

Denton ISD
Utilities Cost and Usage Report
Mid-Year – (July 2013 through December, 2013)

Executive Summary

- 1) The total utility cost for the July 2013-December 2013 period, increased by \$64,491 (1.8%) compared to the prior year for the existing facilities as of FY 2012-2013. New schools (Myers) added an additional \$111,512 to the Denton ISD utility budget for this time period. Other than the increase usage in gas due to a (44.9%) increase in heating degree days, the increase is due to increased rates in electricity, natural gas and irrigation.
- 2) The utility usage for the July 2013-December 2013 period compared to the prior year is as follows:
 - a) Electric usage decreased by 4.8%
 - b) Natural gas usage increased by 22.0%
 - c) Domestic water usage increased by 3.8%
 - d) Irrigation usage decreased by 21.0%
- 3) Utility rates increased for electricity, natural gas and irrigation, resulting in an increase in cost of \$187,198.
 - a) Electric unit cost increased by 6.4%.
 - b) Natural gas unit cost increased by 3.6%.
 - c) Domestic water unit cost decreased by 0.1%.
 - d) Irrigation water unit increased by 9.7%.
- 4) Weather
 - a) There was a 3.7% decrease in the number of cooling degree days, and a 44.9% increase in heating degree days.
 - b) Rainfall in this period increased by 5.36 (61.3%) inches.

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Utility Costs Comparison to Prior Year

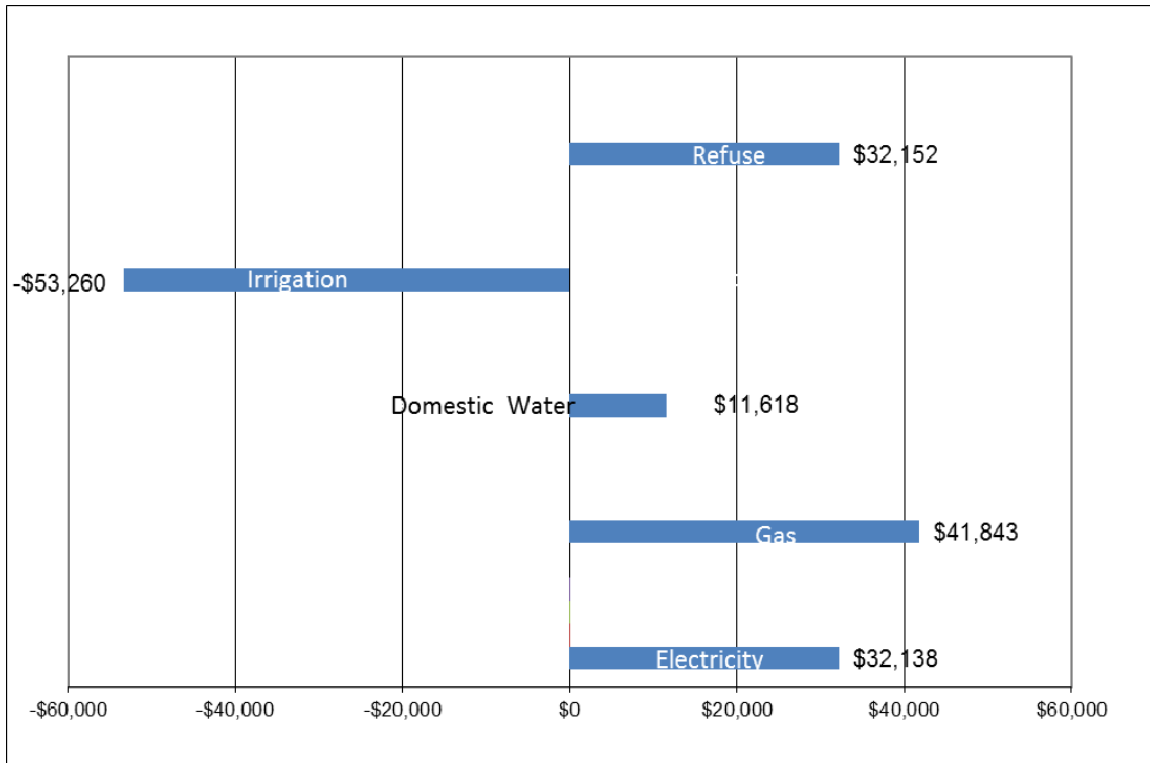
The total utility cost increased by \$64,491 for existing facilities. New facilities will be shown separately. Table 1 and Figure 1 provide a cost breakdown by category.

