

***Pre-Feasibility Assessment for
Integration of Biomass Energy Systems***

in

***West Bonner Junior High School
Priest River, Idaho***

February 15, 2005

Presented by

***CTA Architects Engineers
Dan Stevenson***

For

United States Department of Agriculture
Forest Service
Region One

In partnership with:

West Bonner County School District

Bitter Root Resource and Conservation Development Area, Incorporated
Idaho Division of Forestry

Executive Summary

The following assessment was commissioned to determine the technical and economic feasibility of integrating a biomass heating system with the existing facilities at West Bonner Junior High School located in Priest River, Idaho. This assessment is funded through the USDA Forest Service, Region One, as part of the Fuels for Schools program. The field investigation took place on August 19, 2004.

The existing school is a two story, originally constructed in 1939, with an addition in 1950 and a proposed renovation of the facility in 2005-2006. It is constructed of cast in place concrete. Overall size of the facility is 65,000 square feet. Based on a review of the pre-feasibility assessment form, the existing site plan, building plan and recent energy records, the site has potential as a biomass project.

Field investigation identified the following information:

A single steam boiler serves the existing school. A heat exchanger for domestic hot water has been disconnected and replaced with an 84 gallon hot water heater. The boiler is oil fired.

The existing boiler room has adequate floor space for an additional boiler, however, the approximately 12 foot high ceilings and partially below grade location may make integration difficult depending on the size of the equipment installed. The boiler room does have good access via the large parking lot on the north side of the building.

Option A – Semi-Automated Wood Chip Plant

Construct a semi-automated wood chip heating plant on the north side of the boiler room in the existing parking lot. The heating plant would include a steam or hot water boiler (depending upon the design of the new heating system) and related equipment with adjacent chip storage. The existing boiler room would be re-used if possible. This option provides heat for the base heating load of the facility, but would require additional capacity to meet the peak load conditions (see 100% chip cash flow). Wood chips are available for approximately \$37/ton. The biomass system would be a semi-automated system similar to the Chiptec "A" Series, Grovewood Heat or Messersmith Dragon systems that require day bins to be filled with wood chips. A small tractor would be used to transfer the chips from the chip storage building to the day bin. Piping would extend underground from the biomass plant to the existing boiler plant. Underground piping (50 feet of heating supply and return and 25 feet of cold water and waste water lines) would require the removal and replacement of some of the finished asphalt surface of the courtyard. The \$25,000 integration costs for this project would be similar to Victor, Montana. Estimated cost: \$350,000-\$400,000.

Option B – Wood Pellet Fuel Plant

Construct a wood pellet heating plant and storage silo adjacent to the existing boiler room. The heating plant would include (2-3) 340,000 BTUH (300,000 BTUH output each) hot water or steam pellet fuel boilers and related equipment. The existing boiler room would be re-used if possible. This option provides heat for the base heating load of the facility, but would require additional capacity to meet the peak load conditions (see 100% pellet cash flow). The pellet fuel system would require a separate storage silo. Pellets are available for approximately \$115/ton is used in the cash flow analysis. A small-scale pellet boiler system, as manufactured by KOB was considered. Understanding the extent of the utilization factor (percent of the time the system is operating at full load) is not possible without more detailed energy modeling and is not in the scope of this analysis.

An installed cost for this system would be in the range of \$150,000-\$200,000.

Biomass boiler system budget estimates are based upon recent biomass assessments and project costs for completed systems.

Results of Evaluation

The results of this analysis are summarized below. The cost estimate is representative of the scope of this project. A Cash Flow Analysis is provided at the end of the report. The cash flow analysis assumes availability of green chips at a price of \$37 per green ton in Option A, and a pellet fuel price of \$115 per ton in Option B.

Option A-Semi-Automated Wood Chip Plant achieves a positive accumulated cashflow (PAC) in 10 years with a subsidy of \$165,000- \$190,000 and in 17-19 years with no subsidy.

Option B-Wood Pellet Fuel Plant achieves a positive accumulated cashflow (PAC) in 10 years with a subsidy of \$130,000 - \$137,000, and in 23-25 years without subsidy.

Option A appears to be the preferred alternative due to the lower fuel cost and high payback over a thirty year period. If the existing boiler room can be re-used, the total project costs may be reduced. If the project can be incorporated into the proposed renovation, the integration of the biomass system can be simplified.

