRG

Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

AN EMPLOYEE-OWNED COMPANY

Eastern Pike County Regional Act 537 Plan

Public Hearing
Cory Salmon, PE, PMP – Group Manager
Matt Roberts, EIT – Staff Professional

November 16, 2022

Presentation Overview

- > Summary of Act 537 Facilities Act
- > Previous Planning Efforts
- > Review of Wastewater Planning Needs
- > Evaluation of Alternatives
- > Plan Recommendations
- > Implementation Schedule
- > Plan Status and Approval Process
- > Questions

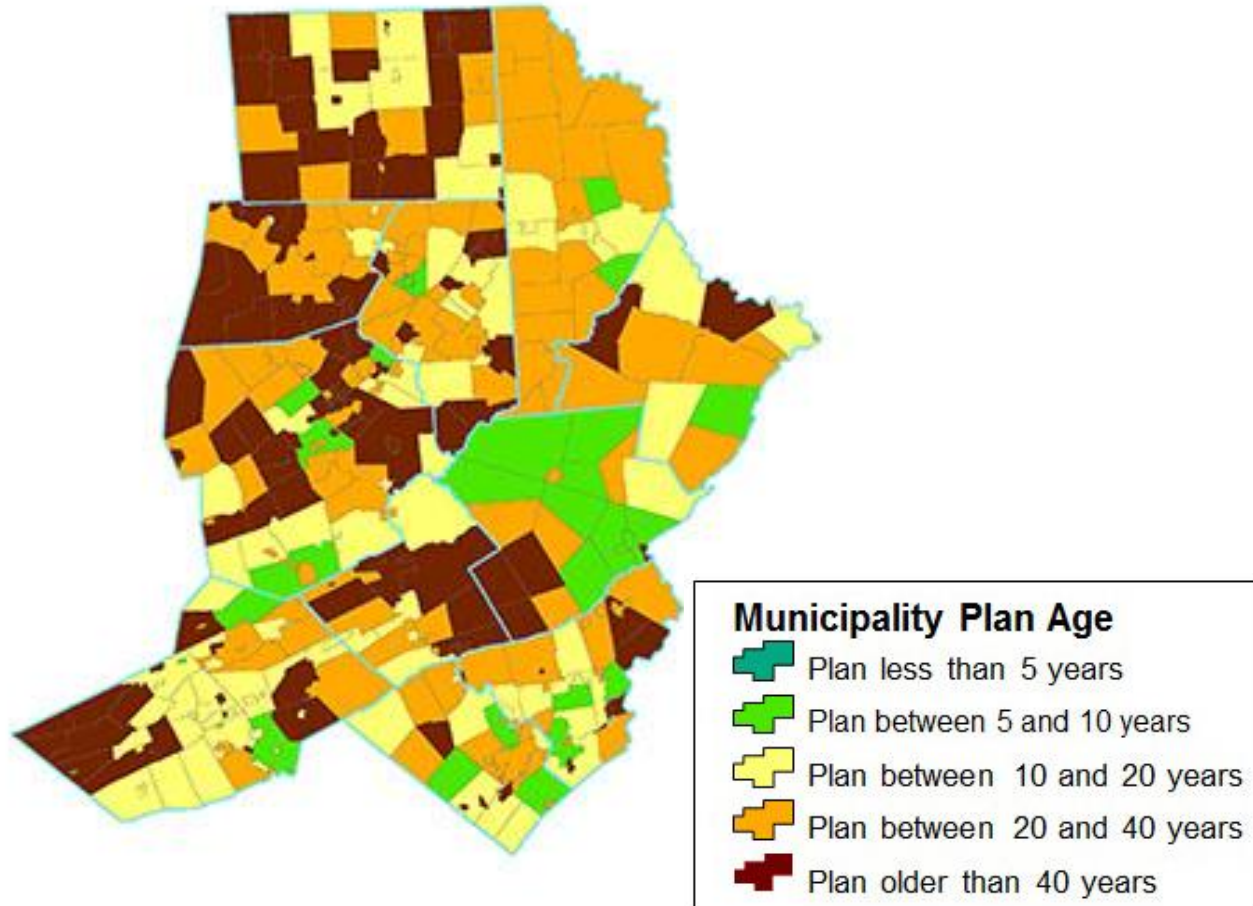
Summary of Act 537 Facilities Act

- > Enacted by PA Legislature in 1966, the Sewage Facilities Act (Act 537) requires all PA municipalities develop and maintain an up-to-date sewage facilities plan.
- > Sewage facilities plans provide for the resolution of existing sewage disposal problems, provide for the future sewage disposal needs of new land development and provide for the future sewage disposal needs of the municipality.
- > Act 537 also serves to prevent future sewage disposal problems and protect groundwater and surface waters in PA.

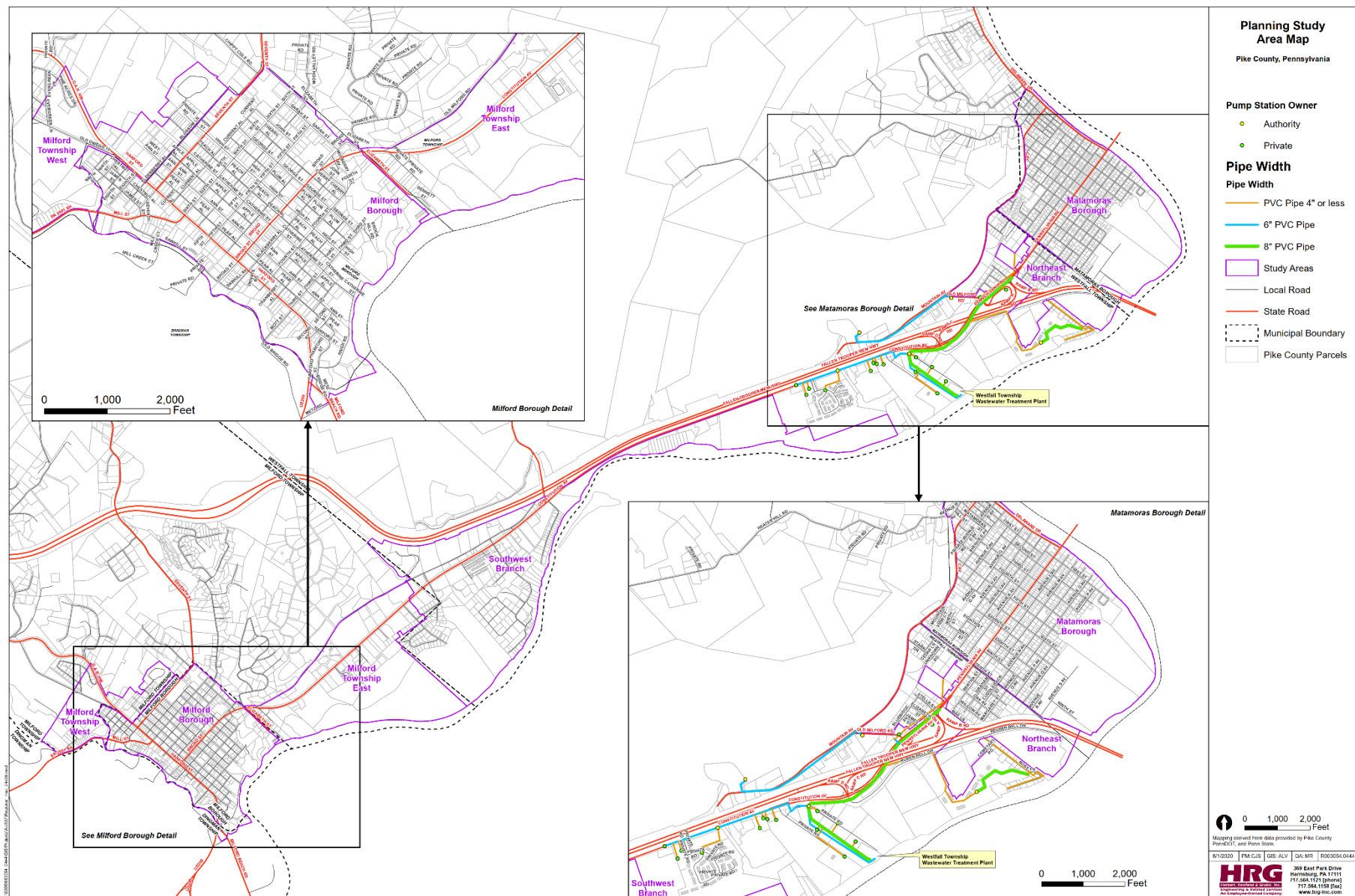
Previous Planning Efforts by the Municipalities

