

**Scotland County Board of Commissioners meeting as the Water District
6:30 p.m. Monday, January 4, 2016
A.B. Gibson Center, 322 South Main Street, Laurinburg**

Convene meeting of the Water District

Chair Carol McCall

Public Forum

- I. Financial summary through November 30, 2015
- II. Update on water tanks

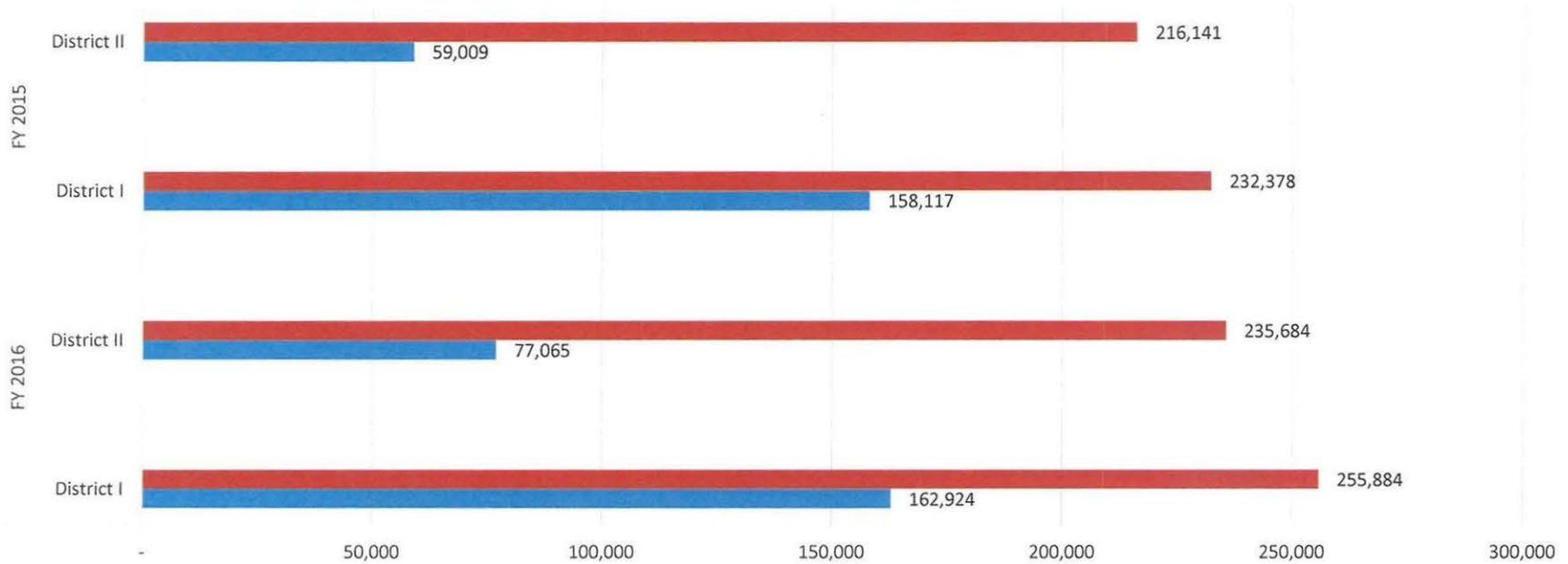
Adjourn

**SCOTLAND COUNTY
WATER DISTRICTS
CASH FLOWS REPORT
As of November 30, 2015**

	FY 2016		
	Budget	District I	Difference
Revenues:			
<i>Charges for Services</i>			
Water Taps	-	-	-
Water Sales	685,000	255,884	429,116
Sewer Sales	-	-	-
Fund Balance Appropriated	14,781	-	-
Total revenues	699,781	255,884	443,897
Expenditures:			
Salary and Wages	27,510	10,355	17,155
FICA	2,107	772	1,335
Employee Benefits	15,300	6,473	8,827
Unemployment Insurance	-	-	-
Workman's Comp Insurance	94	35	59
Professional Services	25,000	3,565	21,435
<i>Contract Services:</i>			
Water Purchase	270,000	105,901	164,099
Billing & Collection Fees	45,000	12,166	32,834
Other	26,000	2,938	23,062
Repair & Maintenance - Other	34,834	9,086	25,748
Repair & Maintenance - Water Towers	59,341	-	59,341
Testing	50,000	6,656	43,344
Operating Expenses	6,900	1,350	5,550
Property over \$5,000	-	-	-
Utilities	11,000	3,625	7,375
Communications	-	-	-
Travel Expenses	-	-	-
Office Supplies	1,000	-	1,000
Principal	46,500	-	46,500
Interest and other charges	79,195	-	79,195
Total expenditures	699,781	162,924	536,857
Revenues over (under) expenditures	-	92,960	(92,960)

