

Timber Lakes Water Special Service District

Our Water System...
the Past, Present & Future



August 28, 2007

There are advantages of
living in Timber Lakes...
However, there are also
Disadvantages of Serving on a
Volunteer Water Board



"Bummer of a birthmark, Hal."

Our Water System

OVERVIEW

- Purchased from Veigh Cummings - 1995
 - 637 ac-ft of Water Rights - \$1,600,000 (\$2,511/ac-ft)
 - Water System - \$10.00
- What we inherited
 - A Cabin Retreat / Summer Home Water System
 - Indoor Water Right for 637 ac-ft/yr (1,415 cabins)
 - Summer Water System serving 380 Connections
 - Three Developed Springs
 - Two Storage Tanks (108,000, 400,000 gallons)
 - 33 miles of Water Lines (2-6 inch, buried 2-3 feet deep)
 - Fire Hydrants (inadequately spaced & maintained)
 - Water Connections (to existing cabins)

Our Water System

WHAT WE NOW FACE

Although we inherited a working system, it did not come without problems. We have both present and long term, build-out issues.

- The system was built for summer recreational use, *but it now provides water for year round residences. WATER DELIVERY HAS NEVER BEEN GUARANTEED, especially during winter months.*
- We have three springs that supply our current needs, *but they are inadequate to meet build-out demands.*
- We have water storage to meet present needs, *but it is inadequate for build-out demands.*
- We have small water lines adequate to meet indoor water needs, *but inadequate to meet fire demands.*
- We have many buried pipes that are protected against the surface environment, *but are too shallow to protect against winter freeze.*
- Growth from 380 connections to 745 in 2007 (19.6% growth per year)

SPRINGS

We Share Spring Sources with the LDS Church

There are approximately 3 more upper springs in the Lone Pine area that are now being developed in cooperation with the LDS Church. They must be developed to preserve our rightful share to the water. We get $\frac{1}{2}$ the water developed for a maximum commitment of \pm \$75,000.

We have spent \pm \$30,000 installing spring flow measuring devices so we can more accurately evaluate our water supply.



SPRING SOURCES



Pointer 40°28'17.48" N 111°14'40.70" W elev 7846 ft

Streaming ||:|||| 75%

Eye alt 45135 ft

STORAGE



West Tank
200,000 gal

Lone Pine Tanks
400,000 gal
108,000 gal

ADDITIONAL MASTER PLANNED STORAGE



WATER LINE SIZES

The majority of water lines inherited are 2" to 4"

The Master Plan shows proper sizes for main and distribution lines:

Main distribution lines – 8"