- > No regional Act 537 Plans have been developed
 - Milford Borough (1976 and 1987)
 - Continued OLDS
 - Milford Township (1970 and 1978)
 - Continued OLDS
 - Westfall Township (2000-2001, 2006, and 2012)
 - Iterations established future sewage requirements
 - 2012 Special Study increased WWTP Capacity to 0.374 MGD

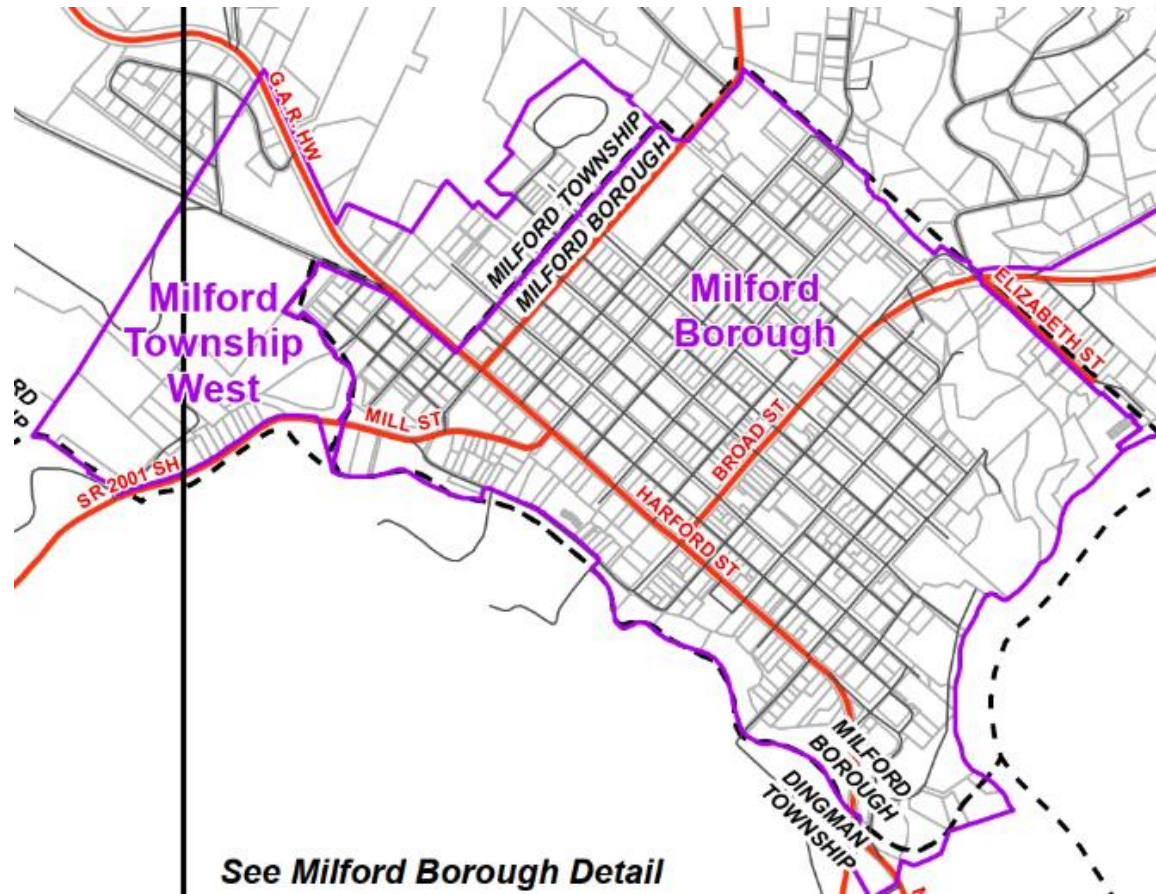
Previous Planning Efforts by the Municipalities