Accumulated cash flow is the primary evaluation measure that is implemented in this report and is similar to simple payback with the exception that accumulated cash flow takes the cost of financing and fuel escalation into account. For many building owners, a positive accumulated cash flow of about 10 years maximum is considered necessary for implementation. Based on this standard, the amount of project subsidy required to achieve a 10-year PAC was calculated and is indicated above. If the School District chooses to further pursue a biomass heating system, it is recommended that each of the options be investigated in further detail.

The approach in analyzing this option has been to remain conservative, yet realistic about the performance of biomass heating plants and the cost of their installation. Due to the preliminary nature of this assessment, it is possible that the construction cost estimates can be reduced as additional information relative to the construction is gathered, favorably affecting the economic analysis.

Other factors should be considered when evaluating the viability of this project. The first is that although the current fuel oil cost is approximately \$9.71/decatherm, regional fuel contracts have been as high as \$12.00-13.00/decatherm. The cash flow analysis assumes a 4% inflation rate in fuel oil costs. Individual years may fluctuate beyond that average. The cost of transporting wood pellet fuel to the site should be considered. Wood chips sell for \$37/ton or \$3.30/decatherm. Wood pellets sell for \$115/ton or \$7.00/decatherm.

Air Quality permits for wood burning devices in the State of Idaho are required and may impact the overall cost of the project.

West Bonner School District Junior High Heating Summary

Existing Building Heating Summary	Floor Area	Estimated Building Heating Load (BTU/hr)	Correction to Design Heating Conditions	Design Plant Capacity (BTU/hr)	Building Heat Type	Existing Annual Heating Plant Fuel Input (BTU)	Fuel Type	Existing Heating Plant Estimated Efficiency (%)	Net Heat Input to Building
School	65,000	2,785,000	10%	3,063,500	Steam or Hot water heating	3,500,000,000	Fuel Oil	80%	2,800,000,000 2,520,000,000

Wood Chips

Building	Estimated Wood Chip Plant Efficiency	Estimated Biomass Plant Input (BTU)	Wood Chips 40% MC (BTU/LB)	Wood Chip Eq/wint Mixed Conifer Chip (lbs)	Annual Wood Chip Fuel Consumption (Tons)	Two Weeks Required Heat Energy Storage (BTU)	Required Chip Storage (tons)	Chip Density (lb/ft ³)	One Week Chip Storage (ft ³)
School Chips	65%	4,307,692,308	5400	797,721	399	331,360,947	31	21	731
90% Chips	65%	3,876,923,077	5400	717,949	359	298,224,852	28	21	657
School Pellets	65%	4,307,692,308	8200	525,328	263	331,360,947	31	21	731

Option B: West Bonner School District Junior High

Conversion Proforma for Cascade S

February 15, 2005
 Revision:
 Analyst: Salmon-CTA

Total Project Cost -\$200

Project Financing Information		Factor
Percent Financed		1.04
Amount Financed	-\$6	1.04
Amount of Grants	\$13	1.04
Interest Rate	4	1.02
Term		1.03
Annual Finance Cost (years)	-\$	1.03

Cashflow Descriptions	Unit Co	Year 11	Year 12	Year 13	Year 14	Year 15
Existing Heating System Operating Costs						
Displaced fuel oil heating costs		50,328	52,341	54,435	56,612	58,877
Displaced Operation and Maintenance Costs		766	789	813	837	862
Biomass System Operating Costs						
Green Chip Fuel (\$/ton, delivered to boiler site, btu/lb) (90% of total heat reqmnt)	\$	36,535	37,631	38,760	39,923	41,121
Small load fuel oil (10% of total heat reqmnt)		5,514	5,734	5,964	6,202	6,450
Operation and Maintenance Costs		2,298	2,367	2,438	2,511	2,587
Annual Operating Cost Savings		6,747	7,398	8,086	8,813	9,581
Financed Project Costs - Principal and Interest						
Displaced System Replacement Costs						
Special financing						
Net Annual Cash Flow		6,747	7,398	8,086	8,813	9,581
Cumulative Cash Flow		498	7,896	15,981	24,794	34,375