Table 1

Category	2012	2013	% change	Cost Change 2012 to 2013	New Schools (Myers)
Electric	\$2,458,318	\$2,490,456	1.3%	\$32,138	\$58,131
Gas	\$158,203	\$200,046	26.4%	\$41,843	\$1,553
Domestic Water	\$314,895	\$326,513	3.7%	\$11,618	\$3,729
Irrigation	\$398,881	\$345,621	-13.4%	-\$53,260	\$36,443
Refuse	\$298,449	\$330,601	10.8%	\$32,152	\$11,656
Total	\$3,628,746	\$3,693,237	1.8%	\$64,491	\$111,512

Note: The changes in the cost of utilities contributed to an increase in cost. See tables 3 and 4 for a detailed breakdown.

Figure 1
Cost Change by Utility



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Utility Cost Comparison by Facility

Table 2 represents the total utility cost by facility per SqFt for the last 6 months for Energy and Water extrapolated to an annual amount.

Table 2

Site	Sq Ft	Energy Cost per Sq Ft	Domestic Water Cost per Sq Ft	Irrigation Cost per Sq Ft
Advanced Technology Center	120,700	\$1.30	\$0.08	\$0.85
Ann Windle School for Young Children	41,200	\$1.40	\$0.11	\$0.24
Blanton Elementary School	80,344	\$1.15	\$0.07	\$0.30
Borman Elementary School	78,952	\$1.06	\$0.14	\$0.00
C.H. Collins Athletic Complex	78,059	\$1.46	\$0.68	\$0.43
Calhoun Middle School	235,174	\$0.91	\$0.13	\$0.04
Central Services*	22,368	\$3.19	\$5.21	\$0.11
Cross Oaks Elementary	88,231	\$0.79	\$0.11	\$0.00
Crownover Middle School	161,200	\$1.11	\$0.07	\$0.22
Denton High School	533,181	\$0.92	\$0.07	\$0.04
E.P. Rayzor Elementary School	77,725	\$0.98	\$0.06	\$0.11
Evers Park Elementary School	85,855	\$1.24	\$0.24	\$0.04
Fred Moore High School	28,487	\$1.09	\$0.17	\$0.09
Ginnings Elementary School	89,099	\$1.07	\$0.07	\$0.09
Gonzalez School For Young Children	60,391	\$0.71	\$0.05	\$0.23
Guyer High School	426,380	\$1.02	\$0.16	\$0.09
Harpool Middle School	161,327	\$1.17	\$0.03	\$0.23
Hawk Elementary School	81,419	\$1.20	\$0.14	\$0.27
Hodge Elementary School	87,015	\$1.18	\$0.10	\$0.14
Houston Elementary	78,499	\$1.08	\$0.08	\$0.15
L.A. Nelson Elementary	80,334	\$1.34	\$0.08	\$0.02
Lee Elementary School	85,592	\$1.12	\$0.08	\$0.15
Lester Davis School	32,563	\$0.70	\$0.08	\$0.00
McMath Middle School	159,136	\$1.14	\$0.06	\$0.15
McNair Elementary School	88,551	\$1.16	\$0.08	\$0.10
Myers Middle School	181,474	\$0.62	\$0.04	\$0.38
Navo Middle School	162,095	\$1.10	\$0.10	\$0.38
Olive Stephens Elementary School	80,334	\$1.17	\$0.12	\$0.09
Paloma Creek Elementary	80,334	\$1.18	\$0.06	\$0.06
Pecan Creek Elementary School	80,029	\$0.91	\$0.10	\$0.01
Providence Elementary School	80,485	\$0.94	\$0.09	\$0.06
Rayzor Elementary School	99,565	\$1.01	\$0.19	\$0.00
Rivera Elementary School	84,598	\$1.15	\$0.09	\$0.03
Ryan High School	426,300	\$1.11	\$0.12	\$0.22
Savannah Elementary School	80,334	\$0.92	\$0.06	\$0.07
Service Center Annex	63,656	\$0.89	\$0.07	\$0.06
Special Ed Services	6,528	\$1.84	\$0.12	\$0.00
Strickland Middle School	194,571	\$1.03	\$0.05	\$0.04
Technology Bldg	16,173	\$4.58	\$0.05	\$0.00
Transportation Facility	14,336	\$1.35	\$0.23	\$0.00
Virginia Gallian Child Dev. Ctr.	8,218	\$1.42	\$0.20	\$0.00
W.S. Ryan Elementary School	77,725	\$1.11	\$0.07	\$0.17
Wilson Elementary School	90,791	\$0.99	\$0.05	\$0.08
District Totals	4,889,328	\$1.07	\$0.13	\$0.15
* Water costs include district storm water charges at several sites				

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Utility Unit Cost Comparison

Table 3 lists the average unit cost for electricity, natural gas, water and irrigation.