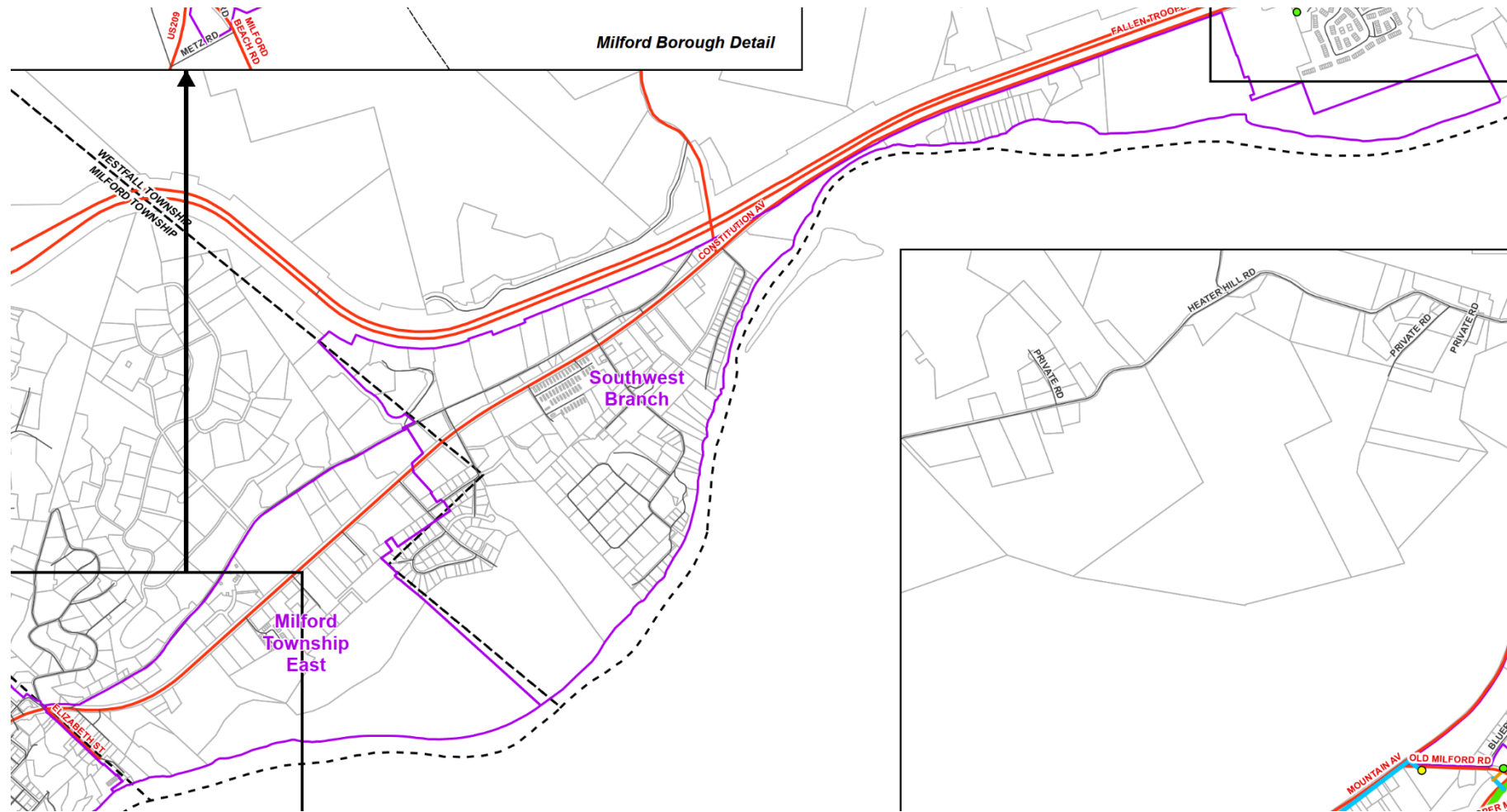
Wastewater Planning Areas



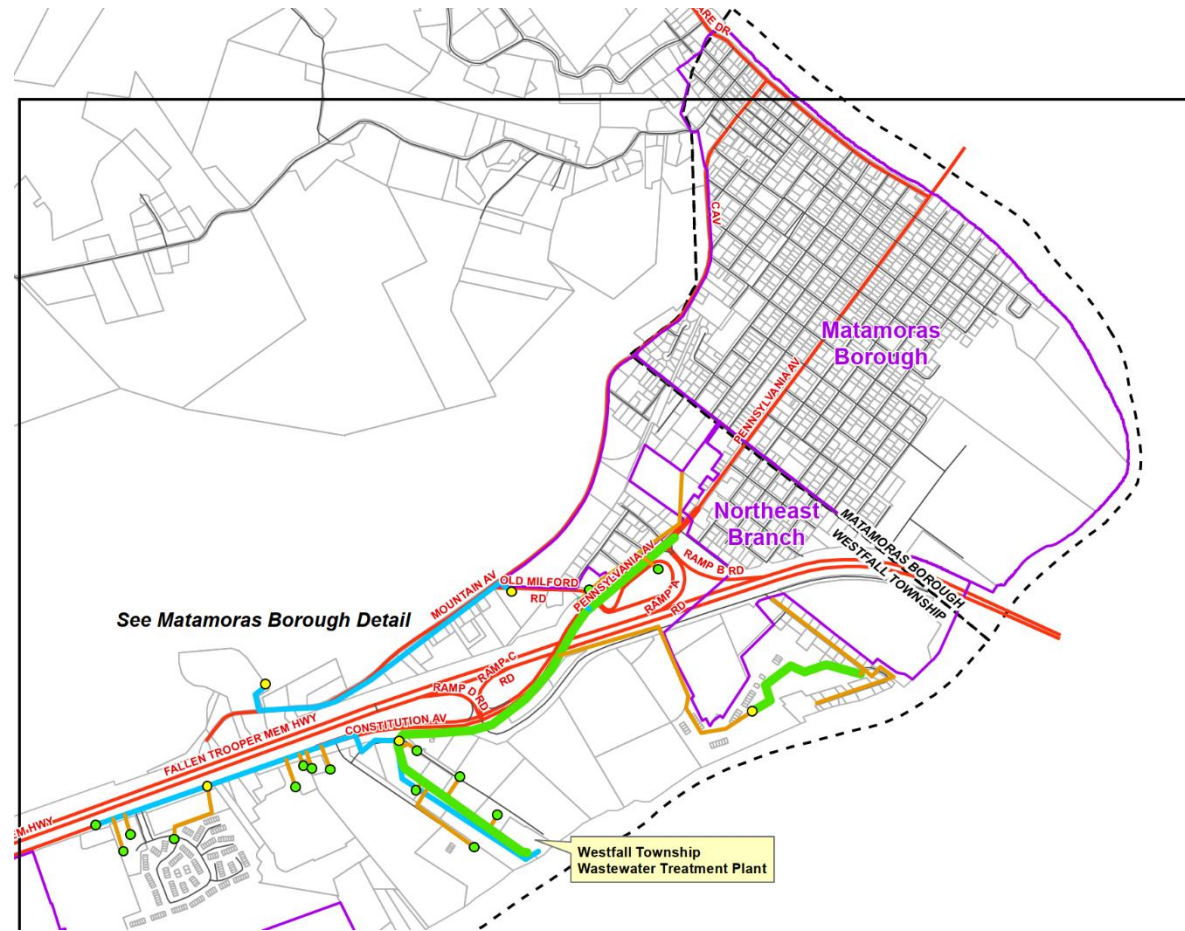
Wastewater Planning Areas –Milford Borough and Milford Township West



Wastewater Planning Areas – Westfall Southwest and Milford Township East



Wastewater Planning Areas – Matamoras Borough and Westfall Northeast Branch



OLDS Inspections

- > Completed in accordance with DEP Sewage Disposal Needs Identification (Tier 2 Surveys)
- > Classifications
 - Confirmed Malfunctions
 - Piped discharges from a single structure with direct evidence of sewage (i.e. direct observation of soap suds, food residue, solids, odors, etc.), reported system backups, malfunctions with photographic documentation, or other similar evidence.
 - Holding Tanks, Wildcat Sewers, Borehole disposal
 - Suspected Malfunctions
 - Systems exhibiting some malfunction characteristics such as abnormally green grass in the vicinity of an absorption area, piped discharges from a dwelling without direct evidence of sewage (i.e. no observation of soap suds, food residue, solids, odors, etc.), absorption areas located in known unsuitable soils (observed wetlands, rock outcropping, etc.), cesspools in high-density development areas, and pit privies.

OLDS Inspections

> Classifications

– Potential Malfunctions

- Systems that appear to be operating satisfactorily but were constructed prior to system permitting requirements, systems located in areas extremely unlikely to receive permitting by current standards, systems constructed in areas having soils mapped as unsuitable or with severe limitations for OLDS and systems located on exceptionally steep slopes greater than 25 percent.
- Included as potential malfunctions are permits issued for OLDS repairs that meet Chapter 73 standards. While this needs category does not represent “stand alone” existing needs, the information may be utilized in a needs analysis to locate areas affected by poorly defined adverse circumstances. For example, clusters of legitimate repairs will often indicate areas requiring closer scrutiny.

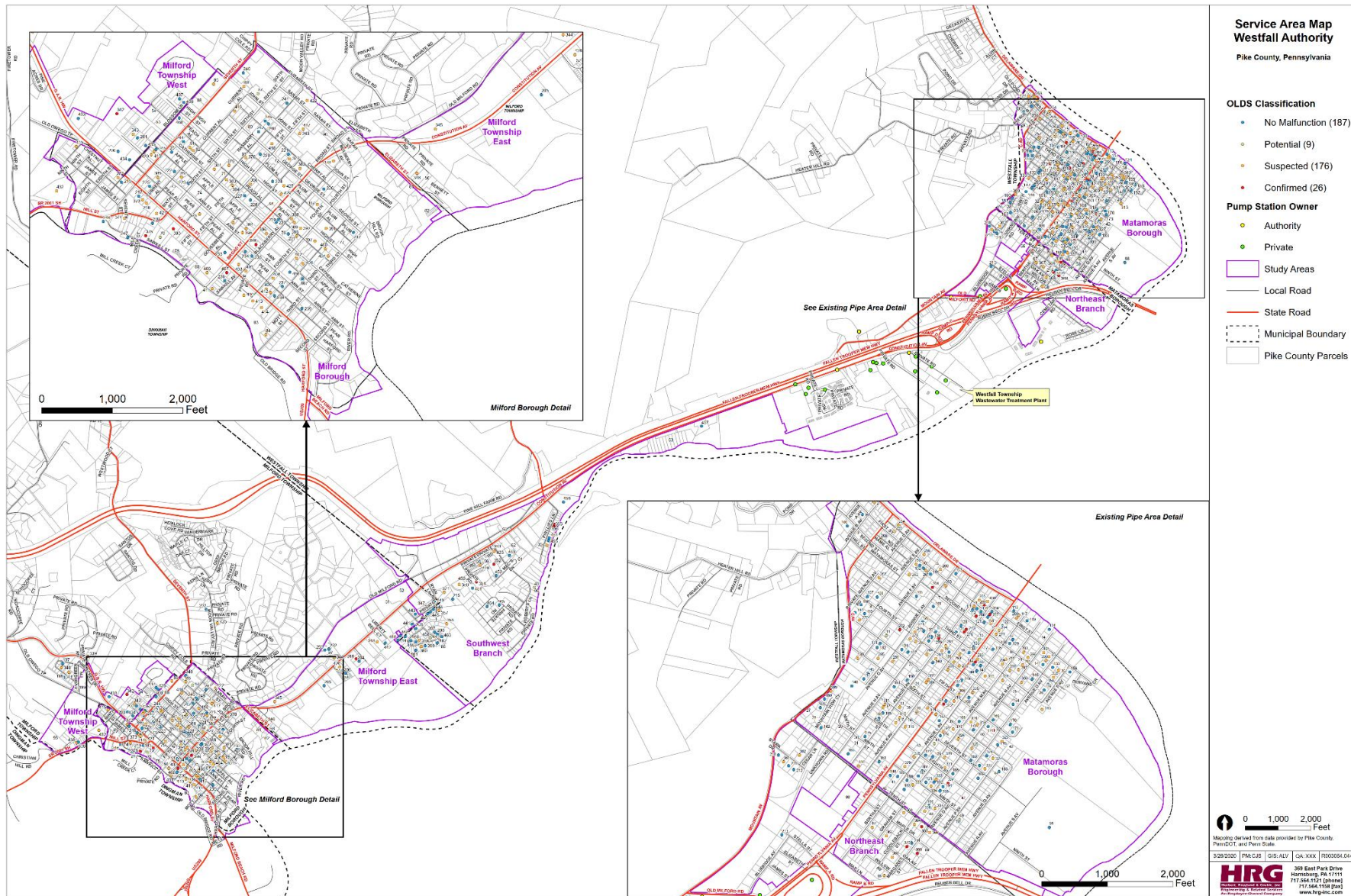
– No Malfunction

- Systems that appear to be operating satisfactorily, were constructed since the implementation of system permitting requirements, and appear to have been constructed in accordance with the permitting requirements in effect at the time of construction (Permitting became effective May 15, 1972)

