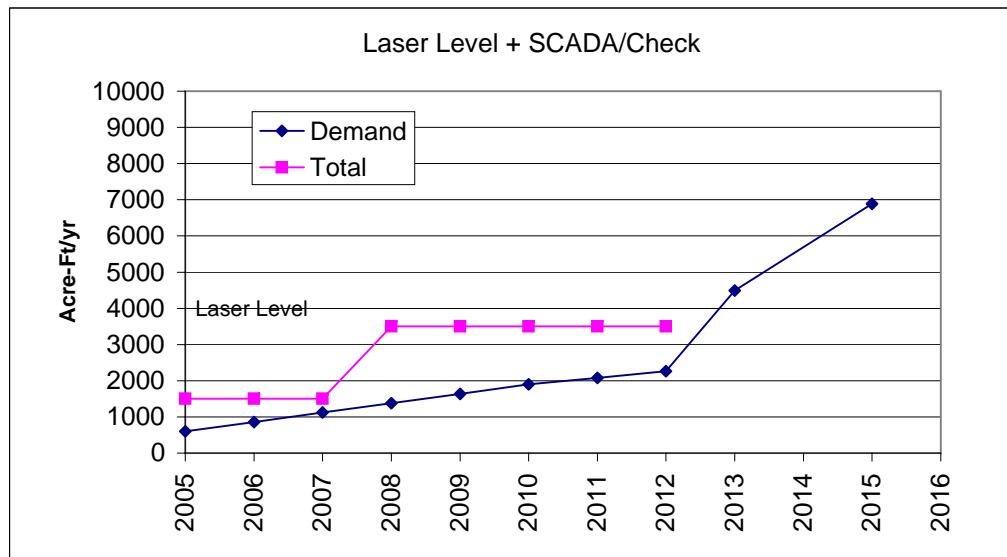


**Combination Precision Leveling with SCADA/Checks, Contract End at 2012, SCADA Construction in 2007,  
One Cycle of Maintenance**

**Summary**

Capacity af/yr	3500
Surcharge =	25%
EQIP %	50%
Ag Fund %	30%

Yr	Laser - On Farm			In-District		Total	Capacity,% of Demand
	Demand	Acres	Vol.	Vol.			
2005	600	2000	1500	0	1500	250.00%	
2006	860	2000	1500	0	1500	174.42%	
2007	1120	2000	1500	0	1500	133.93%	
2008	1380	2000	1500	2000	3500	253.62%	
2009	1640	2000	1500	2000	3500	213.41%	
2010	1900	2000	1500	2000	3500	184.21%	
2011	2080	2000	1500	2000	3500	168.27%	
2012	2260	2000	1500	2000	3500	154.87%	
2013	4491	2000	1500	2000		0.00%	
2015	6886	2000	1500	2000		0.00%	



Combination Precision Leveling with SCADA/Checks, Contract End at 2012, SCADA Construction in 2007,  
One Cycle of Maintenance

183000

Conservation Charge 25.00%  
EQIP % 50%

Costs	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Sums
Used to Implement Strategy														
Laser Leveling	\$0	\$183,600	\$183,600	\$183,600	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000	\$200,000	\$200,000	\$1,150,800
Check & SCADA	\$0	\$0	\$0	\$291,429	\$291,429	\$327,256	\$327,256	\$327,256	\$327,256	\$35,826	\$35,826	\$35,826	\$35,826	\$2,035,186
Supplemental Well	0	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$13,090	\$0	\$0	\$0	\$0	\$104,720
M&M	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$600,000
<b>Total Costs to Implement</b>	<b>\$0</b>	<b>\$246,690</b>	<b>\$246,690</b>	<b>\$538,119</b>	<b>\$354,519</b>	<b>\$390,346</b>	<b>\$390,346</b>	<b>\$390,346</b>	<b>\$390,346</b>	<b>\$85,826</b>	<b>\$285,826</b>	<b>\$285,826</b>	<b>\$285,826</b>	<b>\$3,890,706</b>