Water Districts Comparison of Revenues and Expenses As of November 30

■ Revenues ■ Expenses



SCOTLAND COUNTY
WATER DISTRICTS
NET POSITION REPORT
 As of November 30, 2015

	<u>WATER DISTRICT I FUND</u>	<u>WATER DISTRICT II FUND</u>	<u>TOTAL</u>
NET POSITION - JUNE 30, 2015**	2,034,900	1,217,655	\$ 3,252,555
REVENUES	255,884	235,684	\$ 491,568
EXPENDITURES	<u>162,924</u>	<u>77,065</u>	\$ 239,989
NET POSITION - NOVEMBER 30, 2015	<u>2,127,860</u>	<u>1,376,274</u>	\$ 3,504,134

** - Preliminary

SCOTLAND COUNTY
CASH FLOWS REPORT - WATER DISTRICTS
As of November 30, 2015

	<u>FY 2016</u>		<u>FY 2015</u>	
	<u>District I</u>	<u>District II</u>	<u>District I</u>	<u>District II</u>
Revenues:				
<i>Charges for Services</i>				
Water Sales	255,884	192,696	232,378	137,999
Sewer Sales	-	42,988	-	78,142
Total revenues	<u>255,884</u>	<u>235,684</u>	<u>232,378</u>	<u>216,141</u>
Expenditures:				
Salary and Wages	10,355	-	10,160	-
FICA	772	-	759	-
Employee Benefits	6,473	-	6,278	-
Unemployment Insurance	-	-	56	-
Workman's Comp Insurance	35	-	28	-
Professional Services	3,565	-	4,353	-
<i>Contract Services:</i>				
Water Purchase	105,901	59,332	106,297	43,537
Billing & Collection Fees	12,166	12,034	12,493	11,825
Other	2,938	669	5,831	-
Repair & Maintenance - Other	9,086	-	-	-
Repair & Maintenance - Water Towers	-	-	-	-
Testing	6,656	-	8,960	-
Operating Expenses	1,350	870	188	-
Property over \$5,000	-	-	-	-
Utilities	3,625	4,160	2,715	3,647
Communications	-	-	-	-
Travel Expenses	-	-	-	-
Office Supplies	-	-	-	-
Principal	-	-	-	-
Interest and other charges	-	-	-	-
Total expenditures	<u>162,924</u>	<u>77,065</u>	<u>158,117</u>	<u>59,009</u>
Revenues over (under) expenditures	92,960	158,619	74,261	157,132
Cash, beginning - July 1	<u>1,077,091</u>	<u>-</u>	<u>954,127</u>	<u>-</u>
Cash, ending - November 30	<u>1,170,051</u>	<u>158,619</u>	<u>1,028,388</u>	<u>157,132</u>