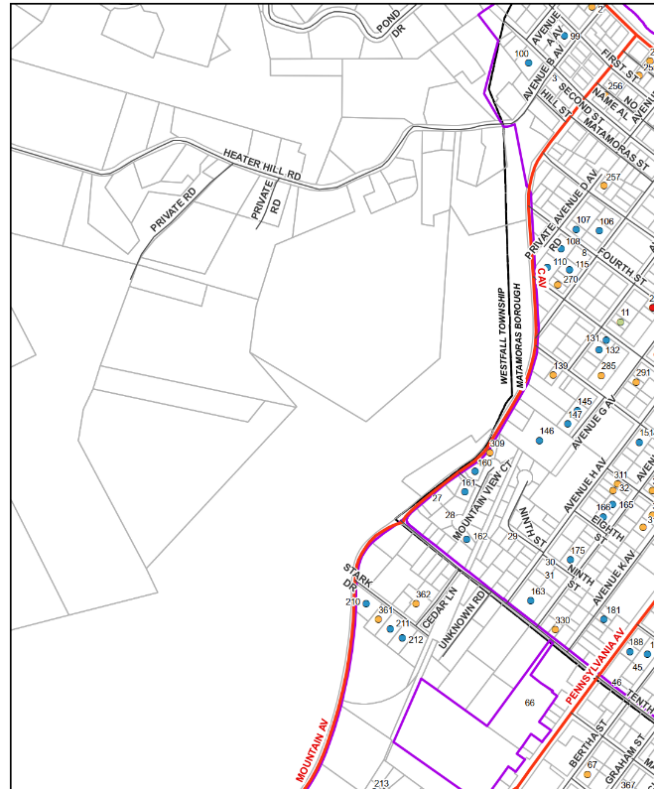
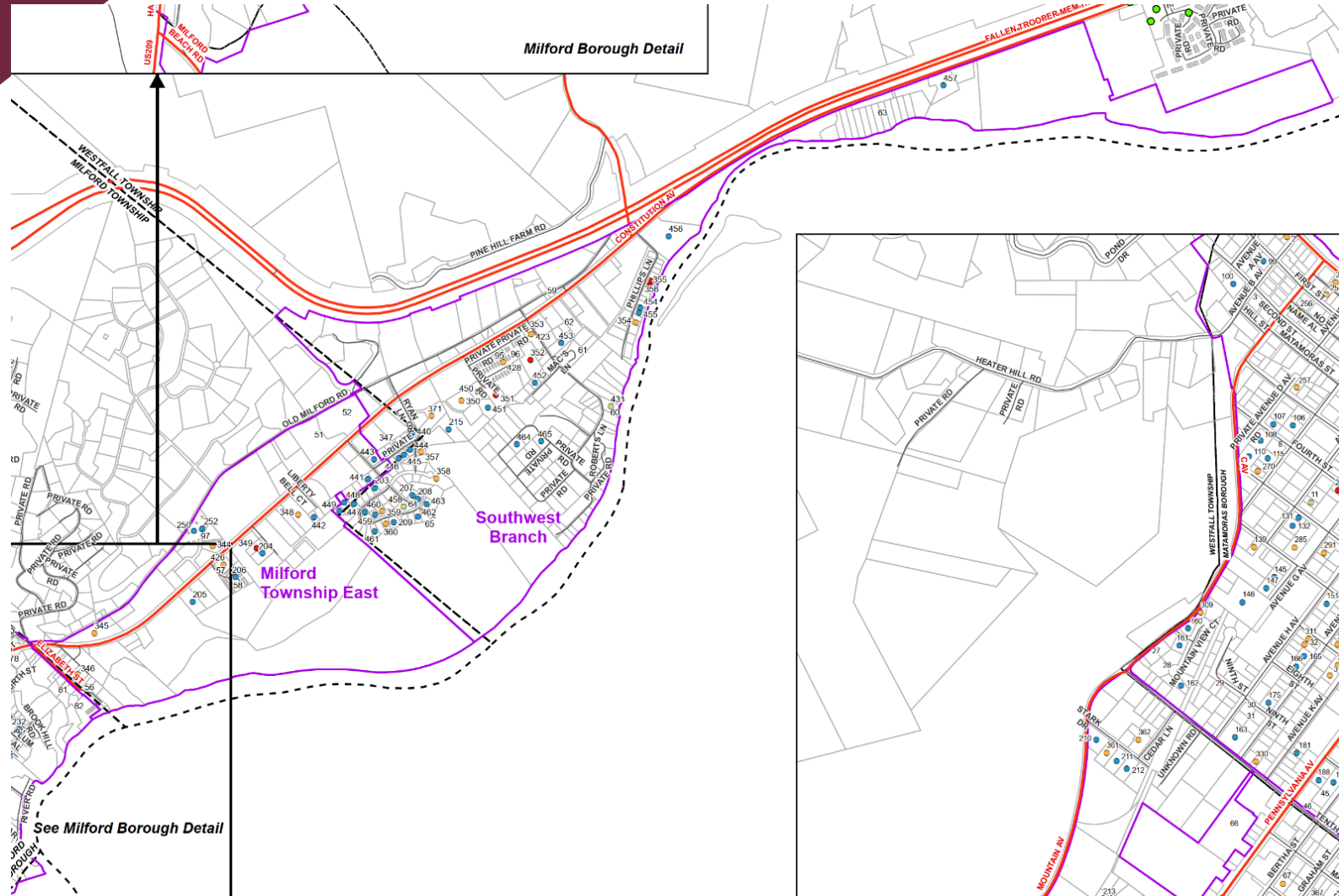
OLDS Inspection Results

Planning Area	OLDS Surveyed	Malfunction (% of OLDS Surveyed)							
		Confirmed		Suspected		Potential		None	
		No.	Percent	No.	Percent	No.	Percent	No.	Percent
Milford Borough	123	5	4%	72	59%	2	2%	44	36%
Milford Township East	21	1	5%	9	43%	0	0%	11	52%
Milford Township West	19	1	5%	6	32%	0	0%	12	63%
Westfall Township-Northeast	42	3	7%	15	36%	0	0%	24	57%
Westfall Township-Southwest	52	6	12%	13	25%	0	0%	33	63%
Matamoras Borough	220	11	5%	100	45%	5	2%	104	47%

