

## How much to fix/upgrade the system?

Based on minimum industry standard engineering construction costs submitted to the Board from Scott Medina, PE, (2011).

### System 1

	Item Description	Unit	Qt	Unit price	Total
	60,000 On Grade, Welded Steel Reservoir	LS	1	\$ 80,000.00	\$ 80,000.00
2	Concrete Ring wall	LS	1	\$ 5,000.00	\$ 5,000.00
3	Site Grading	CY	2000	\$ 2.50	\$ 5,000.00
4	Natural Gravel Surfacing, 4" thick	SY	2000	\$ 7.00	\$ 14,000.00
5	Site Clearing and Grubbing	AC	1.00	\$ 1,500.00	\$ 1,500.00
6	2" Waterline Pie including fittings	LF	4500	\$ 12.00	\$ 54,000.00
7	4" Waterline Pie including fittings	LF	12200	\$ 16.00	\$ 195,200.00
8	2" Gate Valve	EA	10	\$ 450.00	\$ 4,500.00
9	4" Gate Valve	EA	20	\$ 900.00	\$ 18,000.00
10	2" Flush Hydrant	EA	20	\$ 1,500.00	\$ 30,000.00
11	3/4" Single Meter	EA	97	\$ 1,800.00	\$ 174,600.00
12	3/4" HDPE Waterline	LF	4850	\$ 9.25	\$ 44,862.50
13	Road Crossing w/ Steel Sleeve	LF	50	\$ 100.00	\$ 5,000.00
				<b>Subtotal</b>	<b>\$ 631,662.50</b>

### System 2

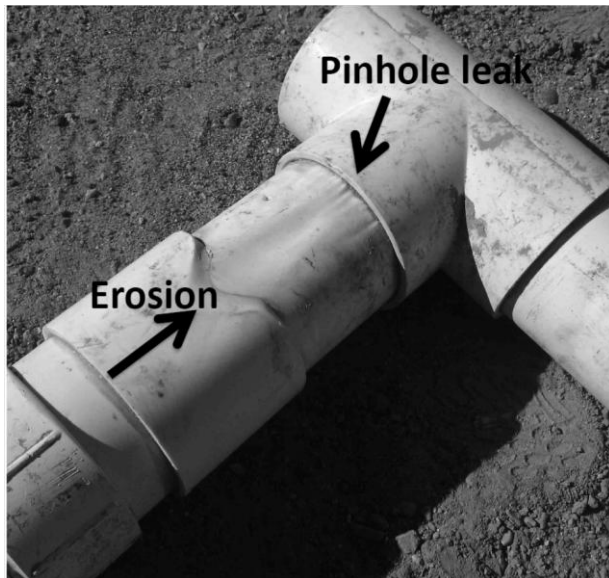
14	32,000 On Grade, Welded Steel Reservoir	LS	1	\$ 50,000.00	\$ 50,000.00
15	Concrete Ring wall	LS	1	\$ 5,000.00	\$ 5,000.00
16	Site Grading	CY	2000	\$ 2.50	\$ 5,000.00
17	Natural Gravel Surfacing, 4" thick	SY	2000	\$ 7.00	\$ 14,000.00
18	Site Clearing and Grubbing	AC	1.00	\$ 1,500.00	\$ 1,500.00
19	4" Waterline Pie including fittings	LF	12300	\$ 16.00	\$ 196,800.00
20	4" Gate Valve	EA	15	\$ 900.00	\$ 13,500.00
21	2" Flush Hydrant	EA	8	\$ 1,500.00	\$ 12,000.00
22	3/4" Single Meter	EA	52	\$ 1,800.00	\$ 93,600.00
23	3/4" HDPE Waterline	LF	2600	\$ 9.25	\$ 24,050.00
24	Road Crossing w/ Steel Sleeve	LF	50	\$ 100.00	\$ 5,000.00
25	Booster Station	LS	1	\$ 25,000.00	\$ 25,000.00
26	Construction Staking	%		1.4%	\$ 15,080.58
27	Construction Surveying	%		1.3%	\$ 14,003.00
28	Construction Mobilization	%		4.0%	\$ 43,088.84
	Construction Contin enc 10%				\$ 107,720.60
	<b>TOTAL CONSTRUCTION COST</b>				<b>\$1,257,005.52</b>
	Engineering @ 7.5%				\$89,237.00
	Legal Fees @ 0.75%				\$8,923.77
	Inspection @ 4.5%				\$53,542.60
	NMGRT 7.3125%				\$87,006.02
	<b>PROJECT TOTAL</b>				<b>\$ 1,495,714.91</b>

This estimate did not include tank(s) and construction for fire protection water storage est. - \$150,000.

\*Expect prices have increased substantially.

## ADDITIONAL IMPROVEMENTS

*not included in engineering costs*



- GIS system mapping
- SCADA remote monitoring system
- Return lines for chlorination contact time
- Fire protection water storage tank(s)
- Inline system diagnostic components
- Redesign the commingle system
- Well houses upgrades/pressure tanks
- Storage shed rebuild w/elec.
- Hire contract services (water operator) and other vendors to relieve dependence on volunteers.

### **Water Operator Services** *(many services now delegated to the Board & volunteers)*

- Chlorination systems maintenance
- Usage monitoring and reporting and any other required water system regulatory measures required by the State of New Mexico and/or the Federal Government.
- Monthly water bio sampling and delivery of samples to a certified testing lab
- Assist the state with metals, etc. sampling on a periodic basis
- Monthly meter reading and reporting to OSE
- Weekly chlorination systems maintenance
- Monthly residual chlorine and Bac-T measurement and reporting.
- In the event of contamination, working with the appropriate State authorities
- Prepare the yearly Consumer Confidence Report (CCR).
- Conduct regular inspections of the pump houses and booster station
- Monitor tank levels via remote / web based monitoring system and site visits
- Reset pumps and monitoring equipment as needed.
- Conduct minor repairs, valve exercising, system testing, leak repairs.
- Keep activity log books at each work station and preventative maintenance logs.
- Maintain chemical inventory and parts for water system.