

**CO Department of Local Affairs****EIAF Tier II Grant Application****Budget and Schedule****Prepared Date:** December 1, 2019**Name of Applicant:** Town of Erie**Name of Project:** Horizontal Well Pilot Project**Project Start Date:** 1/1/2020**Project End Date:** 8/1/2021

<b>Task No.</b>	<b>Task Description</b>	<b>Task Start Date</b>	<b>Task End Date</b>	<b>Grant Funding Request</b>	<b>Match Funding</b>	<b>Total</b>
1	Design Hydrogeology and Engineering	1/1/2020	5/1/2020	\$106,357	\$106,357	\$212,713
2	Horizontal Well Construction and Development	6/1/2020	8/1/2020	\$509,372	\$509,372	\$1,018,743
3	Pilot Operations, Reporting and Community Workshop (Study) (Grant and match funding reduced because of \$200,000 CWCB grant)	8/1/2020	8/1/2021	\$22,568	\$22,568	\$245,135
	<i>PROJECT CONTINGENCY (20%)</i>			\$147,659	\$147,659	\$295,318
<b>Total</b>				<b>\$785,955</b>	<b>\$785,955</b>	<b>\$1,771,909</b>

EXHIBIT B - ENGINEERING COSTS

Task 1 - Engineering							Water Consultants				Subcontracts				Project Total
Sub-task	Senior Project Manager	225	Senior	Staff	Project	Subtotal	Geotechnical Lump sum	Registered	(Other)	Subtotal					
			Hydrogeologist and Engineer	Hydrogeologist	Adminstration Support			Surveyor Lump Sum							
			\$	\$	\$			\$							
Estimated Hours							Estimated Cost per Task and subcontractor								
Task 1 Design Hydrogeology and Engineering															
Project Management	40				10	\$ 9,830				\$ -	\$9,830				
Pre-drilling coordination			2	4		\$ 900				\$ -	\$900				
Meeting with City to stake test boring locations	8					\$ 1,800				\$ -	\$1,800				
On-Site hydrogeology logging and supervision	3		4	40		\$ 6,955				\$ -	\$6,955				
Completion of Well Design	10		20	10		\$ 7,050				\$ -	\$7,050				
Presentation of test results	6			10		\$ 2,750				\$ -	\$2,750				
Site surveying for design			4			\$ 680		\$ 12,000		\$ 12,000	\$12,680				
Stream gage design			4			\$ 680			\$ 3,000	\$ 3,000	\$3,680				
Technical specifictions and bid documents	46		260	30	24	\$ 60,742				\$ -	\$60,742				
Pre-bid meeting with potential bidders				8		\$ 1,120				\$ -	\$1,120				
Bidding support and addendum preparation	10		20	8	40	\$ 10,090				\$ -	\$10,090				
Permitting support	60			10		\$ 14,900				\$ -	\$14,900				
Project Reporting					8	\$ 664				\$ -	\$664				
Technical report on construction and testing results	20		30	20	8	\$ 13,064				\$ -	\$13,064				
Maintenance manual for installations				20	16	\$ 4,128				\$ -	\$4,128				
Task 1 Total						\$ 135,353					\$150,353				
Task 2 Construction Oversight															
Construction Adminstration	40				20	\$ 10,660				\$ -	\$10,660				
Resident Construction Observation and Oversight				160		\$ 22,400		\$ 20,000		\$ 20,000	\$42,400				
Remote Construction Oversight			40			\$ 6,800				\$ -	\$6,800				
Task 2 Total						\$39,860				\$35,000	\$59,860				
Other Direct Costs (see below)											\$2,500	\$ 2,500.00			
ENGINEERING TOTAL												\$212,713			

Other Direct Costs				
Item:	Rental Truck		Mileage	Total
Units:	No.		Miles	
Unit Cost:	\$	100.00	\$0.535	
Task 1	25		0	
Task 2				
Total Units:	25		0	
Total Cost:	\$2,500		\$0	\$2,500

# CO Department of Local Affairs

## EIAF Tier II Grant Application - Detailed Budget Estimate

### Fair and Reasonable Estimate

**Prepared Date:** December 1, 2019  
**Name of Applicant:** Town of Erie  
**Name of Project:** Horizontal Well Pilot Project

## EXHIBIT B - CONSTRUCTION COSTS

### Task 1 - Design Hydrogeology and Engineering

Preconstruction	Unit	Quantity	Unit Cost	Total Cost
Mobilization of track mounted sonic rig and crew	LS	1	\$ 5,500	\$ 5,500
crew per diem	Day	2	\$ 400	\$ 800
Rig set up and move per site	Hour	4	\$ 750	\$ 3,000
Sonic drilling	Foot	100	\$ 50	\$ 5,000
2" Monitoring Well Installation	Foot	100	\$ 64	\$ 6,400
4" stickup and concrete pads	Each	4	\$ 400	\$ 1,600
Monitoring Well Development	Each	4	\$ 200	\$ 800
<b>Task 1 Subtotal</b>				<b>\$ 23,100</b>