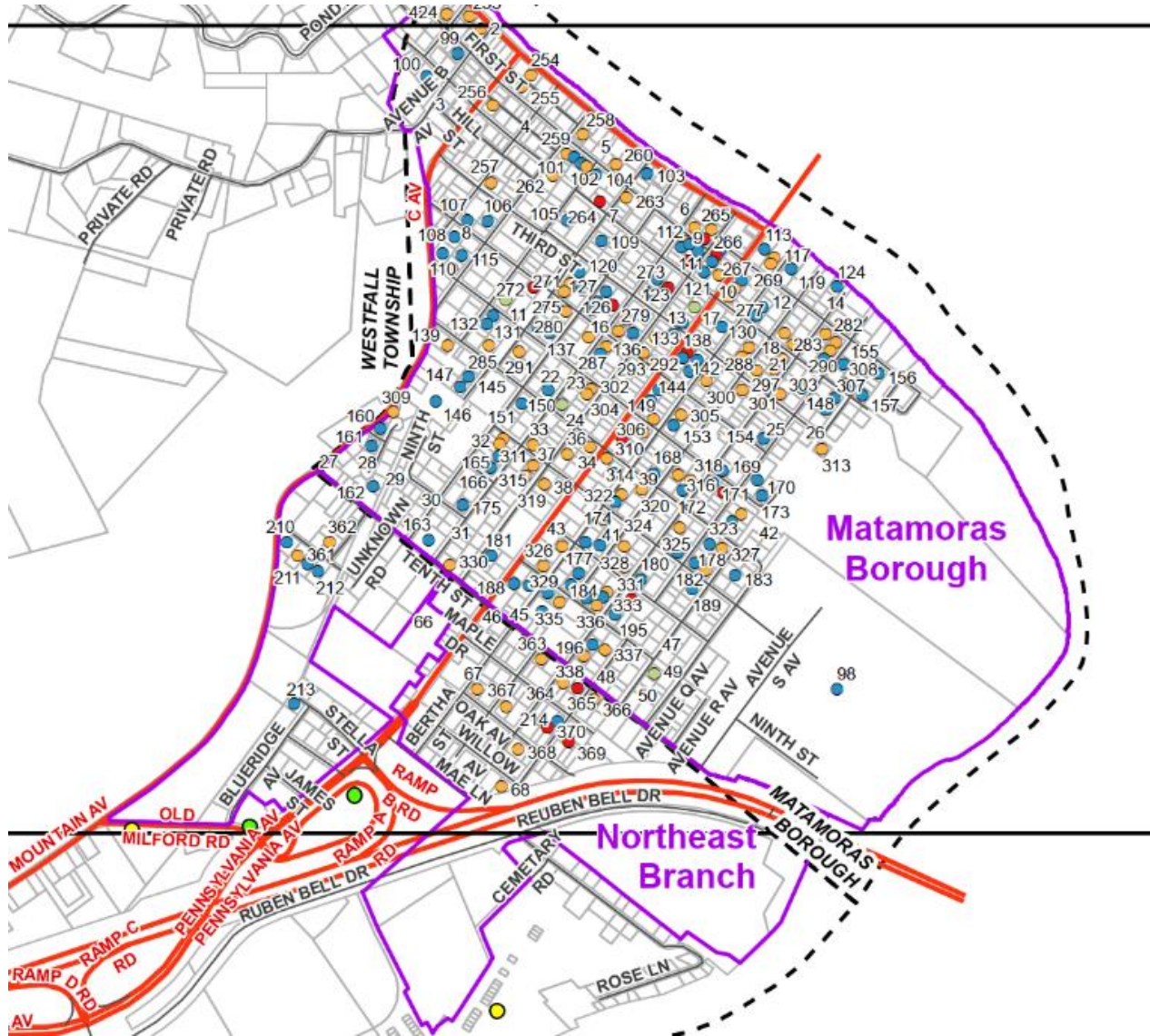
OLDS Inspection Results



OLDS Inspection Results – Westfall Township Southwest and Milford Township East



OLDS Inspection Results – Westfall Township Northeast and Matamoras Borough



Well Water Testing

- > Completed in accordance with DEP Sewage Disposal Needs Identification (Tier 2 Surveys)
- > Performed by DEP Certified Lab
- > Criteria Tested for:
 - Presence of Total Coliform
 - Naturally present bacteria
 - Useful indicator of pathogens and determine vulnerability of a water supply to fecal contamination
 - Presence of Fecal Coliform
 - Coliform associated with human or animal wastes
 - Presence indicates water may be contaminated with human or animal wastes
 - Can cause short term effects such as diarrhea, cramps, nausea, headaches, or other symptoms.
 - Nitrate
 - Can be caused by fertilizer run off or a leaking septic tank
 - If greater than 10 mg/L, infants under 6 months could become ill.

Well Water Testing Results

Planning Area	Approximate # of Wells	# of Water Samples needed		# of Water Samples Completed	Nitrate Test Results				Total Coliform	Fecal Coliform
					Non-Detectable (<0.05 mg/l)	0-5 mg/L	5-10 mg/L	10+ mg/l	Detectable >1	Detectable >1
Milford Township East	10	50%	5	5	0	5	0	0	0	0
Westfall Township-Southwest	128	25%	32	32	8	24	0	0	7	0

Review of Wastewater Needs – Alternatives Identification

- > Planning Areas with Apparent Infrastructure Needs
 - Milford Borough
 - Matamoras Borough
 - Westfall Township Southwest

- > Planning Areas with Focus on Continued OLDS Management
 - Milford Township East and West

Evaluation of Structural Alternatives (Sewer Extension/Central Sewerage)

- > Collection System Alternatives
 - New service to three (3) Planning Areas based on needs assessment
 - Seven (7) major Structural Alternatives with 25 total sub-alternatives
 - All sanitary sewer flows are proposed to be conveyed to MATW WWTP
 - Each alternative evaluated for cost-effectiveness, environmental soundness, and structural feasibility
 - Further evaluated based on 20-year present worth per EDU, estimated O&M costs, and affordability.
- > Downstream Conveyance (Pump Stations and existing infrastructure) and Downstream Treatment (MATW WWTP)
 - Designed for more capacity than anticipated with extensions
 - No improvements anticipated

Evaluation of Structural Alternatives

- > Alternative 1: Public Sewer for Matamoras along Pennsylvania Avenue
- > Alternative 2: Public Sewer for Matamoras Borough along Pennsylvania Avenue and portions of 10th Street, 7th Street, 3rd Street, Ave Q, Ave K, Ave M, and Ave N are included
- > Alternative 3: Extension of Public Sewer for Westfall Township along Route 6/209 to Milford Township Line
- > Alternative 4: Public Sewer for Milford Borough along Broad Street with transmission line through Milford Township along Route 6/209.
- > Alternative 5: Public Sewer for Milford Borough along Broad Street and West Harford Street with transmission line through Milford Township along Route 6/209.
- > Alternative 6: Public Sewer for Milford Borough along Broad Street and Harford Street with transmission line through Milford Township along Route 6/209.
- > Alternative 7: Public Sewer for Milford Borough along Broad Street and Harford Street as well as select residential streets based on OLDS Surveys with transmission line through Milford Township along Route 6/209.

Review of Structural Alternatives Planning

Potential Service Area	Initial EDUs	Initial Flow (GPD)	Future Connection EDUs	Future Connection Flow
Alternative 1	140	28,000	177	35,400
Alternative 2	328	65,600	336	63,400
Alternative 3	128	25,600	389	77,800
Alternative 4A-4C	106	21,200	222	44,400
Alternative 4D-4E	126	25,200	242	48,400
Alternative 5A, 5C	172	34,400	288	57,600
Alternative 5B, 5D	178	35,600	294	58,800
Alternative 6A-6C	264	52,800	380	76,000
Alternative 6D-6E	236	47,200	352	70,400
Alternative 6F	284	56,800	400	80,000
Alternative 7	363	72,600	479	95,800

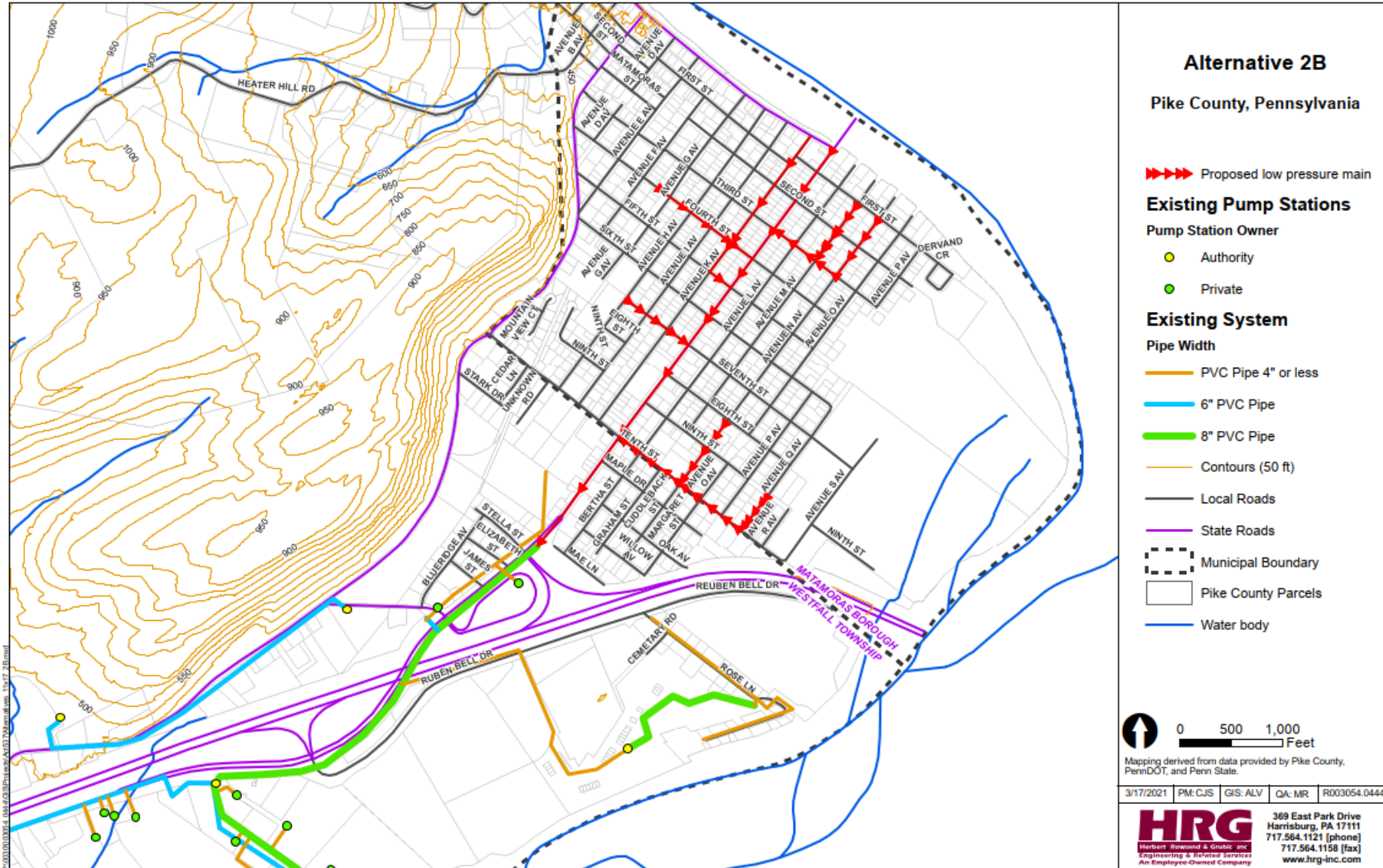
Plan Recommendations – Structural Alternatives