Table 3
Utility Unit Cost Comparison

Utility	2012	2013	Change	% Change
Electric, \$/kwh	\$0.092229	\$0.098142	\$0.005913	6.4%
Gas, \$ per Therm	\$0.684838	\$0.709625	\$0.024787	3.6%
Water-Dom, \$/CCF	\$9.381648	\$9.369634	-\$0.012014	-0.1%
Water-Irrig, \$/CCF	\$3.620530	\$3.972016	\$0.351486	9.7%

Table 4 details the impact of the unit cost change on the cost of electricity, natural gas and water.

Table 4
Utility Cost Comparison

Category	2013 Use	2013 Cost Calculated with Current Unit Cost	2013 Cost Calculated on 2012 Unit Cost	Cost Difference
Electric (kWh)	25,376,119	\$2,490,456	\$2,340,411	\$150,045
Gas (Therm)	281,904	\$200,046	\$193,059	\$6,987
Dom Water (CCF)	34,848	\$326,513	\$326,932	-\$419
Irrig Water (CCF)	87,014	\$345,621	\$315,037	\$30,584
Total:		\$3,362,636	\$3,175,438	\$187,198

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Energy Use Comparison by Facility

Table 5 represents the total energy and water use by facility per SqFt for the last 6 months extrapolated to an annual amount.

Table 5

Site	Sq Ft	Energy kBtu per Sq Ft	Domestic Water CCF per Sq Ft	Irrigation Water CCF per Sq Ft
Advanced Technology Center	120,700	58.4	0.003	0.246
Ann Windle School for Young Children	41,200	55.8	0.017	0.064
Blanton Elementary School	80,344	47.4	0.010	0.099
Borman Elementary School	78,952	43.3	0.024	0.000
C.H. Collins Athletic Complex	78,059	45.2	0.048	0.118
Calhoun Middle School	235,174	42.6	0.018	0.011
Central Services	22,368	135.0	0.024	0.027
Cross Oaks Elementary	88,231	31.0	0.017	0.000
Crownover Middle School	161,200	57.0	0.006	0.046
Denton High School	533,181	41.6	0.010	0.010
E.P. Rayzor Elementary School	77,725	35.0	0.009	0.036
Evers Park Elementary School	85,855	63.5	0.094	0.011
Fred Moore High School	28,487	42.5	0.026	0.023
Ginnings Elementary School	89,099	46.0	0.008	0.023
Gonzalez School For Young Children	60,391	25.2	0.004	0.062
Guyer High School	426,380	49.2	0.017	0.024
Harpool Middle School	161,327	54.7	0.005	0.073
Hawk Elementary School	81,419	49.6	0.013	0.054
Hodge Elementary School	87,015	52.5	0.014	0.036
Houston Elementary	78,499	45.2	0.011	0.043
L.A. Nelson Elementary	80,334	51.0	0.012	0.001
Lee Elementary School	85,592	49.9	0.011	0.040
Lester Davis School	32,563	30.6	0.007	0.000
McMath Middle School	159,136	52.0	0.007	0.043
McNair Elementary School	88,551	47.4	0.012	0.025
Meyers Middle School	181,474	23.6	0.004	0.035
Navo Middle School	162,095	54.2	0.010	0.056
Olive Stephens Elementary School	80,334	49.6	0.009	0.009
Paloma Creek Elementary	80,334	48.8	0.008	0.018
Pecan Creek Elementary School	80,029	35.5	0.014	0.000
Providence Elementary School	80,485	39.2	0.019	0.023
Rayzor Elementary School	99,565	42.6	0.031	0.000
Rivera Elementary School	84,598	50.7	0.012	0.007
Ryan High School	426,300	56.7	0.018	0.068
Savannah Elementary School	80,334	37.5	0.010	0.021
Service Center Annex	63,656	48.2	0.018	0.015
Special Ed Services	6,528	81.2	0.005	0.000
Strickland Middle School	194,571	50.8	0.007	0.009
Technology Bldg	16,173	194.8	0.003	0.000
Transportation Facility	14,336	82.6	0.032	0.000
Virginia Gallian Child Dev. Ctr.	8,218	52.1	0.019	0.000
W.S. Ryan Elementary School	77,725	42.6	0.010	0.047
Wilson Elementary School	90,791	39.2	0.008	0.022
District Totals	4,889,328	47.8	0.014	0.037