**SCOTLAND COUNTY
WATER DISTRICTS
CASH FLOWS REPORT
As of November 30, 2015**

	FY 2016		
	<u>Budget</u>	<u>District II</u>	<u>Difference</u>
Revenues:			
<i>Charges for Services</i>			
Water Taps	-	-	-
Water Sales	436,316	192,696	243,620
Sewer Sales	150,000	42,988	107,012
Fund Balance Appropriated	<u>26,819</u>	-	<u>26,819</u>
Total revenues	<u>613,135</u>	<u>235,684</u>	<u>377,451</u>
Expenditures:			
Salary and Wages	-	-	-
FICA	-	-	-
Employee Benefits	-	-	-
Unemployment Insurance	-	-	-
Workman's Comp Insurance	-	-	-
Professional Services	5,500	-	5,500
<i>Contract Services:</i>			
Water Purchase	150,000	59,332	90,668
Billing & Collection Fees	36,000	12,034	23,966
Other	60,000	669	59,331
Repair & Maintenance - Other	5,000	-	5,000
Repair & Maintenance - Water Towers	63,135	-	63,135
Testing	-	-	-
Operating Expenses	1,988	870	1,118
Property over \$5,000	-	-	-
Utilities	12,250	4,160	8,090
Communications	-	-	-
Travel Expenses	-	-	-
Office Supplies	500	-	500
Principal	88,000	-	88,000
Interest and other charges	<u>190,762</u>	-	<u>190,762</u>
Total expenditures	<u>613,135</u>	<u>77,065</u>	<u>536,070</u>
Revenues over (under) expenditures	<u>-</u>	<u>158,619</u>	<u>(158,619)</u>



Kevin Patterson
County Manager

Ann W. Kurtzman
Clerk to the Board

County of Scotland

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Board of Commissioners
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December 30, 2015

To: Board of County Commissioners acting as Water Board

From: County Manager

Re: Update Report

Request for Proposal for the painting of the water tanks – attached is a copy of the draft proposal for the water tanks painting. I am looking for a date the Capital Committee can meet with the engineers writing the proposal.

Requesting date for capital committee meeting.

Technical Memorandum

To Scotland County, North Carolina Page 1

CC Joe Langston, PE

Subject Elevated Tank Repainting – Maintenance vs. Engineered Coating System Evaluation

From Nathan Ward, PE

Date November 2, 2015

Scotland County contracted AECOM to review the proposed maintenance coating systems for their three elevated water tanks, provide a recommended engineered system with a long life span and a cost analysis between the two systems for each tank.

Deercroft Tank – 300,000 Gallon Elevated Tank

Exterior Coating System:

	Proposed Maintenance Coating System	Proposed Engineered Coating System
Surface Preparation	Power wash/SSPC-SP2, SP3	Power wash/SSPC-SP2, SP3
Prime Coat (Spot)	Tnemec 135 Chembuild	Tnemec 135 Chembuild
Prime Coat (Full)	N/A	Tnemec 135 Chembuild
Intermediate Coat	Tnemec 135 Chembuild	Tnemec 73 Endura-Shield
Final Coat	Tnemec 73U Endura-Shield	Tnemec 700 Hydroflon

The major difference between the maintenance coating system and the engineered coating system on the exterior for the Deercroft Tank is the application of a fourth coat of paint. AECOM has been recommending the use of a fluoropolymer coating system (i.e. – Tnemec 700 Hydroflon) since 2008 and has had good success with the engineered coating system. The fluoropolymer coating system has an outstanding resistance to ultra-violet light degradation along with excellent resistance to abrasion and chalking. The fluoropolymer coating system is recommended on tanks where extremely long-term maintenance cycles are desired (per Tnemec).

The estimated cost for the maintenance coating system on the exterior is \$60,000. The estimated cost for the engineered coating system on the exterior is \$95,000. The additional coat of paint with the engineered system almost doubles the life cycle on the exterior. With the maintenance coating system on the tank, the tank exterior will most likely have to be repainted again in 9 years at an estimated cost of \$47,000. With the engineered coating system on the tank, the exterior will not have to be repainted for approximately 15-18 years.

Interior Coating System:

	Proposed Maintenance Coating System	Proposed Engineered Coating System
Surface Preparation	SSPC-SP10	SSPC-SP10
Prime Coat	Tnemec N140	Tnemec 91/94 Hydro-Zinc
Stripe Coat	Tnemec N140	Tnemec N140
Intermediate Coat	None	Tnemec N140
Final Coat	Tnemec N140	Tnemec N140

The major difference between the maintenance coating system and the engineered coating system on the interior is the application of a zinc-rich primer (Tnemec 91/94 Hydro-Zinc). The zinc-rich primer provides outstanding long-term corrosion resistance when used as a primer with other coatings (per Tnemec). AECOM has been using the zinc-rich primers on tank interiors for over 10 years and has had good success with the outlined engineered coating system.