- > Public Sewer for Matamoras Borough along Pennsylvania Avenue and portions of 10th Street, 7th Street, Ave K, Ave Q, and Ave N (Alternative 2B)
 - Low pressure sewer proposed with a tie in to existing MATW Collection System
- > Extension of Public Sewer for Westfall Township along Route 6/209 from the McDonald's to the Westfall/ Milford Township Line (Alternative 3B)
 - Low pressure sewer proposed
- > Public Sewer for Milford Borough along Broad Street and Harford Street with transmission line through Milford Township along Route 6/209 (Alternative 6F)
 - Low pressure sewer proposed with a tie in to proposed MATW Collection System tie in at Westfall / Milford Township Line
 - Along Broad Street, sewer lines run behind properties in the adjacent Alleys
 - Milford Township has no immediate connections anticipated as part of this plan, but potential future flow has been accounted for

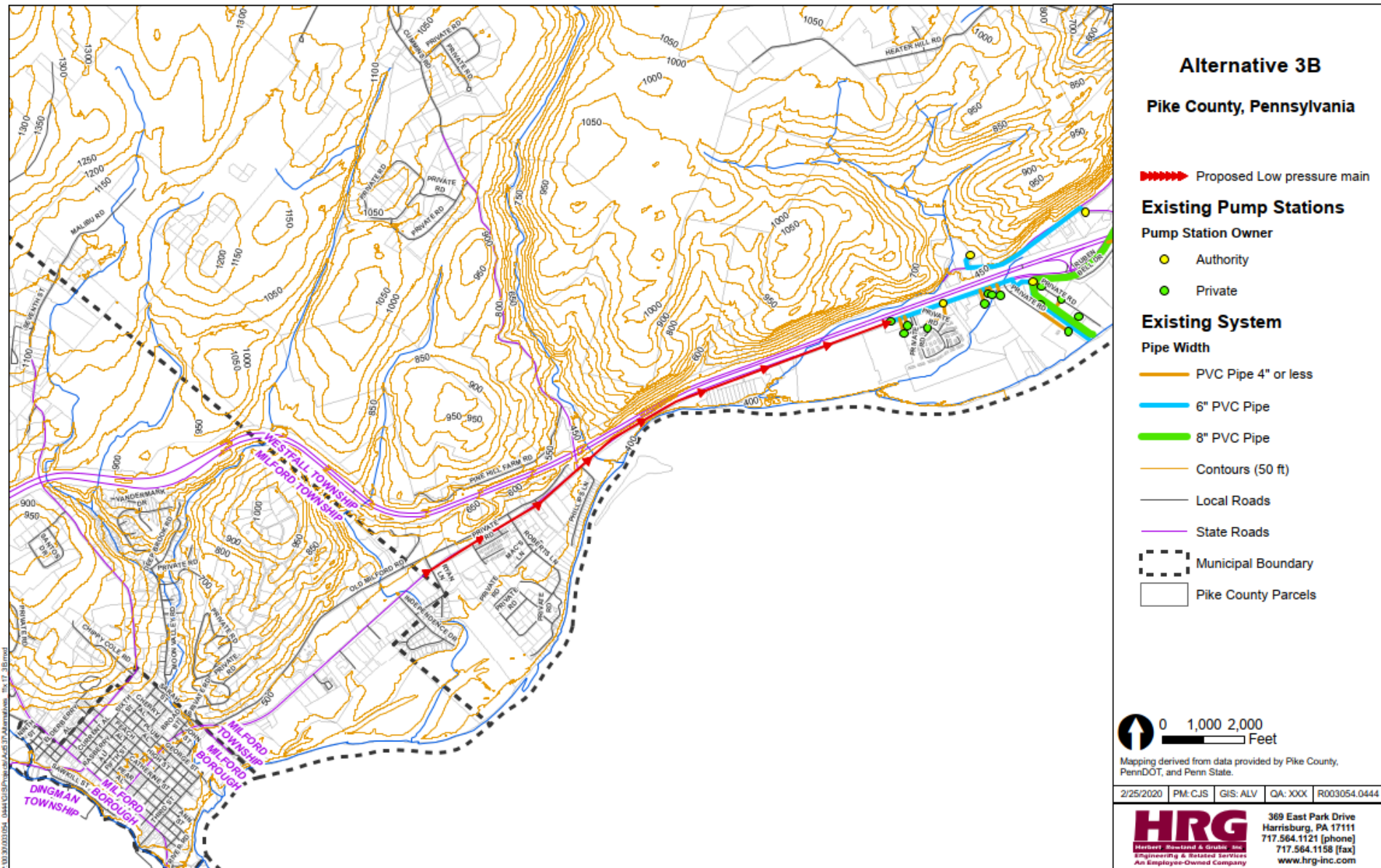
Plan Recommendations – OLDS Management

- > On-lot Disposal System Management Ordinance Development (each Municipality)
 - Continued Use and Maintenance of Existing OLDS
 - Mandatory Pumping Interval