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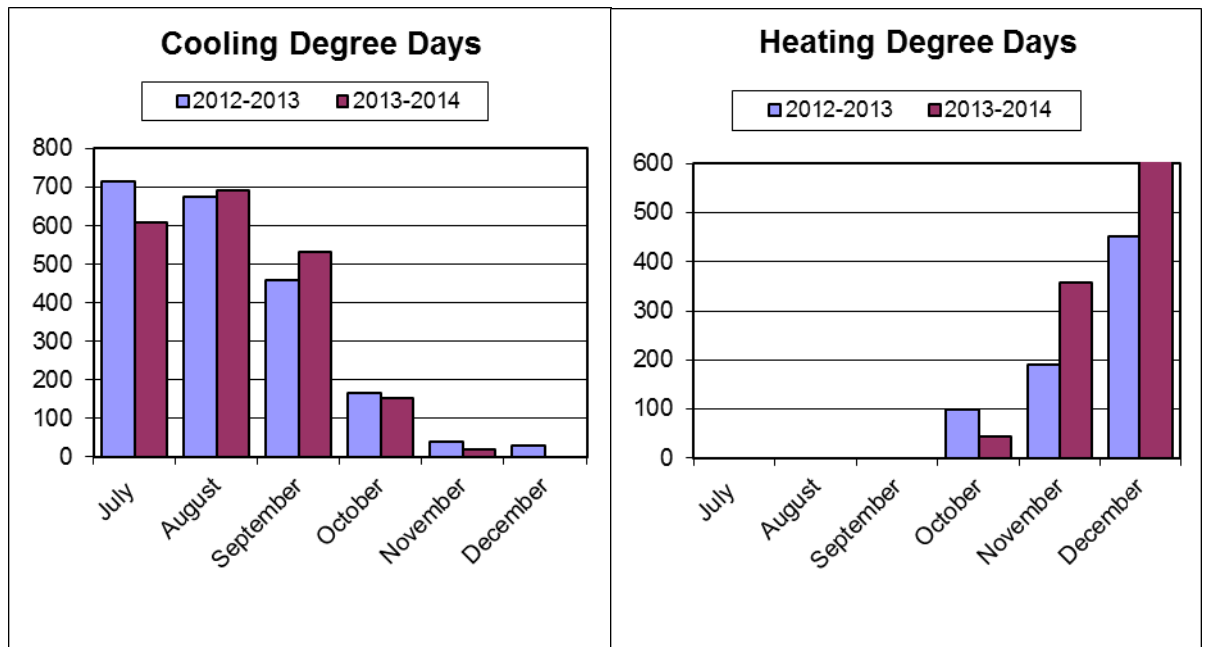
Weather Comparison to Prior Year

There was a 21.5% decrease in the number of cooling degree days, and a 12.6% decrease in heating degree days. Rainfall over the period increased 13.3 (70%) inches from the prior year.

Table 6
Weather Data

	Cooling Degree Days		Heating Degree Days	
	2012-2013	2013-2014	2012-2013	2013-2014
July	713	609	0	0
August	675	692	0	0
September	457	532	0	0
October	166	152	98	44
November	40	18	190	357
December	28	0	452	671
Six Months Tot	2,079	2,003	740	1,072
%Change	-3.7%		44.9%	

Figure 5



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Table 7
Rainfall Data

	Rainfall (in.)	
	2012-2013	2013-2014
July	0.78	2.05
August	3.19	1.32
September	1.75	2.72
October	1.02	3.13
November	0.05	2.12
December	1.95	2.76
6 Mo. Total	8.74	14.1
%Change	61.3%	

Energy Cost and Use Historical Trends (Last 5 Years)