Income Balance

Beginning Balance	\$ 544,125	\$544,125	\$687,200	\$839,736	\$710,681	\$763,801	\$786,958	\$814,778	\$846,299	\$881,668	\$831,108	\$578,526	\$315,841
Deposited to Ag Fund		\$368,000	\$371,738	\$375,475	\$379,213	\$382,950	\$386,688	\$389,275	\$391,863	\$0	\$0	\$0	\$0
Interest Accrued on Balance (4%)		\$21,765	\$27,488	\$33,589	\$28,427	\$30,552	\$31,478	\$32,591	\$33,852	\$35,267	\$33,244	\$23,141	\$12,634
Implementation Costs		\$246,690	\$246,690	\$538,119	\$354,519	\$390,346	\$390,346	\$390,346	\$390,346	\$85,826	\$285,826	\$285,826	\$285,826
<b>Ag Fund Balance</b>	<b>\$544,125</b>	<b>\$687,200</b>	<b>\$839,736</b>	<b>\$710,681</b>	<b>\$763,801</b>	<b>\$786,958</b>	<b>\$814,778</b>	<b>\$846,299</b>	<b>\$881,668</b>	<b>\$831,108</b>	<b>\$578,526</b>	<b>\$315,841</b>	<b>\$42,648</b>

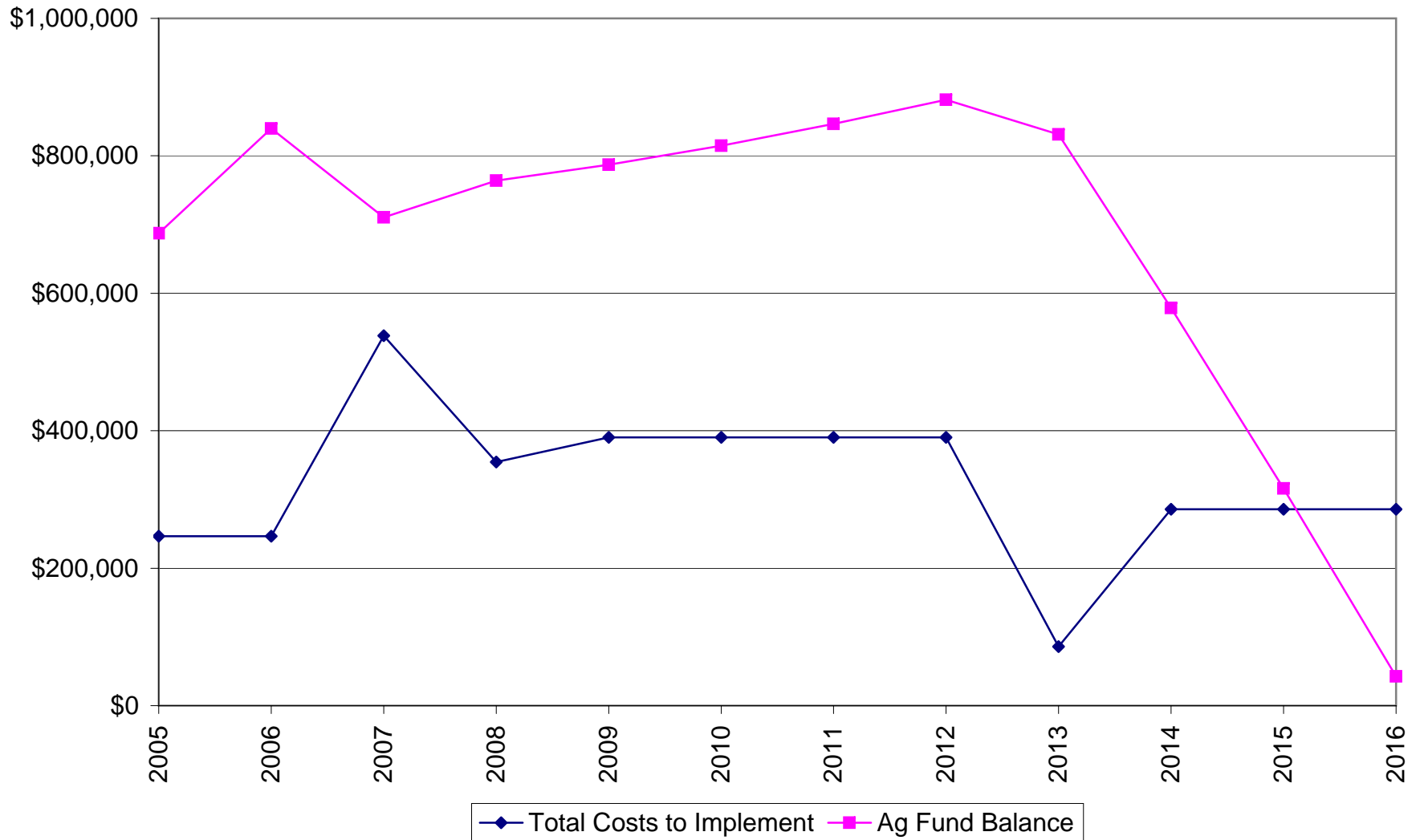
TOTALS

	Ag Fund	Income	Costs
Construction	\$3,584,575		
Operations	\$991,330	\$3,933,354	\$991,330
Field Maint	\$600,000		\$600,000
			\$2,299,375
<b>Total</b>		<b>\$3,933,354</b>	<b>\$3,890,706</b>
Balance		\$42,648	
Use		\$742,000	

COSTS

	Totals	EQIP	Ag Fund	Farmer	Math Check
<b>Constructor</b>					
Level	\$1,836,000	\$918,000	\$550,800	\$367,200	\$1,836,000
Check/SCADA	\$1,748,575	\$0	\$1,748,575	\$0	
<b>Total Costs:</b>	<b>\$3,584,575</b>	<b>\$918,000</b>	<b>\$2,299,375</b>	<b>\$367,200</b>	
