



# Department of Environmental Protection

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## Comprehensive Review of Revised Water Management Act Permit Requirements, July 1, 2017

### Summary of Conversion Costs to an Automatic Meter Reading System

This information is to provide an order of magnitude cost estimate.  
By definition, Order of Magnitude cost estimates are +50% to -30% the final cost and therefore should be used as planning guidance, not as a firm cost estimate for any given water supply system.

Estimate provided by Ti Sales (Neptune). This is a Fixed Radio Read System

#### A Estimate Meter Replacement costs

*Meters 10 year and younger (e.g. electrical retrofit only)*

Meter Size	Number in System	Retrofit Cost	Labor Cost	Rounded Total Cost
5/8 in	2,940	\$100	\$100	\$588,000
3/4 in	27	\$100	\$100	\$5,400
1 in	59	\$100	\$100	\$11,800
1.5 in	5	\$100	\$100	\$1,000
2 in	14	\$100	\$ 100	\$2,800
<b>Sub Total</b>	<b>3,045</b>			<b>\$609,000</b>

*Meters older than 10 years old (e.g. total meter replacement)*

*Note that this cost will be sensitive to the meter age and condition and has the most variability.  
District has assumed all meters 10 years and older would be replaced, but that may not be case in the final assessment as some of these meters may be retrofitted.*

Meter Size	Number in System	Retrofit Cost	Labor Cost	Rounded Total Cost
5/8 in	4,167	\$216	\$150	\$1,525,200
3/4 in	147	\$285	\$50	\$64,000
1 in	19	\$350	\$150	\$9,500
1.5 in	10	\$650	\$150	8,000
2 in	9	\$749	\$150	\$8,100
<b>Sub Total</b>	<b>4,352</b>			<b>\$1,614,800</b>

**MeterTotal \$2,223,800**

**B Radio Read System**

Assumes three collectors will be required

Item	No. of Systems	Unit Cost		Total Cost
Collector	3	\$19,600		\$58,800
<b>Subtotal</b>				<b>\$58,800</b>

**C Miscellaneous Capital Items**

Item	No. of Systems	Unit Cost		Total Cost	Notes
Trimble Ranger (Manual Collection)	1	\$7,500		\$7,500	
Ranger Charging Station	1	\$500		\$500	
Intergration to Northern Data	1			\$2,000	
Training	1	\$1500		\$1,500	
<b>Subtotal</b>				<b>\$11,500</b>	

**D Estimated Capital Total for Conversion to a Fixed Network System**

A	Estimate Meter Replacement costs	\$2,223,800
B	Radio Read System	\$58,800
C	Miscellaneous Capital Items	\$11,500

<b>Grand Total</b>	<b>\$2,294,100</b>
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**E Maintenance Items**

- 1.) Replacing meters as they become 10 yrs and older.
- 2.) Maintenance of the system.
- 3.) Maintenance contract ~ \$1,000 (to keep software up to date)

**F Substitutions**

- 1.) If a drive by system selected instead of fixed data system,  
reduce line item B cost by \$46,200 or a total of \$12,600.

**G Normalized Cost by Meter**

No. of Meters	7,397
Install Cost.	\$2,294,100
Normalized Install. Cost	\$311 per meter