The estimated cost for the maintenance coating system on the interior is \$58,000. The estimated cost for the engineered coating system on the interior is \$68,000. Adding the zinc-rich primer with the engineered system extends the coating system life cycle from approximately 12 years to over 18 years. The repainting of the maintenance coating system in 12 years is estimated at \$81,000.

The total initial one time coating system cost (including repairs) of the maintenance coating system is approximately \$130,000 while the engineered coating system is \$175,000. Neither cost includes engineering and inspections. The savings between the two systems comes when looking at the life cycle over 12 years. With the additional repaints required with the maintenance coating system, the total estimated cost at 12 years is \$258,000. The proposed maintenance program will cost Scotland County \$330,000 over 12 years (including engineering and inspections). The proposed engineered coating system will cost Scotland County approximately \$240,000 at 12 years (this includes engineering, inspections and washouts). With the engineered coating system, at 12 years, the tank will still have several years of lifecycle remaining from the initial coating system applied in year one. The fees for the maintenance coating system reset at year 12. The engineered coating system allows for longer life cycles which reduces the amount of time that the tanks are removed from service.

McEachin Tank – 250,000 Gallon Elevated Tank

Exterior Coating System:

	Proposed Maintenance Coating System	Proposed Engineered Coating System
Surface Preparation	Containment/SSPC-SP6	Containment/SSPC-SP6
Prime Coat	Tnemec 91/94 Hydro-Zinc	Tnemec 91/94 Hydro-Zinc
Intermediate Coat	Tnemec N69 Hi-Build	Tnemec 73 Endura-Shield
Final Coat	Tnemec 73U Endura-Shield	Tnemec 700 Hydroflon

The existing coating system on the McEachin Tank must be removed prior to painting. Both the proposed maintenance coating system and engineered coating system are four coat systems. The difference is the type of paint used. The proposed maintenance coating system has an estimated life cycle of 10-12 years at an estimated cost of \$210,000 and is scheduled to be painted again in 9 years based on the current maintenance schedule at an estimated cost of \$37,000. The engineered coating system has an estimated lifecycle of 18-20 years at an estimated cost of \$225,000.

Interior Coating System:

	Proposed Maintenance Coating System	Proposed Engineered Coating System
Surface Preparation	SSPC-SP10	SSPC-SP10
Prime Coat	Tnemec N140	Tnemec 91/94 Hydro-Zinc
Stripe Coat	Tnemec N140	Tnemec N140
Intermediate Coat	None	Tnemec N140
Final Coat	Tnemec N140	Tnemec N140

The interior coating systems outlined above are the same as the recommended systems for the Deercroft Tank.

The estimated cost for the maintenance coating system on the interior is \$55,000. The estimated cost for the engineered coating system on the interior is \$65,000. Adding the zinc-rich primer with the engineered system extends the coating system life cycle from approximately 12 years to over 18 years. The repainting of the maintenance coating system in 12 years is estimated at \$73,000.

The total initial one time coating system cost of the maintenance coating system is approximately \$280,000 while the engineered coating system is \$305,000. Neither cost includes engineering and inspections. The savings between the two systems comes when looking at the life cycle over 12 years. With the additional repaints required with the maintenance coating system, the total estimated cost at 12 years is \$390,000. The proposed maintenance program will cost Scotland County \$465,000 over 12 years (including engineering and inspections). The proposed engineered coating system will cost Scotland County approximately \$370,000 at 12 years (including engineering, inspections and washouts). With the engineered coating system, at 12 years, the tank will still have several years of lifecycle remaining from the initial coating system applied in year one. The fees for the maintenance coating system reset at year 12. The engineered coating system allows for longer life cycles which reduces the amount of time that the tanks are removed from service.

Gum Swamp Tank – 150,000 Gallon Elevated Tank

Exterior Coating System:

	Proposed Maintenance Coating System	Proposed Engineered Coating System
Surface Preparation	Power wash/SSPC-SP2, SP3	Power wash/SSPC-SP2, SP3
Prime Coat (Spot)	Tnemec 135 Chembuild	Tnemec 135 Chembuild
Prime Coat (Full)	N/A	Tnemec 135 Chembuild
Intermediate Coat	Tnemec 135 Chembuild	Tnemec 73 Endura-Shield
Final Coat	Tnemec 73U Endura-Shield	Tnemec 700 Hydroflon

The exterior coating systems outlined above are the same as the recommended systems for the Deercroft Tank.