<b>Operations</b>					
M&M	\$600,000				
Checks	\$286,610				
GW Wells	\$104,720				
<b>Total O&amp;M</b>	<b>\$991,330</b>		<b>\$991,330</b>		
Annual Avg	\$123,916				
<b>Field Relevel</b>	<b>\$600,000</b>		<b>\$600,000</b>		
<b>Total</b>	<b>\$5,175,906</b>	<b>\$918,000</b>	<b>\$3,890,706</b>	<b>\$367,200</b>	

**Combination Precision Leveling with SCADA/Checks, Contract End at 2012,  
SCADA Construction in 2007, One Cycle of Maintenance**



**Combination Precision Leveling with SCADA/Checks, Contract End at 2012, SCADA Construction in 2007,  
One Cycle of Maintenance**

**Projected Water Usage of HB 1437 Alliance Water**

Note: Projections made for LCRA use in "No Net Loss" evaluations. All values are in acre-feet per year.

Entity (amount of Alliance Water contract)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
CTSUD (3472 acft/yr)	-	-	-	-	-	600	760	920	1,080	1,240	1,400		
Georgetown (6944 acft/yr)	-	-	-	-	-	-	-	-	-	-	-		
Liberty Hill (600 acft/yr)	-	-	-	-	-	-	100	200	300	400	500		
Round Rock (11,444 acft/yr)	-	-	-	-	-	-	-	-	-	-	-		
<b>Total</b>	-	-	-	-	-	<b>600</b>	<b>860</b>	<b>1,120</b>	<b>1,380</b>	<b>1,640</b>	<b>1,900</b>	<b>2,080</b>	<b>2,260</b>

Source of Water Demand: D. Wheelock, 4/19/04; Williamson Co Water Facilities Plan; personal correspondence.

