



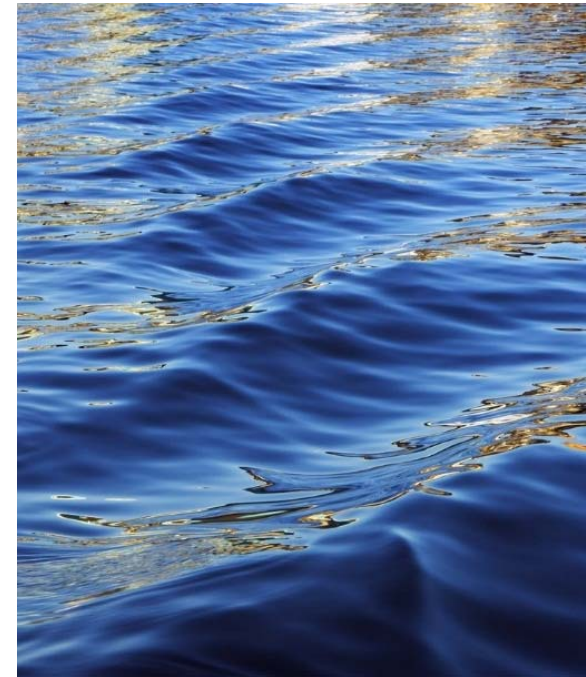
Report of Feasibility:
Change from
Waste Treatment Contract
to
Waste Treatment Ownership
for the
Village of Mattawan, MI

Jeff S. Landers, P.E.



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Background Summary

- Treatment agreement in place with the City of Kalamazoo provides a high cost to service
- Lift Station 1 is located on 25th Street and pumps an average of 420,000 gallons per day approximately 6.6 miles.
- The air release valves are reaching the end of their design life, have had several recent failures, and replacement cost will be very high due to the dynamics of bypassing such large flows for such an extended length.



Feasibility Definition

- Must hold value over the existing condition – meaning the cost to construct, operate, and maintain
- Must have an available location for construction.
- Must have an acceptable location to discharge treated effluent according to the State, and have State discharge limits achievable by a treatment technology used in the analysis.
- The cost effect on the user rates must be within Village tolerances to accept.
- The Village must be able to retire, or otherwise work within, the current treatment agreements in place with Kalamazoo.
- Funding for the project is available to the Village.



Existing Conditions

- Over the course of the next 20 years, OM&R and treatment costs are estimated to cost about \$23M

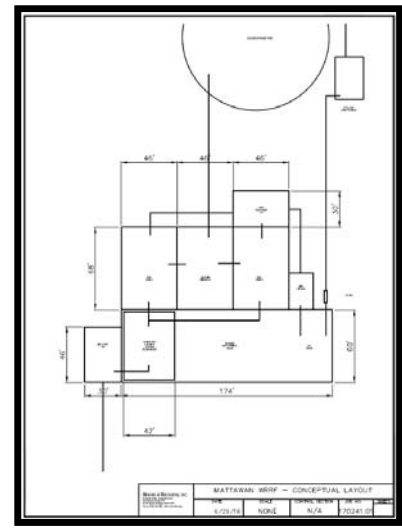
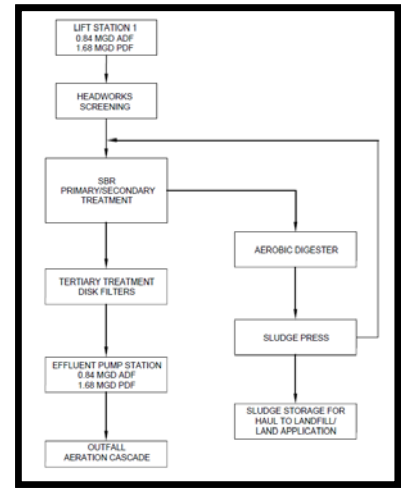
Description	Quantity	Unit Price	Units	Cost
Full Air Release Replacement Set	1.00	\$1,536,000.00	LS	\$1,536,000.00
Full Check Valve Replacement Set	1.00	\$1,032,000.00	LS	\$1,032,000.00
Full Forcemain Cleaning	1.00	\$1,600,000.00	LS	\$1,600,000.00
16" FM replacement within 20 years	6.60	\$1,500,000.00	Mi	\$9,900,000.00
Kalamazoo Treatment Costs	20.00	\$250,000.00	Yr	\$5,000,000.00
Contractor OH&P (10%)	1.00	\$566,800.00	Sft	\$566,800.00
Legal (2%)	1.00	\$113,360.00	Ft	\$113,360.00
Engineering (15%)	1.00	\$1,955,220.00	Ea	\$1,955,220.00
Contingency (20%)	1.00	\$1,710,676.00	Ea	\$1,710,676.00
Subtotal				\$23,415,000.00