The estimated cost for the maintenance coating system on the exterior is \$38,000. The estimated cost for the engineered coating system on the exterior is \$69,000. The additional coat of paint with the engineered system almost doubles the life cycle on the exterior. With the maintenance coating system on the tank, the tank exterior will most likely have to be repainted again in 9 years at an estimated cost of \$28,000. With the engineered coating system on the tank, the exterior will not have to be repainted for at least 15-18 years.

Interior Coating System:

	Proposed Maintenance Coating System	Proposed Engineered Coating System
Surface Preparation	SSPC-SP10	SSPC-SP10
Prime Coat	Tnemec N140	Tnemec 91/94 Hydro-Zinc
Stripe Coat	Tnemec N140	Tnemec N140
Intermediate Coat	None	Tnemec N140
Final Coat	Tnemec N140	Tnemec N140

The interior coating systems outlined above are the same as the recommended systems for the Deercroft Tank and McEachin Tank.

The estimated cost for the maintenance coating system on the interior is \$38,000. The estimated cost for the engineered coating system on the interior is \$50,000. Adding the zinc-rich primer with the engineered system extends the coating system life cycle from approximately 12 years to over 18 years. The repainting of the maintenance coating system in 12 years is estimated at \$53,000.

The total initial one time coating system cost of the maintenance coating system is approximately \$82,000 while the engineered coating system is \$125,000. Neither cost includes engineering and inspections. The savings between the two systems comes when looking at the life cycle over 12 years. With the additional repaints required with the maintenance coating system, the total estimated cost at 12 years is \$163,000. The proposed maintenance program will cost Scotland County

\$217,000 over 12 years (including engineering and inspections). The proposed engineered coating system will cost Scotland County approximately \$190,000 at 12 years (this includes engineering, inspections and washouts). With the engineered coating system, at 12 years, the tank will still have several years of life cycle remaining from the initial coating system applied in year one. The fees for the maintenance coating system reset at year 12. The engineered coating system allows for longer life cycles which reduces the amount of time that the tanks are removed from service.

Summary:

If Scotland County chose to put all three tanks on a maintenance program with inspections, they can expect to pay over \$1,000,000 over 12 years. If Scotland County chooses the engineered coating system, they can expect to pay approximately \$800,000 for the painting of their tanks including engineering, inspections and washouts. The potential saving for painting the tanks with the engineered coating system is over \$200,000 at 12 years. The savings will continue to increase after 12 years with the extended life cycles of the engineered coating system.



Deercroft Tank - 300K Gallon Elevated Tank

	Proposed Maintenance Coating System		Proposed Engineered Coating System	
Exterior				
Surface Preparation	Power wash/SSPC-SP2, SP3		Power wash/SSPC-SP2, SP3	
Prime Coat (Spot)	Tnemec 135 Chembuild		Tnemec 135 Chembuild	
Prime Coat (Full)	N/A		Tnemec 135 Chembuild	
Intermediate Coat	Tnemec 135 Chembuild		Tnemec 73 Endura-Shield	
Final Coat	Tnemec 73U Endura-Shield		Tnemec 700 Hydroflon	
Estimated Exterior Cost	\$	60,000	\$	95,000
Estimated Life Cycle	8-10 Years		15-18 Years	
Exterior Maint. Repaint @ 9 Yrs	\$	47,000	\$	-
Interior				
Surface Preparation	SSPC-SP10		SSPC-SP10	
Prime Coat	Tnemec N140		Tnemec 91/94 Hydro-Zinc	
Stripe Coat	Tnemec N140		Tnemec N140	
Intermediate Coat	None		Tnemec N140	
Final Coat	Tnemec N140		Tnemec N140	
Estimated Interior Cost	\$	58,000	\$	68,000
Estimated Life Cycle	10-14 Years		18-20 Years	
Interior Maint. Repaint @ 12 Yrs	\$	81,000	\$	-
Repairs	\$	12,000	\$	12,000
Total First Year Cost	\$	130,000	\$	175,000
Total Cost at 12 Yrs (Traditional)	\$	258,000	\$	175,000
12 Yr Maint. Cost (No Inspection)	\$	305,000		
12 Yr Traditional Cost			\$	175,000
Engineering/Inspection	\$	25,000	\$	35,000
Washouts/Inspection			\$	30,000
Total Maintenance Cost at 12 Years vs Traditional	\$	330,000	\$	240,000