Cost Creep	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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Maximum Acre feet	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Normal Rate	\$105.00	\$105.00	\$105.00	\$105.00	\$105.00	\$115.00	\$115.00	\$115.00	\$115.00	\$115.00	\$115.00	\$115.00	\$115.00
Inverted Block Rate	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
Reserve Charge Rate %	50.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
Conservation Charge %	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%

Check for Lowest Ag Fund Balance: \$ 42,648.03

Reserve Charge Volume						24,400	24,140	23,880	23,620	23,360	23,100	22,920	22,740
Total Volume for Conservation Charge - Normal						600	860	1,120	1,380	1,640	1,900	2,080	2,260

Reserve Charge	\$0	\$0	\$0	\$0	\$1,403,000	\$1,388,050	\$1,373,100	\$1,358,150	\$1,343,200	\$1,328,250	\$1,317,900	\$1,307,550
Normal Usage Charge	\$0	\$0	\$0	\$0	\$69,000	\$98,900	\$128,800	\$158,700	\$188,600	\$218,500	\$239,200	\$259,900
<b>Water Charge to go to LCRA</b>	\$0	\$0	\$0	\$0	\$1,472,000	\$1,486,950	\$1,501,900	\$1,516,850	\$1,531,800	\$1,546,750	\$1,557,100	\$1,567,450
Reserve Charge to Conservation Charge	\$0	\$0	\$0	\$0	\$350,750	\$347,013	\$343,275	\$339,538	\$335,800	\$332,063	\$329,475	\$326,888
(\$/1000 GAL) based on reserve volume					\$0.044	\$0.044	\$0.044	\$0.044	\$0.044	\$0.044	\$0.044	\$0.044
(\$/1000 GAL) based on demand					\$1.794	\$1.238	\$0.941	\$0.755	\$0.628	\$0.536	\$0.486	\$0.444
Normal Usage Charge to Conservation Charge	\$0	\$0	\$0	\$0	\$17,250	\$24,725	\$32,200	\$39,675	\$47,150	\$54,625	\$59,800	\$64,975
(\$/1000 GAL) based on demand					\$0.088	\$0.088	\$0.088	\$0.088	\$0.088	\$0.088	\$0.088	\$0.088
<b>Conservation Charge to go to Ag Fund</b>	\$0	\$0	\$0	\$0	\$368,000	\$371,738	\$375,475	\$379,213	\$382,950	\$386,688	\$389,275	\$391,863

Management Cost Component	\$ 25,000
Monitoring Cost Component	\$ 25,000

**Combination Precision Leveling with SCADA/Checks, Contract End at 2012, SCADA Construction in 2007,  
One Cycle of Maintenance**

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Level Costs		\$183,600	\$183,600	\$183,600	\$0	\$0	\$0	\$0	\$0	\$0			
<b>O&amp;M Cost (10 Year)</b>		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000	\$200,000	\$200,000
Well Cost		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
GW Mitigation		\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000				
Well O&M		\$2,090	\$2,090	\$2,090	\$2,090	\$2,090	\$2,090	\$2,090	\$2,090				
Check Capital				\$291,429	\$291,429	\$291,429	\$291,429	\$291,429	\$291,429				
Check O&M						\$35,826	\$35,826	\$35,826	\$35,826	\$35,826	\$35,826	\$35,826	\$35,826
M&R Costs		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
<b>Total Costs</b>		\$246,690	\$246,690	\$538,119	\$354,519	\$390,346	\$390,346	\$390,346	\$390,346	\$85,826	\$285,826	\$285,826	\$285,826

Interest Accrued on - balances: 6%  
Interest Accrued on + balances: 4%

Net Present Value Percentage 6.0%

Net Present Value \$2,759,305

Total Volume Delivered 22,000 acre-feet

NPV per Total Volume \$125.42

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Beginning Balance	\$ 544,125	\$544,125	\$687,200	\$839,736	\$710,681	\$763,801	\$786,958	\$814,778	\$846,299	\$881,668	\$831,108	\$578,526	\$315,841
Deposited to Ag Fund		\$368,000	\$371,738	\$375,475	\$379,213	\$382,950	\$386,688	\$389,275	\$391,863	\$0	\$0	\$0	\$0
Used to Implement Strategy		\$246,690	\$246,690	\$538,119	\$354,519	\$390,346	\$390,346	\$390,346	\$390,346	\$85,826	\$285,826	\$285,826	\$285,826
Interest Accrued on Balance		\$21,765	\$27,488	\$33,589	\$28,427	\$30,552	\$31,478	\$32,591	\$33,852	\$35,267	\$33,244	\$23,141	\$12,634
<b>Balance</b>	\$544,125	\$687,200	\$839,736	\$710,681	\$763,801	\$786,958	\$814,778	\$846,299	\$881,668	\$831,108	\$578,526	\$315,841	\$42,648