Cashflow Descriptions	Unit Co	Year 26	Year 27	Year 28	Year 29	Year 30
Existing Heating System Operating Costs						
Displaced fuel oil heating costs		90,638	94,264	98,035	101,956	106,034
Displaced Operation and Maintenance Costs		1,193	1,229	1,266	1,304	1,343
Biomass System Operating Costs						
Green Chip Fuel (\$/ton, delivered to boiler site, btu/lb) (90% of total heat reqmnt)	\$	56,921	58,629	60,387	62,199	64,065
Small load fuel oil (10% of total heat reqmnt)		9,930	10,327	10,741	11,170	11,617
Operation and Maintenance Costs		3,580	3,688	3,798	3,912	4,030
Annual Operating Cost Savings		21,400	22,849	24,374	25,978	27,666
Financed Project Costs - Principal and Interest						
Displaced System Replacement Costs						
Special financing						
Net Annual Cash Flow		21,400	22,849	24,374	25,978	27,666
Cumulative Cash Flow		204,484	227,333	251,708	277,686	305,352

Option B: West Bonner School District Junior High

Conversion Proforma for Cascade School

February 15, 2005
 Revision:
 Analyst: Salmon-CTA

Total Project Cost -\$20,000,000

Project Financing Information	Factors
Percent Financed	Inflation factor 1.04
Amount Financed	Escalation factor 1.04
Amount of Grants	Escalation factor 1.04
Interest Rate	Escalation factor 1.02
Term	Inflation factor 1.03
Annual Finance Cost (years)	Escalation factor 1.03

Cashflow Descriptions	Unit Cost	Year 11	Year 12	Year 13	Year 14	Year 15
Existing Heating System Operating Costs						
Displaced fuel oil heating costs	93	50,328	52,341	54,435	56,612	58,877
Displaced Operation and Maintenance Costs	44	766	789	813	837	862
Biomass System Operating Costs						
Pellet Fuel (\$/ton, delivered to boiler site, btu/lb) (100% of total heat reqmnt)	12	40,595	41,813	43,067	44,359	45,690
Small load fuel oil (0% of total heat reqmnt)	0	0	0	0	0	0
Operation and Maintenance Costs	31	2,298	2,367	2,438	2,511	2,587
Annual Operating Cost Savings	03	8,201	8,951	9,743	10,579	11,463
Financed Project Costs - Principal and Interest	0)					
Displaced System Replacement Costs						
Special financing	0					
Net Annual Cash Flow	7)	8,201	8,951	9,743	10,579	11,463
Cumulative Cash Flow	4)	3,157	12,108	21,851	32,430	43,893

Cashflow Descriptions	Unit Cost	Year 26	Year 27	Year 28	Year 29	Year 30
Existing Heating System Operating Costs						
Displaced fuel oil heating costs	52	90,638	94,264	98,035	101,956	106,034
Displaced Operation and Maintenance Costs	59	1,193	1,229	1,266	1,304	1,343
Biomass System Operating Costs						
Green Chip Fuel (\$/ton, delivered to boiler site, btu/lb) (90% of total heat reqmnt)	03	63,245	65,143	67,097	69,110	71,183
Small load fuel oil (10% of total heat reqmnt)	0	0	0	0	0	0
Operation and Maintenance Costs	76	3,580	3,688	3,798	3,912	4,030
Annual Operating Cost Savings	32	25,006	26,663	28,405	30,238	32,164
Financed Project Costs - Principal and Interest						
Displaced System Replacement Costs						
Special financing						
Net Annual Cash Flow	2	25,006	26,663	28,405	30,238	32,164
Cumulative Cash Flow	4	244,200	270,863	299,268	329,506	361,670

Option A: West Bonner School District Junior High School Biomass Heating Economic Analysis- 100% Wood Chips

Conversion Proforma for Cascade School District - 4.6% APR - 10 Year Term

February 15, 2005
 Revision:
 Analyst: Salmon-CTA

Total Project Cost **-\$400,000**

Project Financing Information	
Percent Financed	59%
Amount Financed	-\$235,000
Amount of Grants	\$165,000
Interest Rate	4.60%
Term	10
Annual Finance Cost (years)	-\$29,845

No Subsidy 17 years
 30 Year Payback \$990,503

Escalation factors	
Elec. Escalation factor	1.04
Propane Escalation factor	1.04
Fuel Oil Escalation factor	1.04
Pellet Escalation factor	1.03
Green Chip Escalation factor	1.02
Maint. Escalation factor	1.03