DRAFT

McEachin Tank - 250K Gallon Elevated Tank

	Proposed Maintenance Coating System		Proposed Engineered Coating System	
Exterior				
Surface Preparation	Containment/SSPC-SP6		Containment/SSPC-SP6	
Prime Coat	Tnemec 91/94 Hydro-Zinc		Tnemec 91/94 Hydro-Zinc	
Intermediate Coat	Tnemec N69 Hi-Build		Tnemec 73 Endura-Shield	
Final Coat	Tnemec 73U Endura-Shield		Tnemec 700 Hydroflon	
Estimated Exterior Cost	\$	210,000	\$	225,000
Estimated Life Cycle	10-12 Years		18-20 Years	
Exterior Maint. Repaint @ 9 Yrs	\$	37,000	\$	-
Interior				
Surface Preparation	SSPC-SP10		SSPC-SP10	
Prime Coat	Tnemec N140		Tnemec 91/94 Hydro-Zinc	
Stripe Coat	Tnemec N140		Tnemec N140	
Intermediate Coat	None		Tnemec N140	
Final Coat	Tnemec N140		Tnemec N140	
Estimated Interior Cost	\$	55,000	\$	65,000
Estimated Life Cycle	10-14 Years		18-20 Years	
Interior Maint. Repaint @ 12 Yrs	\$	73,000	\$	-
Repairs	\$	15,000	\$	15,000
Total First Year Cost	\$	280,000	\$	305,000
Total Cost at 12 Yrs (Traditional)	\$	390,000	\$	305,000
12 Yr Maint. Cost (No Inspection)	\$	425,000		
12 Yr Traditional Cost			\$	305,000
Engineering/Inspection	\$	40,000	\$	35,000
Washouts/Inspection			\$	30,000
Total Maintenance Cost at 12 Years vs Traditional	\$	465,000	\$	370,000

DRAFT**Gum Swamp Tank - 150K Gallon Elevated Tank**

	Proposed Maintenance Coating System		Proposed Engineered Coating System	
Exterior				
Surface Preparation	Power wash/SSPC-SP2, SP3		Power wash/SSPC-SP2, SP3	
Prime Coat (Spot)	Tnemec 135 Chembuild		Tnemec 135 Chembuild	
Prime Coat (Full)	N/A		Tnemec 135 Chembuild	
Intermediate Coat	Tnemec 135 Chembuild		Tnemec 73 Endura-Shield	
Final Coat	Tnemec 73U Endura-Shield		Tnemec 700 Hydroflon	
Estimated Exterior Cost	\$	38,000	\$	69,000
Estimated Life Cycle	8-10 Years		15-18 Years	
Repaint @ 9 Yrs	\$	28,000	\$	-
Interior				
Surface Preparation	SSPC-SP10		SSPC-SP10	
Prime Coat	Tnemec N140		Tnemec 91/94 Hydro-Zinc	
Stripe Coat	Tnemec N140		Tnemec N140	
Intermediate Coat	None		Tnemec N140	
Final Coat	Tnemec N140		Tnemec N140	
Estimated Interior Cost	\$	38,000	\$	50,000
Estimated Life Cycle	10-14 Years		18-20 Years	
Repaint @ 12 Yrs	\$	53,000	\$	-
Repairs	\$	6,000	\$	6,000
Total First Year Cost	\$	82,000	\$	125,000
Total Cost at 12 Yrs (Traditional)	\$	163,000	\$	125,000
12 Yr Maint. Cost (No Inspection)	\$	200,000		
12 Yr Traditional Cost			\$	125,000
Engineering/Inspection	\$	17,000	\$	35,000
Washouts/Inspection			\$	30,000
Total Maintenance Cost at 12 Years vs Traditional	\$	217,000	\$	190,000
Total Maint vs Traditional Cost	\$	1,012,000	\$	800,000
Potential Savings			\$	212,000