### Task 2 - HDD Well Construction and

Development	Unit	Quantity	Unit Cost	Total Cost
Mobilization of drilling rig, support equipment, materials, and crew	LS	1	\$38,000	\$38,000
Pilot bore with walkover navigation	Foot	850	\$130	\$110,500
Reaming and installation of 10" Well Material	Foot	850	\$130	\$110,500
Well materials stringing and assembly	LS	1	\$35,000	\$35,000
Well materials	Foot	850	\$174	\$147,947
Well development	Hour	60	\$600	\$36,000
Well seals	Each	2	\$6,500	\$13,000
Surface completions	Each	2	\$10,000	\$20,000

Demobilization crew and equipment, site cleanup	LS	1	\$15,000	\$15,000
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### Infrastructure, Pumps, Controls, Electrical, and Control Building Costs

Mobilization, demobilization, bonds, insurance, submittals	LS	1	\$50,000	\$50,000
8" ASTM PVC Pipe	Foot	320	\$13	\$4,160
12" ASTM PVC Pipe	Foot	3400	\$18	\$61,200
8" Buried valves	Each	3	\$1,100	\$3,300
12" Buried valves	Each	3	\$2,200	\$6,600
Flush hydrants	Each	5	\$2,000	\$10,000
Air release valves	Each	2	\$1,400	\$2,800
Restrained crossings	Percent	20	-	\$13,036
Control building	Each	1	\$20,000	\$20,000
Submersible pumps (including column pipe, electrical, VFD, and installation)	Each	1	\$45,000	\$45,000
Purchase and install west side pitless adapter	Each	1	\$10,000	\$10,000
Conduit and wire	Foot	3400	\$38	\$129,200
Electrical, Panels, and VFD	LS	1	\$34,400	\$34,400
Controls and radio	Each	1	\$50,000	\$50,000
Stream gage installation	Each	1	\$30,000	\$30,000

<b>Task 2 Subtotal</b>				<b>\$995,643</b>
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<b>Construction Total</b>				<b>\$1,018,743</b>
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**CO Department of Local Affairs**  
**EIAF Tier II Grant Application - Detailed Budget Estimate**  
**Fair and Reasonable Estimate**

**Prepared Date:** December 1, 2019  
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**EXHIBIT B - STUDY COSTS**

**Task 3 - Pilot Operations, Reporting and Community Workshop (Study)**

Sub-task	Item	Hourly Rate	# Hours	Sub-total	Item Cost	Item Quantity	Sub-total	Total
Pilot Operations								
	Senior Project Manager	\$ 225	40	\$ 9,000.00			\$ -	\$ 9,000.00
	Senior Hydrogeologist and Engineer	\$ 170	80	\$ 13,600.00			\$ -	\$ 13,600.00
	Staff Hydrogeologist	\$ 140	120	\$ 16,800.00			\$ -	\$ 16,800.00
	Project Administration Support	\$ 83	20	\$ 1,660.00			\$ -	\$ 1,660.00
	30 Day Pumping Test Contractor	\$ 275	120	\$ 33,000.00			\$ -	\$ 33,000.00
	Temporary Pump Install				\$ 2,500.00	1.00	\$ 2,500.00	\$ 2,500.00
	30 Day Generator Rental/Fuel				\$ 30,000.00	1.00	\$ 30,000.00	\$ 30,000.00
Reporting								
	Senior Project Manager	\$ 225	40	\$ 9,000.00			\$ -	\$ 9,000.00
	Senior Hydrogeologist and Engineer	\$ 170	120	\$ 20,400.00			\$ -	\$ 20,400.00
	Staff Hydrogeologist	\$ 140	120	\$ 16,800.00			\$ -	\$ 16,800.00
	Project Administration Support	\$ 83	80	\$ 6,640.00			\$ -	\$ 6,640.00
Community Workshop								
	Senior Project Manager	\$ 225	24	\$ 5,400.00			\$ -	\$ 5,400.00
	Senior Hydrogeologist and Engineer	\$ 170	24	\$ 4,080.00			\$ -	\$ 4,080.00
	Staff Hydrogeologist	\$ 140	24	\$ 3,360.00			\$ -	\$ 3,360.00
	Project Administration Support	\$ 83		\$ -			\$ -	\$ -
<b>TOTAL</b>								<b>\$ 172,240.00</b>
<a href="#">Other Direct Costs (see below)</a>								<a href="#">\$ 72,895.00</a>
<b>OVERALL TOTAL</b>								<b>\$ 245,135.00</b>

**Other Direct Costs**

Item:	YSI Automated Sampler	Drinking Water Laboratory Sample Analysis	Limited Parameter Laboratory Sample Analysis	Rental Truck	Data Loggers (Water level, Temp. Sp. Cond.)	Mileage	Total
<b>Units:</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>Miles</b>	
<b>Unit Cost:</b>	<b>\$3,525.00</b>	<b>\$2,235.00</b>	<b>\$500.00</b>	<b>\$ 100.00</b>	<b>\$ 2,750.00</b>	<b>\$0.535</b>	
Pilot Operations	1	12	48	48	5	0	\$35,198
Reporting							
Community Workshop							\$0
<b>Total Units:</b>	<b>1</b>	<b>12</b>	<b>48</b>	<b>48</b>	<b>5</b>	<b>0</b>	
<b>Total Cost:</b>	<b>\$3,525</b>	<b>\$26,820</b>	<b>\$24,000</b>	<b>\$4,800</b>	<b>\$13,750</b>	<b>\$0</b>	<b>\$72,895</b>