Table 8

(Base Year Fiscal Year 2005-2006)	FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014*
Total Utility Cost \$6,957,534	\$6,616,897	\$6,993,558	\$7,114,894	\$6,806,387	\$7,229,023
Total Energy Mbtu \$213,131	245,065	237,958	235,792	235,623	233,824
Total District SqFt 3,553,417	4,528,449	4,677,071	4,689,543	4,761,856	4,943,330
Total Cost/SqFt \$1.96	\$1.46	\$1.50	\$1.52	\$1.43	\$1.46
Energy Use Index kBtu/SF 60.00	54.1	50.9	50.3	49.5	47.3
* 6 months data extrapolated for annual comparison total includes Myers					

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Facilities Report

Table 9

FACILITY	5 YEAR SQUARE FEET TOTALS				
	Fiscal Year 2009-2010	Fiscal Year 2010-2011	Fiscal Year 2011-2012	Fiscal Year 2012-2013	Fiscal Year 2013-2014
Advanced Technology Center	120,700	120,700	120,700	120,700	120,700
Ann Windle School for Young Children	41,200	41,200	41,200	41,200	41,200
Blanton Elementary School	80,344	80,344	80,344	80,344	80,344
Borman Elementary School	78,952	78,952	78,952	78,952	78,952
Calhoun Middle School	235,174	235,174	235,174	235,174	235,174
Central Services	22,368	22,368	22,368	22,368	22,368
Clear Creek	16,173	16,173	16,173	16,173	16,173
CH Collins Athletic Complex	78,059	78,059	78,059	78,059	78,059
Community Ed Bldg	3,960	3,960	3,960	3,960	3,960
Cross Oaks Elementary School	0	88,231	88,231	88,231	88,231
Crownover Middle School	161,200	161,200	161,200	161,200	161,200
Denton High School	486,881	486,881	486,881	533,181	533,181
EP Rayzor Elementary School	76,093	76,093	77,725	77,725	77,725
Evers Park Elementary School	81,655	81,655	81,655	85,855	85,855
Fred Moore High School	28,487	28,487	28,487	28,487	28,487
Ginnings Elementary School	80,403	80,403	80,403	89,099	89,099
Gonzalez SFYC	0	60,391	60,391	60,391	60,391
Guyer High School	426,380	426,380	426,380	426,380	426,380
Harpool Middle School	161,327	161,327	161,327	161,327	161,327
Hawk Elementary School	81,419	81,419	81,419	81,419	81,419
Hodge Elementary School	87,015	87,015	87,015	87,015	87,015
Houston Elementary School	73,631	73,631	73,631	78,499	78,499
LA Nelson Elementary School	80,334	80,334	80,334	80,334	80,334
Lee Elementary School	83,900	83,900	85,592	85,592	85,592
Lester Davis School	32,563	32,563	32,563	32,563	32,563
McMath Middle School	158,567	158,567	158,567	159,136	159,136
McNair Elementary School	88,551	88,551	88,551	88,551	88,551
Myers Middle School	0	0	0	0	181,474
Navo Middle School	162,095	162,095	162,095	162,095	162,095
Olive Stephens Elementary School	80,334	80,334	80,334	80,334	80,334
Paloma Creek Elementary School	80,334	80,334	80,334	80,334	80,334
PDC + Insurance Portable	28,544	28,544	28,544	28,544	28,544
Pecan Creek Elementary School	78,397	78,397	80,029	80,029	80,029
Providence Elementary School	78,853	78,853	80,485	80,485	80,485
Rayzor Elementary School	99,565	99,565	99,565	99,565	99,565
Rivera Elementary School	84,598	84,598	84,598	84,598	84,598
Ryan High School	423,228	423,228	423,228	426,300	426,300
Savannah Elementary School	80,334	80,334	80,334	80,334	80,334
Norm Sisk Service Center Annex	59,048	59,048	59,048	63,656	63,656
Special Ed Services	6,528	6,528	6,528	6,528	6,528
Strickland Middle School	192,039	192,039	194,571	194,571	194,571
Technology Building	16,173	16,173	16,173	16,173	16,173
Transportation Facility	14,336	14,336	14,336	14,336	14,336
Virginia Gallian Child Development Center	8,218	8,218	8,218	8,218	8,218
Wellness Center	5,325	5,325	5,325	5,325	5,325
Wilson Elementary School	89,071	89,071	90,791	90,791	90,791
WS Ryan Elementary School	76,093	76,093	77,725	77,725	77,725
Total	4,528,449	4,677,071	4,689,543	4,761,856	4,943,330

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FY 2013-2014 Water Utilities Rates