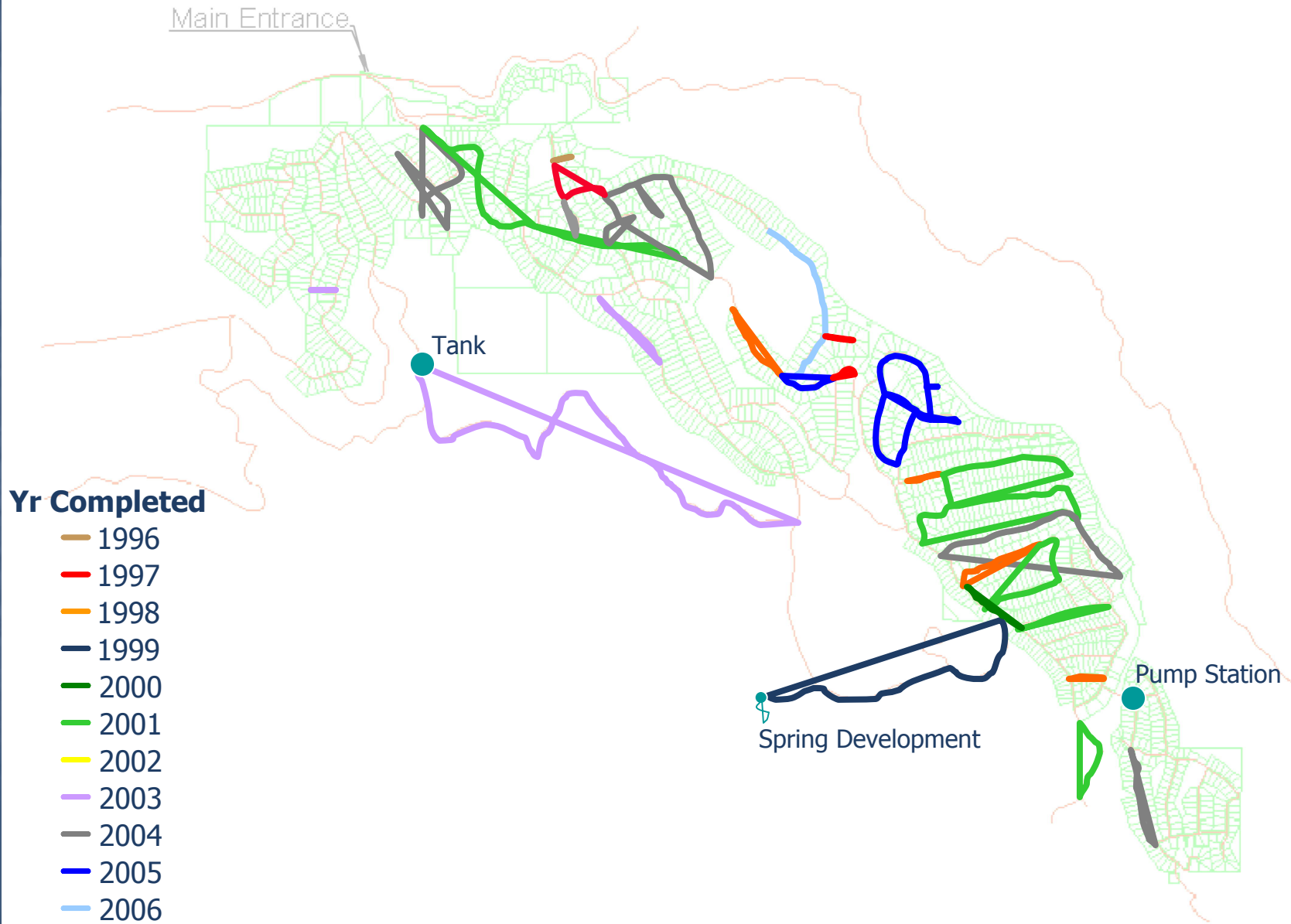
Lateral lines – 6"

WATER LINE BURIAL DEPTHS

When developed, Timber Lakes was intended to be a summer recreation property, not a full-time, year-round development.

Water lines were buried to minimal depths (usually 2 to 3 feet), and were not intended to provide fire flows nor winter freeze protection (needing 6 to 7 foot burial depths & 6 - 8" lines).