Cashflow Descriptions	Unit Costs	Heating Source Proportion	Annual Heating Source Volumes	Heating Units	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Existing Heating System Operating Costs																			
Displaced fuel oil heating costs	\$1.36		25,000	Gallons	34,000	35,360	36,774	38,245	39,775	41,366	43,021	44,742	46,531	48,393	50,328	52,341	54,435	56,612	58,877
Displaced Operation and Maintenance Costs					570	587	605	623	642	661	681	701	722	744	766	789	813	837	862
Biomass System Operating Costs																			
Green Chip Fuel (\$/ton, delivered to boiler site, btu/lb) (90% of total heat reqmnt)	\$37.00	100%	399	tons	14,758	15,053	15,354	15,661	15,974	16,294	16,620	16,952	17,291	17,637	17,990	18,350	18,717	19,091	19,473
Small load fuel oil (10% of total heat reqmnt)	\$1.49	0%	0	Gallons	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation and Maintenance Costs					1,710	1,761	1,814	1,869	1,925	1,982	2,042	2,103	2,166	2,231	2,298	2,367	2,438	2,511	2,587
Annual Operating Cost Savings					18,102	19,133	20,211	21,339	22,518	23,751	25,040	26,388	27,796	29,268	30,807	32,414	34,093	35,848	37,680
Financed Project Costs - Principal and Interest					(29,845)														
Displaced System Replacement Costs					35,000														
Special financing	\$0.00		0		0	0	0	0	0	0	0	0	0	0					
Net Annual Cash Flow					23,257	(10,712)	(9,634)	(8,507)	(7,327)	(6,094)	(4,805)	(3,458)	(2,049)	(577)	30,807	32,414	34,093	35,848	37,680
Cumulative Cash Flow					23,257	12,545	2,910	(5,596)	(12,924)	(19,018)	(23,824)	(27,281)	(29,331)	(29,908)	899	33,313	67,406	103,254	140,934

Cashflow Descriptions	Unit Costs	Heating Source Proportion	Annual Heating Source Volumes	Heating Units	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Existing Heating System Operating Costs																			
Displaced fuel oil heating costs	\$1.36		25,000	Gallons	61,232	63,681	66,229	68,878	71,633	74,498	77,478	80,577	83,800	87,152	90,638	94,264	98,035	101,956	106,034
Displaced Operation and Maintenance Costs					888	915	942	970	999	1,029	1,060	1,092	1,125	1,159	1,193	1,229	1,266	1,304	1,343
Biomass System Operating Costs																			
Green Chip Fuel (\$/ton, delivered to boiler site, btu/lb) (90% of total heat reqmnt)	\$37.00	100%	399	tons	19,862	20,259	20,665	21,078	21,499	21,929	22,368	22,815	23,272	23,737	24,212	24,696	25,190	25,694	26,208
Small load fuel oil (10% of total heat reqmnt)	\$1.49	0%	0	full load MMBtu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operation and Maintenance Costs					2,664	2,744	2,826	2,911	2,998	3,088	3,181	3,277	3,375	3,476	3,580	3,688	3,796	3,912	4,030
Annual Operating Cost Savings					39,594	41,593	43,680	45,859	48,134	50,510	52,989	55,578	58,279	61,098	64,040	67,109	70,312	73,654	77,140
Financed Project Costs - Principal and Interest																			
Displaced System Replacement Costs																			
Special financing	\$0.00																		
Net Annual Cash Flow					39,594	41,593	43,680	45,859	48,134	50,510	52,989	55,578	58,279	61,098	64,040	67,109	70,312	73,654	77,140
Cumulative Cash Flow					180,527	222,120	265,800	311,659	359,794	410,303	463,293	518,870	577,149	638,247	702,287	769,396	839,709	913,363	990,503

Option A: West Bonner School District Junior High School Biomass Heating Economic Analysis- Wood Chips

Conversion Proforma for Cascade School District - 4.6% APR - 10 Year Term

February 15, 2005
 Revision:
 Analyst: Salmon-CTA

Total Project Cost -\$400,000

Project Financing Information

Percent Financed	53%		
Amount Financed	-\$210,000		
Amount of Grants	\$190,000	No Subsidy	19 years
Interest Rate	4.60%		
Term	10		
Annual Finance Cost (years)	-\$26,670	30 Year Payback	\$873,206

Escalation factors

Elec. Escalation factor	1.04
Propane Escalation factor	1.04
Fuel Oil Escalation factor	1.04
Pellet Escalation factor	1.03
Green Chip Escalation factor	1.02
Maint. Escalation factor	1.03