Denton ISD Typical Water Rates					
Utility	Schools	Domestic		Irrigation	
		100	\$/kGal	300	\$/kGal
Lake Cities	Myers, Olive Stephens	\$1,413	\$14.13	\$2,898	\$9.66
City of Corinth	Hawk, Crownover	\$1,273	\$12.73	\$2,105	\$7.02
Mustang SUD	Navo, Cross Oaks	\$1,010	\$10.10	\$2,858	\$9.53
Denton Municipal	All Others	\$935	\$9.35	\$1,646	\$5.49
Denton County FWSD #7	Blanton, EP Rayzor, Harpool	\$748	\$7.48	\$1,148	\$3.83
Denton County FWSD #8A	Paloma	\$485	\$4.85	\$865	\$2.88
Denton County FWSD #9	Providence	\$485	\$4.85	\$865	\$2.88
Denton County FWSD #10	Savannah	\$485	\$4.85	\$865	\$2.88
Domestic based on 100 kGallons and includes water and sewer rates					
Irrigation based on 300 kGallons and includes water rates only					
From last reporting period rates increased 5% for domestic and 9% for irrigation meters.					

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Diary

2005-2006

- Calhoun Middle School – Added 15, 150 square feet in January 2006.
- McNair Elementary School – Added DDC Temperature controls and replaced chiller.
- Hodge Elementary School – Added DDC Temperature controls and replaced chiller.

2006-2007

- Ryan HS – Added 10,000 square feet of classroom space.
 - Includes 5 PRTU E/G.
- New sites opened this year:
 - Savannah ES
 - Navo MS
 - Advanced Technical Center
- Three utility accounts were closed in the second quarter:
 - Rayzor ES – Denton Municipal Utilities – Acct #4240617-00
 - Served a ball field that is no longer in use.
 - Guyer HS – Denton Municipal Utilities – Acct #5570526-02
 - Only billed solid waste. Solid waste now billed on Acct #4290608-01 with rest of utilities.
 - Savannah ES – IESI – Acct #004036438
 - 30 yard roll off container no longer on campus.
- Six utility accounts were opened in the fourth quarter:
 - Paloma Creek ES :
 - CoServ – Acct #0000276200 – Electricity and Natural Gas
 - IESI – Acct #004040591 – Refuse
 - Mustang – Acct #010420 000 – Water
 - Mustang – Acct #010421 000 – Water
 - Mustang – Acct #010422 000 – Water
 - Mustang – Acct #010423 000 – Water

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2007-2008

- Summer School was held at the following schools in 2007:
 - Strickland JH
 - Borman ES
 - Hodge ES
 - Lee ES
 - Davis School

- 3 utility accounts were opened in the first quarter:
 - LA Nelson ES:
 - Denton Municipal Utilities – Acct #4350025-01 – Electricity, Water, and Refuse
 - Denton Municipal Utilities – Acct #5580203-00 – Refuse
 - Atmos Energy – Acct #80-000201127-1750192-0 – Gas

- 2 utility accounts were closed in the second quarter:
 - Strickland MS
 - Denton Municipal Utilities – Acct #4240619-00 – Electricity
 - WS Ryan ES
 - Denton Municipal Utilities – Acct #5580109-00 – Refuse

- The unoccupied section of Fred Moore High School has been occupied by Special Education.

- Hawk Elementary School – a lighting control panel was commissioned in July 2007.

- 2 utility accounts were closed in the fourth quarter:
 - Hodge ES:
 - Denton Municipal Utilities – Acct #4240633-00 – Electricity
 - WS Ryan ES:
 - Denton Municipal Utilities – Acct #5560938-00 – Refuse

- 1 utility account was changed during the fourth quarter:
 - Lee ES
 - Denton Municipal Utilities – Acct #4100967-01 – Electric Service Retired

- 2 electric accounts were switched from TXU to Direct Energy in the fourth quarter:

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- Crownover MS:
 - Closed: TXU Energy – Acct #893-3178-98-3 – Electricity
 - Opened: Direct Energy – Acct #995882921987-RCMS – Electricity

- Hawk ES:
 - Closed: TXU Energy – Acct #972-1384-98-1 – Electricity
 - Opened: Direct Energy – Acct #995882921978-Hawk – Electricity