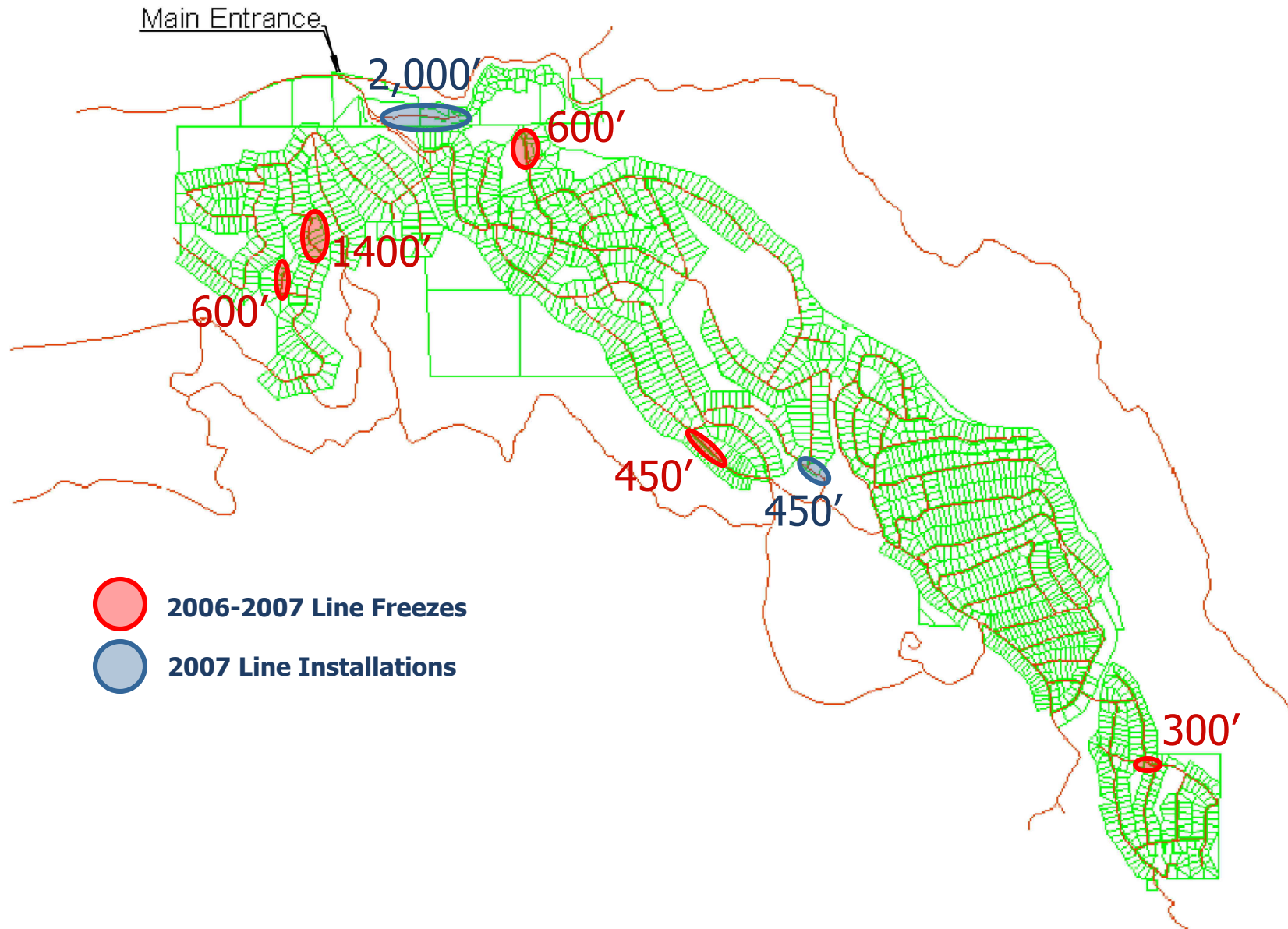
SYSTEM UPGRADES SINCE 1996



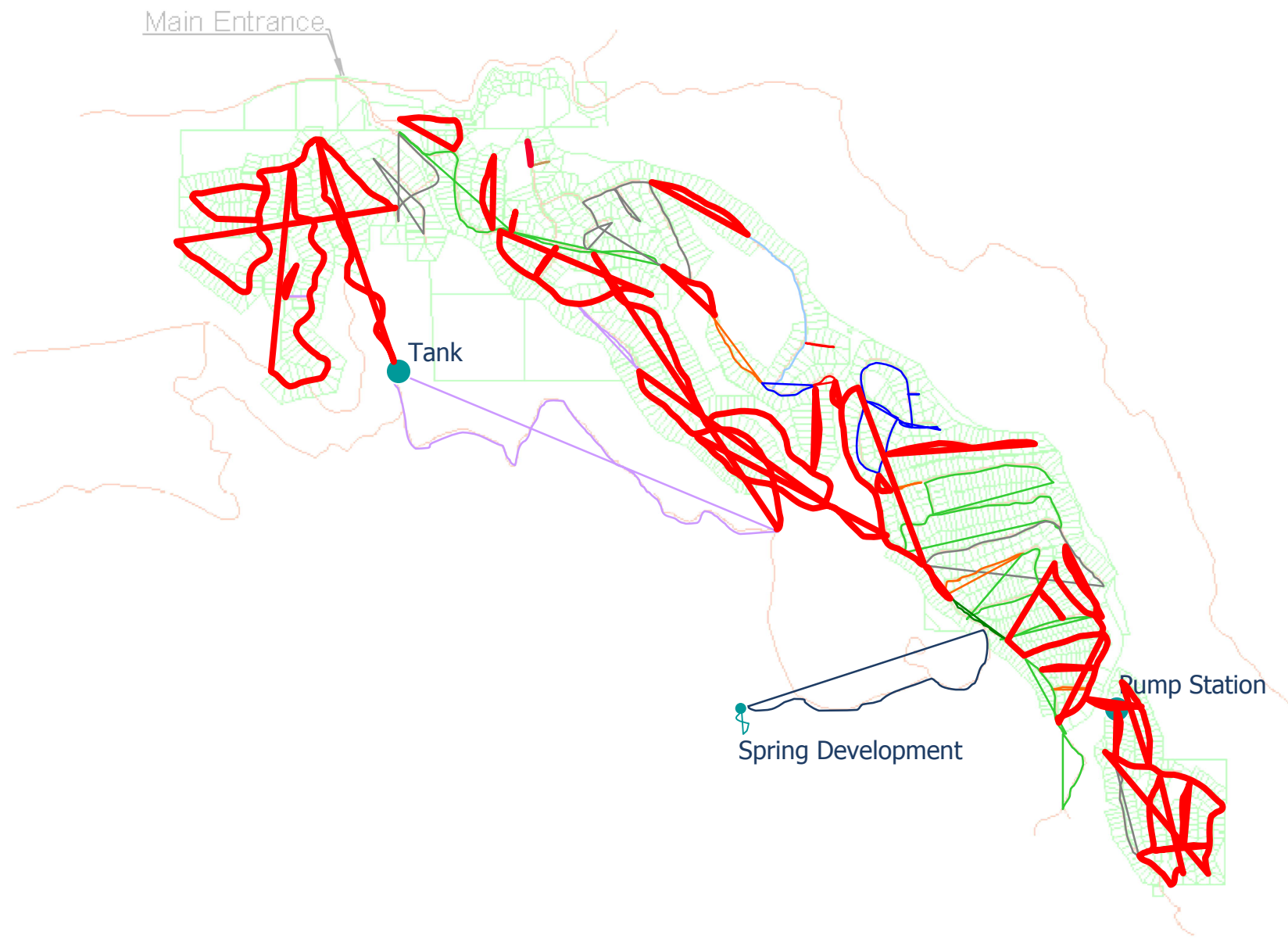
CAPITAL COST EXPENDITURES (96 – 06)

<u>Year</u>	<u>Cost</u>	<u>Cumulative Total</u>
Pre 1996	\$ 174,750	\$ 174,750
1996	\$ 33,159	\$ 207,909
1997	\$ 0	\$ 207,909
1998	\$ 209,952	\$ 417,861
1999	\$ 136,743	\$ 554,604
2000	\$ 271,380	\$ 825,984
2001	\$ 465,804	\$ 1,291,788
2002	\$ 341,044	\$ 1,632,832
2003	\$ 136,297	\$ 1,769,129
2004	\$ 515,724	\$ 2,284,853
2005	\$ 358,243	\$ 2,643,096
2006	\$ 202,156	\$ 2,845,252

2006-2007 WATER LINE FREEZES/BURSTS



LINES REMAINING TO BE UPGRADED



WORK REMAINING TO BE DONE

<u>Road Section</u>	<u>Length</u>	<u>Est. Cost</u>
Deer Creek	8,847	\$621,700
Cedarbark Lane	1,588	\$116,600
Acorn Way	2,930	\$198,400
Greenleaf	949	\$ 62,700
Grove Lane	581	\$ 54,900
Oak View	3,355	\$206,000
West View	6,884	\$448,800
Beaver Bench	3,355	\$206,000
Ridgepine Drive	5,124	\$359,100
Tanglewood Dr	4,065	\$150,100