Cashflow Descriptions	Unit Costs	Heating Source Proportion	Annual Heating Source Volumes	Heating Units	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Existing Heating System Operating Costs																			
Displaced fuel oil heating costs	\$1.36		25,000	Gallons	34,000	35,360	36,774	38,245	39,775	41,366	43,021	44,742	46,531	48,393	50,328	52,341	54,435	56,612	58,877
Displaced Operation and Maintenance Costs					570	587	605	623	642	661	681	701	722	744	766	789	813	837	862
Biomass System Operating Costs																			
Green Chip Fuel (\$/ton, delivered to boiler site, btu/lb) (90% of total heat reqmnt)	\$37.00	90%	359	tons	13,282	13,548	13,819	14,095	14,377	14,664	14,958	15,257	15,562	15,873	16,191	16,515	16,845	17,182	17,525
Small load fuel oil (10% of total heat reqmnt)	\$1.49	10%	2500	Gallons	3,725	3,874	4,029	4,190	4,358	4,532	4,713	4,902	5,098	5,302	5,514	5,734	5,964	6,202	6,450
Operation and Maintenance Costs					1,710	1,761	1,814	1,869	1,925	1,982	2,042	2,103	2,166	2,231	2,298	2,367	2,438	2,511	2,587
Annual Operating Cost Savings					15,853	16,764	17,717	18,715	19,757	20,848	21,989	23,181	24,427	25,730	27,092	28,514	30,001	31,554	33,177
Financed Project Costs - Principal and Interest					(26,670)														
Displaced System Replacement Costs					35,000														
Special financing	\$0.00		0		0	0	0	0	0	0	0	0	0	0					
Net Annual Cash Flow					24,183	(9,906)	(8,953)	(7,956)	(6,913)	(5,822)	(4,682)	(3,489)	(2,243)	(940)	27,092	28,514	30,001	31,554	33,177
Cumulative Cash Flow					24,183	14,277	5,324	(2,632)	(9,545)	(15,367)	(20,048)	(23,538)	(25,781)	(26,721)	371	28,885	58,886	90,441	123,617

Cashflow Descriptions	Unit Costs	Heating Source Proportion	Annual Heating Source Volumes	Heating Units	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30
Existing Heating System Operating Costs																			
Displaced fuel oil heating costs	\$1.36		25,000	Gallons	61,232	63,681	66,229	68,878	71,633	74,498	77,478	80,577	83,800	87,152	90,638	94,264	98,035	101,956	106,034
Displaced Operation and Maintenance Costs					888	915	942	970	999	1,029	1,060	1,092	1,125	1,159	1,193	1,229	1,266	1,304	1,343
Biomass System Operating Costs																			
Green Chip Fuel (\$/ton, delivered to boiler site, btu/lb) (90% of total heat reqmnt)	\$37.00	90%	359	tons	17,876	18,233	18,598	18,970	19,349	19,736	20,131	20,534	20,944	21,363	21,791	22,226	22,671	23,124	23,587
Small load fuel oil (10% of total heat reqmnt)	\$1.49	10%	2500	full load MMBtu	6,709	6,977	7,256	7,546	7,848	8,162	8,488	8,828	9,181	9,548	9,930	10,327	10,741	11,170	11,617
Operation and Maintenance Costs					2,664	2,744	2,826	2,911	2,998	3,088	3,181	3,277	3,375	3,476	3,580	3,688	3,798	3,912	4,030
Annual Operating Cost Savings					34,872	36,642	38,490	40,421	42,436	44,541	46,738	49,031	51,425	53,923	56,531	59,252	62,091	65,053	68,144
Financed Project Costs - Principal and Interest																			
Displaced System Replacement Costs																			
Special financing	\$0.00																		
Net Annual Cash Flow					34,872	36,642	38,490	40,421	42,436	44,541	46,738	49,031	51,425	53,923	56,531	59,252	62,091	65,053	68,144
Cumulative Cash Flow					158,489	195,131	233,621	274,042	316,478	361,019	407,757	456,788	508,213	562,136	618,667	677,918	740,009	805,062	873,206

WEST BONNER COUNTY SCHOOL DIST. #83

PRIEST RIVER, IDAHO 838356

Data obtained from Ken Eldore, Facilities Mgr (phone-208-290-2011)

Reformatted into electronic spreadsheet by Mike Tennery (phone 208-659-3752)

HEATING FUEL INFORMATION:

AMERIGAS: PROPANE LPG						
	PRIEST RIVER ELEMENTARY		PRIEST RIVER HIGH SCHOOL		BUS SHOP	
	COST	GALLONS	COST	GALLONS	COST	GALLONS
Jan-03	\$261.52	324.8	\$6,332.10	6270.4	\$1,709.92	1770.0
Feb-03	\$273.89	290.5	\$5,356.32	5690.3	\$1,572.12	1665.3
Mar-03	\$339.34	400.4	\$4,386.47	4270.9	\$1,532.95	1505.1
Apr-03	\$202.69	260.3	\$1,791.00	2350.1	\$378.18	480.0
May-03	\$203.58	250.0	\$1,982.88	2470.2	\$424.80	530.0
Jun-03						
Jul-03						
Aug-03	\$450.15	500.2				
Sep-03			\$1,572.80	1810.2		
Oct-03	\$353.92	400.3	\$1,681.19	1881.1	\$937.36	1067.5
Nov-03	\$241.16	270.1	\$3,309.22	6006.2	\$907.75	1549.6
Dec-03	\$387.49	430.2	\$8,085.05	6725.2	\$1,629.83	1280.8
	\$2,713.74	3126.8	\$34,497.03	37474.6	\$9,092.91	9848.3
	\$0.87		\$0.92		\$0.92	
Jan-04	\$237.57	250.5	\$7,616.66	8180.3	\$1,173.06	1265.2
Feb-04			\$5,080.48	5316.3	\$454.22	476.3
Mar-04	\$384.38	401.8	\$2,961.69	3190.6	\$581.26	615.0
Apr-04	\$258.06	280.7	\$3,080.26	3380.3		
May-04	\$175.53	200.0				
Jun-04	\$50.00					
Jul-04						
Aug-04	\$1.03					
Sep-04	\$1,107.49	770.0	\$1,644.27	1630.1	\$400.16	334.7
Oct-04	\$440.62	401.0	\$2,634.58	2470.1		
Nov-04			\$5,206.34	4373.1	\$231.88	194.5
Dec-04	\$528.56	450.8	\$5,425.21	4803.4	\$816.11	735.9
	\$3,183.24	2,754.80	\$33,649.49	33,344.20	\$3,656.69	3,621.60
	\$1.16		\$1.01		\$1.01	
Jan-05	\$318.28	300.6	\$5,208.32	7629.9	\$943.17	1310.9

FAMILY OIL: OIL						
	PRIEST RIVER ELEMENTARY		PRIEST RIVER JUNIOR HIGH		BUS SHOP	
	COST	GALLONS	COST	GALLONS	COST	GALLONS
Jan-03	\$4,026.12	2907.5	\$5,518.94	3882.9		
Feb-03	\$3,619.61	3984.4	\$4,115.09	5434.6		
Mar-03	\$3,401.57	3025.5	\$4,747.64	3410.3		
Apr-03	\$1,294.19	2496.4	\$1,876.69	3465.8		
May-03		1137.5	\$1,261.21	1728.8		
Jun-03				1266.2		
Jul-03						
Aug-03						
Sep-03	\$3,145.10		\$12.20			
Oct-03	\$428.23	3042.9	\$1,736.44	11.2		
Nov-03	\$4,146.44	418.6	\$6,117.48	1697.4		
Dec-03	\$2,952.17	3852.0	\$4,536.31	5693.6		
	\$23,013.43	20864.8	\$29,922.00	26590.8		
	\$1.10		\$1.13			
Jan-04	\$4,377.43	2747.0	\$6,128.01	4220.1		
Feb-04	\$3,201.30	3981.3	\$3,586.52	5574.6	\$2,414.95	
Mar-04	\$2,118.93	2779.6	\$3,359.37	4069.2		1121.8
Apr-04	\$958.46	1695.6	\$1,710.94	1385.9	\$1,044.61	
May-04	\$1,316.78	748.6	\$2,624.82	1331.3		796.2
Jun-04		905.0		1804.0		
Jul-04						
Aug-04						
Sep-04	\$1,088.50		\$1,882.33		\$1,335.74	
Oct-04	\$1,157.65	700.0	\$2,021.14	1210.5	\$659.89	859.8
Nov-04	\$5,119.67	653.3	\$7,724.75	1140.6	\$1,391.35	372.4
Dec-04	\$3,613.83	3116.5	\$5,512.49	4691.9	\$383.85	849.8
	\$22,952.55	17,326.90	\$34,550.37	25,428.10	\$7,230.39	4,000.00
	\$1.32		\$1.36		\$1.81	