2008-2009

- 20 utility accounts were opened in the first quarter:
 - Blanton ES
 - CoServ – Acct #0000312515 – Electricity, Gas
 - Denton County FWSD#7 – Acct #417 – Water
 - Denton County FWSD#7 – Acct #421 – Water
 - Denton County FWSD#7 – Acct #428 – Water
 - Denton County FWSD#7 – Acct #429 – Water
 - Denton Municipal Utilities – Acct #5580385-00 – Refuse
 - Harpool MS
 - CoServe – Acct #0000314585 – Electricity, Gas
 - Denton County FWSD#7 – Acct #422 – Water
 - Denton County FWSD#7 – Acct #423 – Water
 - Denton County FWSD#7 – Acct #430 – Water
 - Denton County FWSD#7 – Acct #431 – Water
 - Denton Municipal Utilities – Acct #5580387-00 – Refuse
 - Olive Stephens ES
 - Lake Cities Municipal Utility Authority – Acct #4747-00 – Water
 - Lake Cities Municipal Utility Authority – Acct #4791-00 – Water
 - Lake Cities Municipal Utility Authority – Acct #4792-00 – Water
 - Lake Cities Municipal Utility Authority – Acct #4793-00 – Water
 - Lake Cities Municipal Utility Authority – Acct #4794-00 – Water
 - Denton Municipal Utilities – Acct #5580388-00 – Refuse
 - Atmos – Acct #80-000201127-1797665-2 – Gas
 - TXU Energy – Acct #801-7228-98-5 – Electricity

Mechanical and Control Work completed April through October 2008:

- DDC controls were installed on all portable classrooms
- Calhoun Middle School

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- Replace built-up chilled and hot water VAV system serving the Jones / McAllister building with new package rooftop units.
- Replaced (4) Roof-top package units on the east side of the main building.
- Replaced (8) Roof-top package units on the west side of the main building.
- Replaced (13) Roof-top package units on the East building.
- Replaced the heating boiler in the Main Building.
- Replaced the domestic hot water heating system in the Jones / McAllister building.

- Central Services
 - Replaced all (14) new split systems.
 - Converted the controls for R-lead to DDC

- Clear Creek
 - Replace eight (8) new rooftop units and added one (1) additional unit.
 - Converted the controls for R-lead to DDC

- Denton High School
 - Replaced (36) Roof-top package units serving the spaces which have been historically called the vocational education area, excluding the cosmetology area.
 - Replaced (1) Roof-top package unit to replace serving the main office area.
 - Replaced the air handlers serving the main space of the auditorium.
 - Replaced the domestic hot water heating system serving the kitchen.
 - Replaced pneumatic controls on all fan-powered VAV boxes with DDC.

- Fred Moore High School
 - Replaced eleven (11) rooftop units.
 - Replaced thirteen (13) split heating and cooling units.
 - Converted the controls for R-lead to DDC

- Rivera Elementary School
 - Replaced four (4) rooftop units.
 - Replaced all fan powered VAV boxes and pneumatic controls with new boxes having DDC controls.

- Ryan High School
 - Replaced the cooling tower.
 - Replaced the domestic hot water heating system.

- Strickland Middle School
 - Replaced the air handling units serving the library and west classroom addition.

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- Replaced the domestic hot water heating system.
- Replaced RTU #21 with a new RTU unit.

Lighting Efficiency Retrofit completed June through August 2008:

- Denton High School – Entire Campus was refit with all T8 lamps and electronic ballasts
- Ryan High School – Entire Campus was refit with all T8 lamps and electronic ballasts
- Elementary Schools Gyms: Replaced HID fixtures with linear fluorescent T8 high bay fixtures.
 - Borman Elementary School
 - EP Rayzor Elementary School
 - Evers Park Elementary School
 - Ginnings Elementary School
 - Hawk Elementary School
 - Houston Elementary School
 - Lee Elementary School
 - Newton Rayzor Elementary School
 - Pecan Creek Elementary School
 - Providence Elementary School
 - Rivera Elementary School
 - Savannah Elementary School
 - Wilson Elementary School
 - WS Ryan Elementary School
- 1 electric account was switched from TXU to Direct Energy in the second quarter:
 - Olive Stephens MS:
 - Closed: TXU Energy – Acct #801-7228-98-5 – Electricity
 - Opened: Direct Energy – Acct #995882925531 – Electricity
- The Energy Cost Adjustment (ECA) was reduced in February from \$0.050 to \$0.042 per kWh.
- Lake Cities Municipal Authority increased their minimum bill from \$25.63 to \$34.26 as of June 15, 2009.
- Irrigation Line found broken and fixed at McNair ES on August 9, 2009.
- Internal bill audits found overbilling at Advanced Technology Center. Credit of \$6,400.43 was applied.