WORK REMAINING TO BE DONE - Cont

<u>Road Section</u>	<u>Length</u>	<u>Est. Cost</u>
Ridge Line Dr	12,186	\$860,500
Green Briar	350	\$ 26,200
Timber Lakes Drive	10,382	\$739,300
Falcon Way	1,500	\$ 45,300
Beaver Circle	1,412	\$ 95,100
Badger Court	672	\$ 49,900
Marigold Lane	1,800	\$128,900
Hawk Lane	3,534	\$232,100
Raccoon Way	1,239	\$ 86,400
Blazing Star	3,642	\$279,700
Cliff Rose	1,247	\$ 86,000

WORK REMAINING TO BE DONE - Cont

<u>Road Section</u>	<u>Length</u>	<u>Est. Cost</u>
Rockcress Dr	1,615	\$140,900
Fawn Way	1,650	\$109,000
Elk Drive	1,320	\$ 94,500
Eagle Drive	1,425	\$ 87,700
Club House	2,510	\$165,900
Blue Spruce	6,765	\$484,200
Buck Way	1,160	\$ 83,100
Birch Drive	350	\$ 25,100
Clyde Lake Drive	550	\$ 39,400
Oak Circle	331	\$ 30,300
White Pine	430	\$ 30,800

ENGINEERING COST ESTIMATE

Engineering Cost Estimate in Master Plan

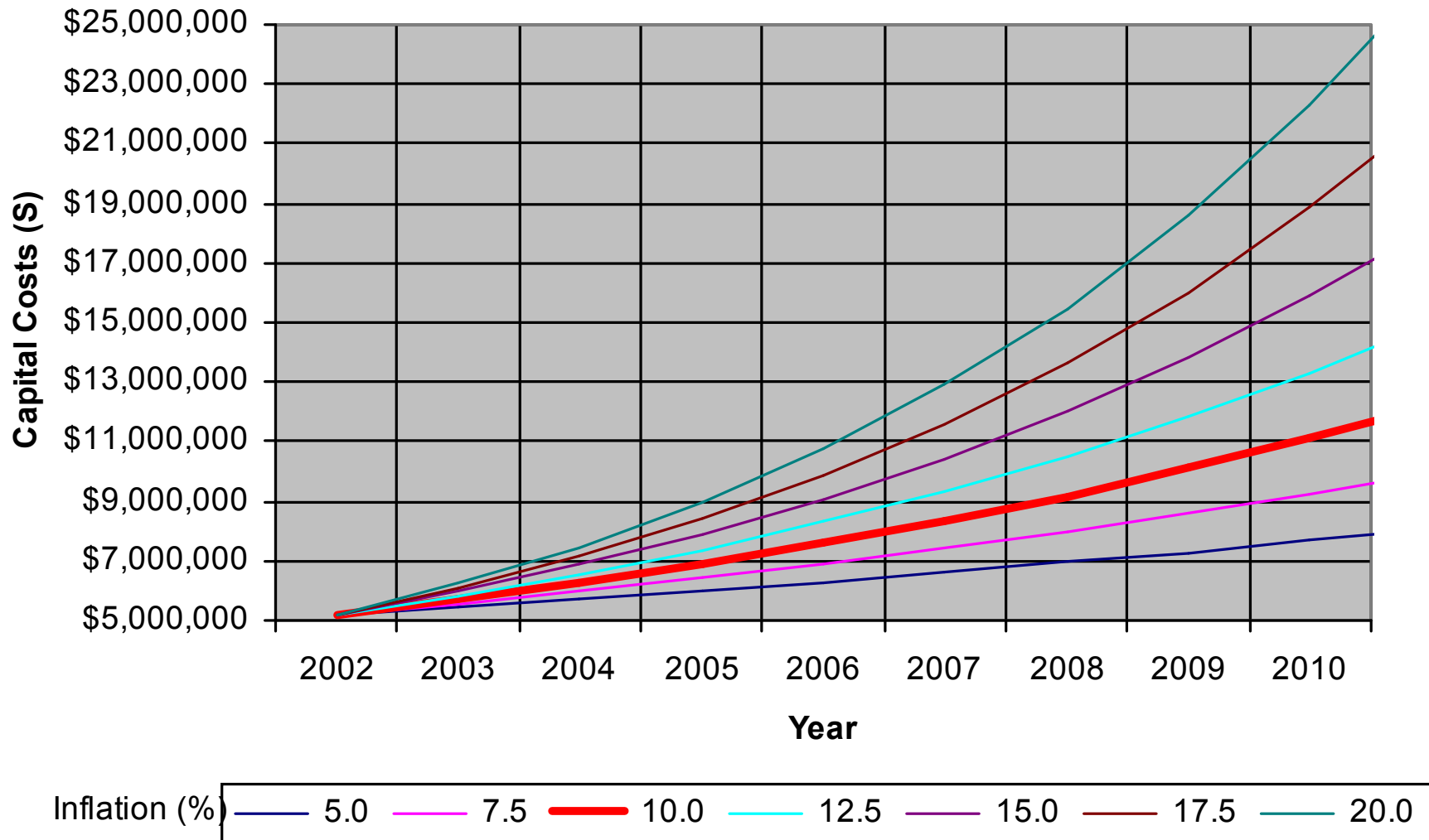
2002	\$5,185,210	
2007	\$8,350,800	(@ 10% Inflation)