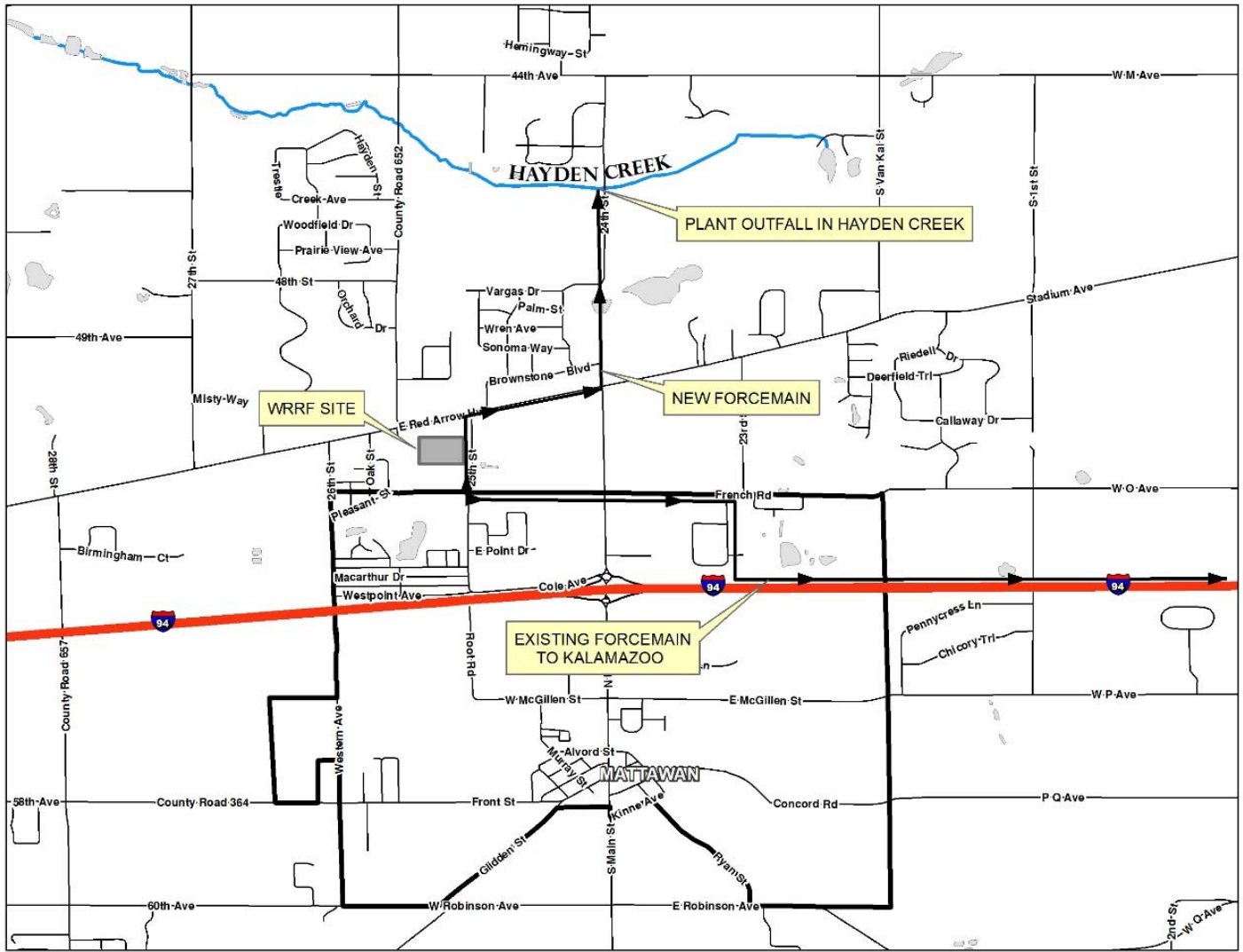


Project Concept Costs

- Finding an available location
- Research and Select a treatment technology to meet ELO (Estimated Limits of Operation)
- Plant Layout and Conceptual Estimates
- Conceptual Cost over 20 years is \$20M (S \$3M)

Description	Quantity	Unit Price	Units	Cost
25th St. Site	1.00	\$1,735,000.00	Lsum	\$1,735,000.00
Influent Forcemain	1.00	\$260,000.00	Lsum	\$260,000.00
WWRF	1.00	\$6,964,000.00	Lsum	\$6,964,000.00
Contractor OH&P (10%)	1.00	\$896,000.00	Sft	\$896,000.00
Legal (2%)	1.00	\$198,000.00	Ft	\$198,000.00
Engineering (15%)	1.00	\$1,479,000.00	Ea	\$1,479,000.00
Contingency (20%)	1.00	\$1,971,000.00	Ea	\$1,971,000.00
Subtotal				\$13,503,000.00
Operating Budget	20.00	\$350,000.00	Yrs	\$7,000,000.00
				\$20,503,000.00





Rate Analysis

	Base Rate	Commodity Charge (per 1000 gal)	User Costs						
			4000 gal/mo	5000 gal/mo	6000 gal/mo	7000 gal/mo	8000 gal/mo	9000 gal/mo	10,000 gal/mo
Current Water	\$2.80	\$3.97	\$18.68	\$22.65	\$26.62	\$30.59	\$34.56	\$38.53	\$42.50
Current Wastewater	\$13.70	\$5.67	\$36.38	\$42.05	\$47.72	\$53.39	\$59.06	\$64.73	\$70.40
			\$55.06	\$64.70	\$74.34	\$83.98	\$93.62	\$103.26	\$112.90
Future Water	\$0.00	\$3.76	\$15.04	\$18.80	\$22.56	\$26.32	\$30.08	\$33.84	\$37.60
Future Wastewater	\$0.00	\$8.58	\$34.32	\$42.90	\$51.48	\$60.06	\$68.64	\$77.22	\$85.80
			\$49.36	\$61.70	\$74.04	\$86.38	\$98.72	\$111.06	\$123.40
Change in Bill			-\$5.70	-\$3.00	-\$0.30	\$2.40	\$5.10	\$7.80	\$10.50

Note: Future Wastewater Rate includes payments for an \$18M loan for the WRRF



Project Feasibility

- Must hold value over the existing condition – meaning the cost to construct, operate, and maintain - **Anticipated to save \$3M over 20 years**
- Must have an available location for construction. – **25th St. Property**
- Must have an acceptable location to discharge treated effluent according to the State, and have State discharge limits achievable by a treatment technology used in the analysis. – **MDEQ pre-evaluation of Hayden Creek**
- The cost effect on the user rates must be within Village tolerances to accept. – **Council’s Decision, but believed to be acceptable**
- The Village must be able to retire, or otherwise work within, the current treatment agreements in place with Kalamazoo. – **Attorney is evaluating**
- Funding for the project is available to the Village. – **USDA-RD, SRF, County Bonds**



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Questions



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