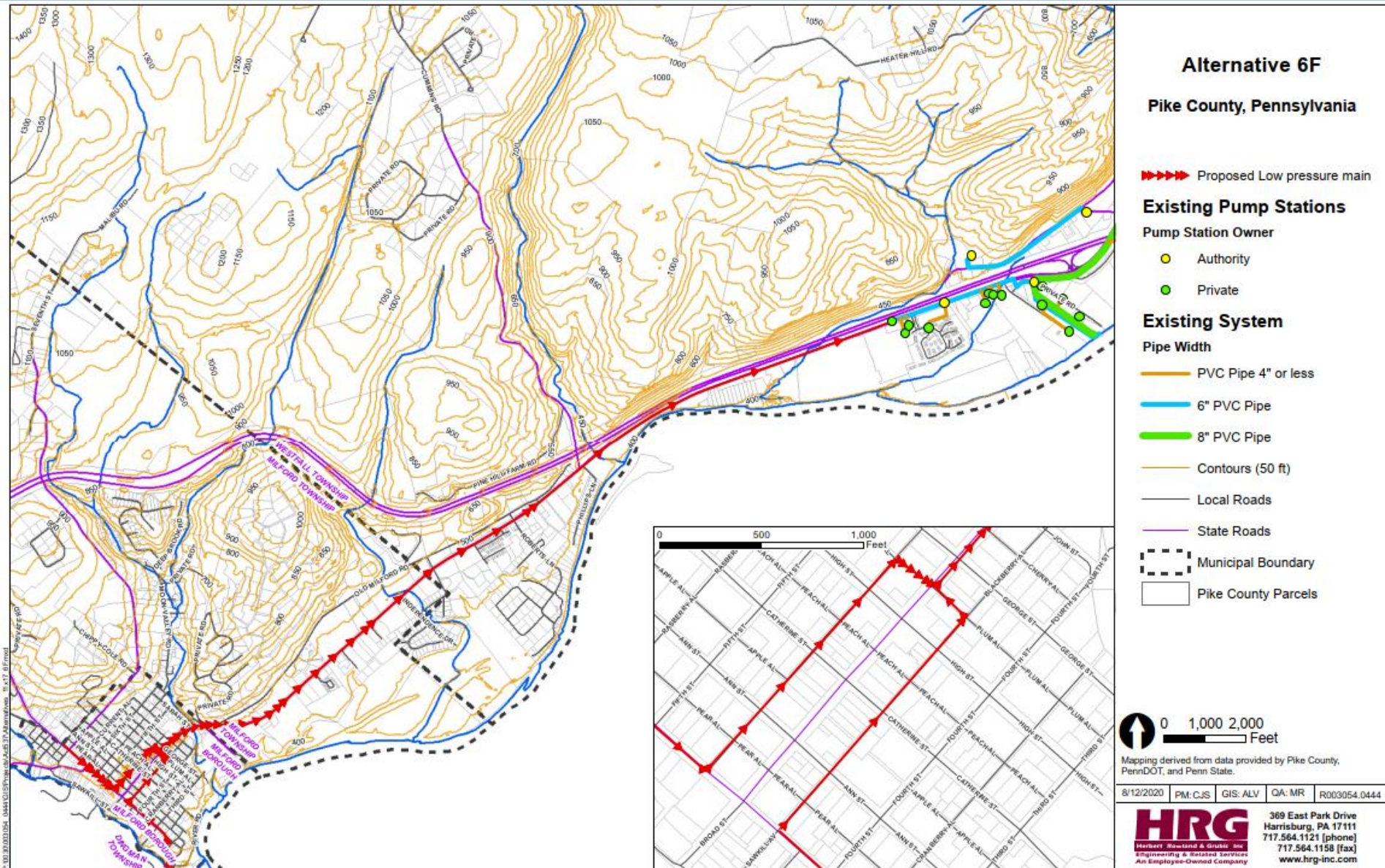
Plan Recommendations – Alternative 2B



Plan Recommendations – Alternative 3B



Plan Recommendations – Alternative 6F



Plan Recommendations- Estimated Costs

Summary of Cost Opinions for Structural Alternatives													
Study Area	Alternative	Estimated Project Cost	Tapping Fee Towards Project	Estimated Project Cost Less Tapping Fee	Estimated Annual Debt Service	Estimated Annual O&M Cost	Estimated Annual Cost	Present Worth of Annual O&M	Total Present Worth	Number of EDUs	Estimated Present Worth Per EDU	Estimated Annual Cost Per EDU	Cost per EDU without Assistance
Matamoras Main Road	Alternative 1A	\$5,300,000	\$0	\$5,300,000	\$293,000	\$7,000	\$300,000	\$93,061	\$5,393,061	140	\$38,521.86	\$2,142.86	\$204
	Alternative 1B	\$3,300,000	\$0	\$3,300,000	\$183,000	\$3,000	\$186,000	\$39,883	\$3,339,883	140	\$23,856	\$1,329	\$136
	Alternative 1C	\$3,700,000	\$0	\$3,700,000	\$205,000	\$9,000	\$214,000	\$119,649	\$3,819,649	140	\$27,283	\$1,529	\$152
Matamoras Residential	Alternative 2A	\$8,900,000	\$0	\$8,900,000	\$492,000	\$12,000	\$504,000	\$159,532	\$9,059,532	276	\$32,824	\$1,826	\$177
	Alternative 2B	\$7,100,000	\$0	\$7,100,000	\$392,000	\$7,000	\$399,000	\$93,061	\$7,193,061	276	\$26,062	\$1,445.65	\$145
Westfall Southwest	Alternative 2C	\$7,400,000	\$0	\$7,400,000	\$409,000	\$13,000	\$422,000	\$172,827	\$7,572,827	276	\$27,438	\$1,528.99	\$152
	Alternative 3A	\$6,000,000	\$300,000	\$5,700,000	\$332,000	\$15,000	\$347,000	\$199,415	\$6,199,415	128	\$48,433	\$2,711	\$225.91
Milford Broad St Only	Alternative 3B	\$3,100,000	\$300,000	\$2,800,000	\$171,000	\$8,000	\$179,000	\$106,355	\$3,206,355	128	\$25,050	\$1,398.44	\$116.54
	Alternative 4A	\$7,000,000	\$0	\$7,000,000	\$428,000	\$21,000	\$449,000	\$279,182	\$7,279,182	106	\$68,672	\$4,236	\$378
	Alternative 4B	\$4,000,000	\$0	\$4,000,000	\$245,000	\$14,000	\$259,000	\$186,121	\$4,186,121	106	\$39,492	\$2,443	\$229
	Alternative 4C	\$5,000,000	\$0	\$5,000,000	\$306,000	\$21,000	\$327,000	\$279,182	\$5,279,182	106	\$49,804	\$3,085	\$282
	Alternative 4D	\$3,500,000	\$0	\$3,500,000	\$214,000	\$14,000	\$228,000	\$186,121	\$3,686,121	126	\$29,255	\$1,810	\$176
Milford Broad+W Harford	Alternative 4E	\$5,500,000	\$0	\$5,500,000	\$336,000	\$22,000	\$358,000	\$292,476	\$5,792,476	126	\$45,972	\$2,841	\$262
	Alternative 5A	\$6,100,000	\$0	\$6,100,000	\$373,000	\$22,000	\$395,000	\$292,476	\$6,392,476	172	\$37,166	\$2,297	\$216
	Alternative 5B	\$7,200,000	\$0	\$7,200,000	\$440,000	\$23,000	\$463,000	\$305,770	\$7,505,770	178	\$42,167	\$2,601	\$242
	Alternative 5C	\$4,200,000	\$0	\$4,200,000	\$257,000	\$15,000	\$272,000	\$199,415	\$4,399,415	172	\$25,578	\$1,581	\$157
Milford Harford+Broad	Alternative 5D	\$4,200,000	\$0	\$4,200,000	\$257,000	\$15,000	\$272,000	\$199,415	\$4,399,415	178	\$24,716	\$1,528	\$152
	Alternative 6A	\$7,700,000	\$0	\$7,700,000	\$471,000	\$23,000	\$494,000	\$305,770	\$8,005,770	264	\$30,325	\$1,871	\$181
	Alternative 6B	\$8,300,000	\$0	\$8,300,000	\$507,000	\$29,000	\$536,000	\$385,537	\$8,685,537	264	\$32,900	\$2,030	\$194
	Alternative 6C	\$6,200,000	\$0	\$6,200,000	\$379,000	\$16,000	\$395,000	\$212,710	\$6,412,710	264	\$24,291	\$1,496	\$150
	Alternative 6D	\$7,400,000	\$0	\$7,400,000	\$452,000	\$24,000	\$476,000	\$319,065	\$7,719,065	235	\$32,847	\$2,026	\$194
	Alternative 6E	\$5,500,000	\$0	\$5,500,000	\$336,000	\$16,000	\$352,000	\$212,710	\$5,712,710	235	\$24,309	\$1,498	\$150
Milford Residential	Alternative 6F	\$6,100,000	\$0	\$6,100,000	\$373,000	\$16,000	\$389,000	\$212,710	\$6,312,710	284	\$22,228	\$1,369.72	\$139
Milford Residential	Alternative 7	\$8,600,000	\$0	\$8,600,000	\$526,000	\$18,000	\$544,000	\$239,299	\$8,839,299	363	\$24,351	\$1,499	\$150

Notes:

1. Annual Debt Service Calculations Assuming 1% for 20 Years
2. Tapping Fees are based on the existing MATW tapping fee of \$1600/EDU and the number of EDUs
3. Present Worth Calculations Assume 4.25% for 20 Years
4. Annual O&M Estimated based on typical common usage
5. Wholesale rate of \$25/edu.