Does not include costs of

Spring Development:	\$235,000
Tank Construction:	\$650,000
Engineering:	\$1,500,000
System O & M:	Varies

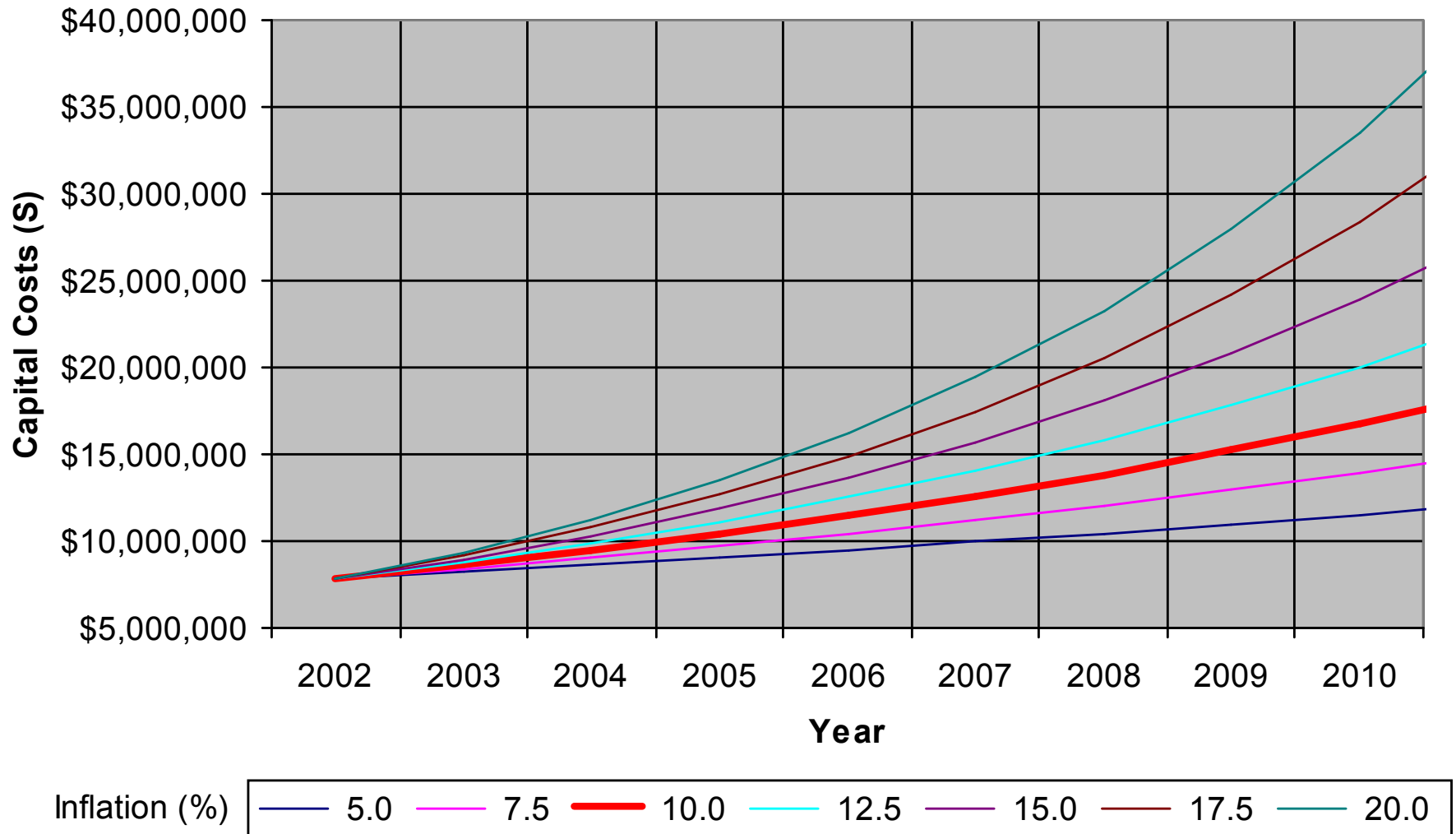
IMPACT OF INFLATION ON PIPE COSTS

Pipe Capital Cost Inflation



IMPACT OF INFLATION ON TOTAL COSTS

Total Capital Cost Inflation



AVAILABLE FUNDS

Income: \$ 780,000.00

- Water Billings
- Meters / Connections
- Finance Charges

Expenses: \$ 682,000.00

- Salaries
- Business
- Miscellaneous

Net Capital Imp Budget: \$ 98,000.00

WHAT IS THE SOLUTION?

- ❑ Maintain Status Quo system with inherent problems
 - ❑ Does not solve problems
 - ❑ Will require a rate increase to maintain system

- ❑ Build up fund and replace over time
 - ❑ Focus on high priority problems
 - ❑ Will require many years to resolve
 - ❑ Will require a rate increase

- ❑ Overhaul system now
 - ❑ Resolves system deficiencies quickly
 - ❑ Puts entire system on equal footing
 - ❑ Will require a rate increase or a one-time assessment

MAINTAINING THE STATUS QUO

The system needs an additional \$100,000/year income just so we can continue to maintain the system we have.

ESTIMATED 2007 INCREASE

$$\$100,000 / 750 \text{ Connections} = \$11.10 / \text{mo}$$

Without system improvements, we will:

- Continue to have line freezes and system interruptions
- Future building will be limited by both water source and storage. *The "haves" will "have", the "have not's" will continue to "have not"*

BUILDING A FUND AND REPLACE OVER TIME

Time to Complete:	15 years
Construction Inflation:	10% per year (low)
Pipeline Improvements:	\$ 8,350,800
Spring Development Costs:	\$ 235,000
Tank Construction Costs:	\$ 650,000
Contingency (10%)	\$ 933,000
Administration (3%)	\$ 280,000
Engineering (15%)	\$ 1,540,000
Total Estimated Cost:	\$ 12,132,000
Needed income:	\$ 1,450,000 / Year

ESTIMATED INCREASE

\$ 1,450,000 / 1415 Lots: \$85.40 / mo / Lot

LUMP SUM REPAIRS

Improvements made over a 2 year time period can likely be bid in a single contract to fix prices.