**Combination Precision Leveling with SCADA/Checks, Contract End at 2012, SCADA Construction in 2007,  
One Cycle of Maintenance  
Automated Check Structures and Control Systems**

**Capital Cost** \$ 1,433,052 \*See "Check Costs" for further detail.

**Annual O&M** \$ 35,826 \*based on SB1 O&M for pump stations

**Rate** 6.00%  
**Useful Life (Debt Term)** 6 years

**Annualized Capital Cost** \$291,429

**Total Annual Cost of Automated Checks with  
O&M and M&R** \$327,256

**Combination Precision Leveling with SCADA/Checks, Contract End at 2012, SCADA Construction in 2007,  
 One Cycle of Maintenance  
 One Cycle of Maintenance  
 Automation of Check Structures for the Garwood Irrigation District**

Full Implementation				Initial implementation	
<b>Control Stations</b>					
Item	Quantity	unit cost	total		
Water level sensors	2	\$ 1,500	\$ 3,000		
Controller	1	\$ 1,000	\$ 1,000		
Radio	1	\$ 1,500	\$ 1,500		
Antenna	1	\$ 1,200	\$ 1,200		
Fabrication/testing	1	\$ 5,000	\$ 5,000		
Field installation/testing	1	\$ 4,000	\$ 4,000		
Solar Panel with batteries	1	\$ 5,000	\$ 5,000		
Programming	1	\$ 2,000	\$ 2,000		
Design	1	\$ 5,000	\$ 5,000		
Subtotal per station			\$ 27,700	34 locations	8 locations
Subtotal for all stations			\$ 941,800		\$ 221,600
<b>Gate Operators</b>					
Gate Operators	2	\$ 5,000	\$ 10,000		
Valve Positioner	2	\$ 1,000	\$ 2,000		
Power Supply	1	\$ 10,000	\$ 10,000		
Gate Operator Installation	2	\$ 5,000	\$ 10,000		
Subtotal per station			\$ 32,000	31 locations	5 locations
Subtotal Operators			\$ 992,000		\$ 160,000
<b>New Gates/Structures</b>					
Gates	2	\$ 12,000	\$ 24,000		
Installation	2	\$ 10,000	\$ 20,000		
Canal Structure	1	\$ 30,000	\$ 30,000		
Structure Design	1	\$ 10,000	\$ 10,000		
Subtotal per structure			\$ 84,000	20 locations	0 locations
Subtotal all structures			\$ 1,680,000	(estimated)	\$ -
<b>Central Control</b>					
MTU	1	\$ 2,000	\$ 2,000		
Radio	1	\$ 3,000	\$ 3,000		
Antenna	1	\$ 3,000	\$ 3,000		
Programming	1	\$ 15,000	\$ 15,000		
Remote Pump Control	1	\$ 200,000	\$ 200,000		
Connection to LCRA Trunk Re	1	\$ 15,000	\$ 15,000		
SCADA	1	\$ 15,000	\$ 15,000		
Subtotal for system			\$ 253,000	1 location	\$ 253,000
<b>System Design</b>	1	\$ 500,000	\$ 500,000		\$ 250,000
<b>Total System Cost</b>					
			\$ 4,366,800		\$ 884,600
Contractor Mob, Demob, Bonding, Insura			5% \$ 218,340		\$ 44,230
Contractor Overhead and Profit			15% \$ 655,020		\$ 132,690
Subtotal			\$0 \$ 5,240,160		\$ 1,061,520
E, A, L, F, B, C			35% \$ 1,834,056		\$ 371,532
<b>Total Capital Cost</b>			\$ 7,074,216		\$ 1,433,052