Plan Recommendations- Estimated Costs

Milford - Selected Alternative 6F Project Cost: \$ 6,100,000 Annual O&M Cost: \$ 101,200 No. of EDUs 284

Option	Description	Tapping Fee		Grant	Loan	Interest Rate	Term (Yrs)	Annual DS Cost	Resulting Annual User Rate/EDU*	Resulting Monthly User Rate/EDU*	Total Interest over Term of Loan
		Towards Pjt									
6F - 1a	PENNVEST - w/ Anticipated Grant	\$ -	\$ -	\$ 1,785,000	\$ 4,315,000	1.000%	20	\$239,117	\$ 1,410	\$ 117	\$467,342
6F- 1b	PENNVEST - w/ Max Grant	\$ -	\$ -	\$ 4,250,000	\$ 1,850,000	1.000%	20	\$102,518	\$ 844	\$ 70	\$200,367
6F- 2	USDA - w/ 45% Grant	\$ -	\$ -	\$ 2,745,000	\$ 3,355,000	1.875%	40	\$119,972	\$ 916	\$ 76	\$1,443,875
6F- 3	Bank Loan	\$ -	\$ -	\$ -	\$ 6,100,000	4.250%	20	\$458,841	\$ 2,320	\$ 193	\$3,076,820
6F- 4	Bond Issue	\$ -	\$ -	\$ -	\$ 6,100,000	4.500%	30	\$374,488	\$ 1,971	\$ 164	\$5,134,652

Matamoras - Selected Alternative 2B Project Cost: \$ 7,100,000 Annual O&M Cost: \$ 89,800 No. of EDUs 276

Option	Description	Tapping Fee		Grant	Loan	Interest Rate	Term (Yrs)	Annual DS Cost	Resulting Annual User Rate/EDU*	Resulting Monthly User Rate/EDU*	Total Interest over Term of Loan
		Towards Pjt									
2B - 1a	PENNVEST - w/ Anticipated Grant	\$ -	\$ -	\$ 819,000	\$ 6,281,000	1.000%	20	\$348,064	\$ 1,866	\$ 156	\$680,272
2B - 1b	PENNVEST - w/ Max Grant	\$ -	\$ -	\$ 1,950,000	\$ 5,150,000	1.000%	20	\$285,389	\$ 1,599	\$ 133	\$557,777
2B - 2	USDA - w/ 45% Grant	\$ -	\$ -	\$ 3,195,000	\$ 3,905,000	1.875%	40	\$139,639	\$ 978	\$ 82	\$1,680,576
2B - 3	Bank Loan	\$ -	\$ -	\$ -	\$ 7,100,000	4.250%	20	\$534,061	\$ 2,659	\$ 222	\$3,581,217
2B - 4	Bond Issue	\$ -	\$ -	\$ -	\$ 7,100,000	4.500%	30	\$435,880	\$ 2,241	\$ 187	\$5,976,399

Westfall - Selected Alternative 3B Project Cost: \$ 3,100,000 Annual O&M Cost: \$ 672,600 No. of Total EDUs 1121 No. of New EDUs 128

Option	Description	Reserve Funds & Tapping Fee		Grant	Loan	Interest Rate	Term (Yrs)	Annual DS Cost	Resulting Annual User Rate/EDU*	Resulting Monthly User Rate/EDU*	Total Interest over Term of Loan
		Towards Pjt									
3B - 1a	PENNVEST - w/ Anticipated Grant	\$ 880,640	\$ -	\$ -	\$ 2,219,360	1.000%	20	\$122,987	\$ 767	\$ 64	\$240,371
3B - 1b	PENNVEST - w/ Max Grant	\$ 880,640	\$ -	\$ -	\$ 2,219,360	1.000%	20	\$122,987	\$ 767	\$ 64	\$240,371
3B - 2	USDA	\$ 880,640	\$ -	\$ -	\$ 2,219,360	1.875%	40	\$79,362	\$ 725	\$ 60	\$955,135
3B - 3	Bank Loan	\$ 880,640	\$ -	\$ -	\$ 2,219,360	4.250%	20	\$166,940	\$ 810	\$ 67	\$1,119,438
3B - 4	Bond Issue	\$ 880,640	\$ -	\$ -	\$ 2,219,360	4.500%	30	\$136,250	\$ 780	\$ 65	\$1,868,138

Notes:

1. Rate projections assumes 7.25% delinquency rate for retail customers and 15% for wholesale.
2. Assumes existing Westfall Authority reserve funds put towards capital project costs and used to lower amount financed by debt.
3. Assumes tapping fee revenue received by Westfall from new connections will be set aside in a reserve account for future capital improvement needs
4. Assumes annual retail and wholesale user charges from Westfall Authority are reduced by \$20/month and \$10/month respectively to eliminate budgeted depreciation expense for the initial years of service.
5. Assumes initial wholesale rate of \$25/EDU/month.

Implementation Schedule

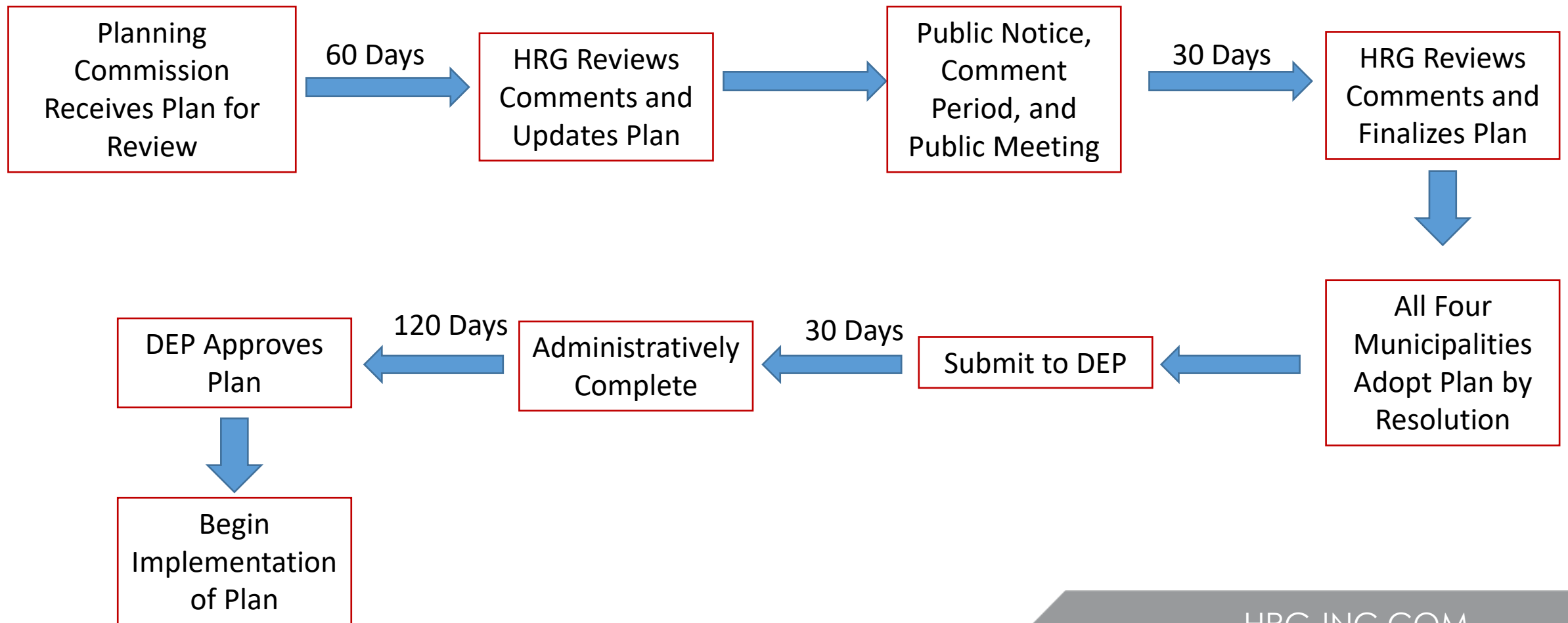
Years from DEP Approval	OLDS Sewage Management Ordinance Phase I
0	Develop Draft On-Lot Disposal System Management Ordinance
	Provide Public Education for On-Lot Disposal System Management Ordinance
1	Finalize and Adopt On-Lot Disposal System Management Ordinance
2	Implement On-lot Disposal System Management Ordinance, Begin Pumping Cycles

Years after DEP Approval (1)	Selected Alternatives Phase II
0	Finalize Inter-municipal Agreements with MATW
	Pursue Funding Opportunities for Construction of Alternative 2B, 3B, 6F Facilities
1	Design and Submit Part II WQM Permit for Alternative 2B, 3B, and 6F Facilities
2	Receive Part II WQM Permit Approval
2.5	Apply for and Obtain Project Financing
3	Bidding of Project
3.1	Finance Closing
3.5	Initiation of Construction
3.5	Substantial Completion
6	Construction Completion/ Final Restoration and connections

Note (1): Without an updated inter-municipal agreement (including updates to the MATW rules and regulations), development agreement(s), and favorable funding (public and private) these alternatives may not be feasible and may not be implemented. The Timeline for the implementation schedule begins on the Approval of the Act 537 Plan.

Plan Status

- > Current Status: Public Comment Period
- > Anticipated Submission to DEP: January 2023



Questions and Comments