Assuming: \$12,232,000 cost

ESTIMATED INCREASE WITH A 5.5% 20 YEAR BOND*

\$12,232,000 for 1,415 lots = \$60.00 / mo

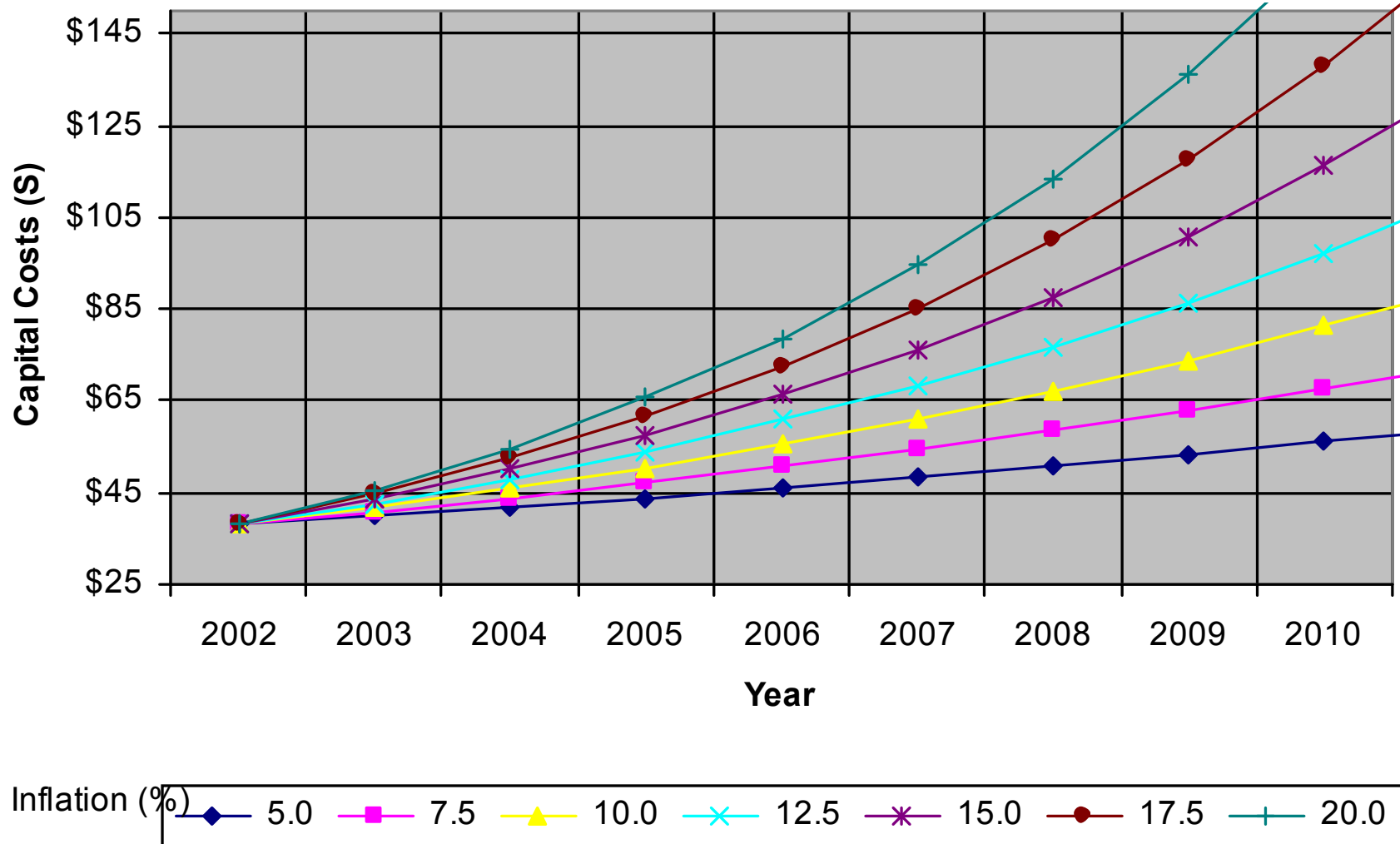
ESTIMATED LUMP SUM INCREASE

\$12,232,000 / 1,415 residences = \$8,644 / lot

* - Including Admin Fees, Bond Costs, etc..

WHAT HAPPENS IF WE DELAY?

Cost of 2% Bond with Inflation



Timber Lakes Water Special Service District

Water Rates

Cost per 1,000 gallons

<u>Usage (gal)</u>	<u>Existing</u>	<u>New</u>
1,000 – 2,000	\$2.00	\$2.00
2,000 – 4,000	\$2.50	\$5.00
4,000 – 6,000	\$3.00	\$6.00
6,000 – 8,000	\$3.50	\$7.00
8,000 – 10,000	\$4.00	\$8.00
10,000 +	\$7.00	\$14.00

Estimated Added Income ~ \$30,000 / Yr

Timber Lakes Water Special Service District

After careful review and consideration, the Board is recommending a \$60 /month increase on all lots to pay for needed system replacements and upgrades, and an increase in water usage rates for usage above 2,000 gal/month.

October 16, 2007