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- Job office for new Pre-K center added to Advanced Technology meter as of June 17, 2009.

- Summer School was held at the following schools in 2008:
 - Strickland JH
 - Guyer HS
 - Ginnings ES
 - Lee ES
 - Newton Rayzor ES

2009-2010

Mechanical and Control Work completed in 2009:

Borman

- Controls for (4) RTU with CO₂, temperature and humidity control.
- Controls for (3) Cooling only RTU's
- Controls for (7) Exhaust Fans.

Calhoun

- Controls for (2) RTU's with CO₂, temperature and humidity control.
- Controls for (1) VAV/RTU with all associated points per specs.
- Controls for (2) DX Split systems.
- Controls for (29) Fan Powered VAV boxes.
- Controls for (11) Exhaust Fans.
- Controls for (6) Emergency Exhaust Fans.

DHS

- Controls for (32) RTU's with Combination sensors.
- Controls for (1) VAV/RTU with all associated points per specs.
- Controls for (6) DX Split systems.
- Controls for (12) Fan Powered VAV boxes.
- Controls for (52) Exhaust Fans.

Hodge

- Controls for (12) RTU with CO₂, temperature and humidity control.
- Controls for (1) DX Split systems.
- Controls for (7) Fan Powered VAV boxes.
- Controls for (3) VAV boxes.
- Controls for (7) Exhaust Fans.

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McNair

- Controls for (12) RTU with CO2, temperature and humidity control.
- Controls for (1) DX Split systems.
- Controls for (7) Fan Powered VAV boxes.
- Controls for (3) VAV boxes.
- Controls for (7) Exhaust Fans.

Rayzor

- Controls for (11) RTU with CO2, temperature and humidity control.
- Controls for (3) Cooling only RTU's
- Controls for (7) Exhaust Fans.

RHS

- Controls for (7) RTU's with CO2 and temperature control.
- Controls for (10) RTU's without CO2 control.
- Controls for (2) VAV/RTU with all associated points per specs.
- Controls for (3) DX Split systems.
- Controls for (33) Fan Powered VAV boxes.
- Controls for (15) Exhaust Fans. The rest of them are wired by Div 16 to a wall switch
- or hood switch
- Controls for (3) Emergency Exhaust Fans.

Rivera

- Controls for (9) RTU with CO2, temperature and humidity control.
- Controls for (2) DX Split systems.
- Controls for (7) Fan Powered VAV boxes.
- Controls for (8) Exhaust Fans.

- Summer School is planned to be as held at the following schools in 2010:
 - Strickland JH
 - Denton HS
 - Ginnings ES
 - Lee ES
 - Fred Moore HS

2010-2011

Mechanical and Control Work completed in 2010:

HVAC Controls Upgrade

- Denton High School
- Guyer High School

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Intelligent Irrigation Control

- Guyer High School

Lighting Retrofit and/or Occupancy Sensors and/or Hawkeye Fixtures

- Ann Windle
- Borman
- Calhoun
- Crownover
- EP Rayzor
- Evers Park
- Fred Moore
- Ginnings
- Hodge
- McMath
- McNair
- Navo
- Pecan Creek
- Rayzor
- Rivera
- Ryan Elementary
- Service Center
- Strickland
- Wilson

SF Added Total 187,695:

- Borman 328 SF
- Calhoun 22,651 SF
- Denton HS 32,807 SF
- Hodge 16,175 SF
- McNair 16,175 SF
- Rayzor 8,600 SF
- Rivera 11,890 SF
- Ryan HS 79,069 SF

Other Activities

- Submitted for SECO grant for Strickland Middle School
- Submitted for SECO Cool Schools grant for boiler and chiller replacements at McNair ES, McMath MS, Hodge ES, Guyer HS and Ryan HS

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July 2012-June 2013 Activities

- Evaluated and reported the economic and technical viability of retrofitting existing campuses to geothermal HVAC systems
- Continuing discussions with DME to host solar PV projects on District property
- Implemented boiler efficiency program at several schools
- Implemented more energy conserving control strategies for below freezing weather operations
- Included smart irrigation controllers and efficient outdoor lighting retrofits in the current bond package
- Continuing to explore other energy conservation opportunities to present to the Board, some of which are Thermal Storage, Demand Response, Building Performance Management

July 2013-June 2014 Activities

- Continuing discussions with DME to host solar PV projects on District property
- Included smart irrigation controllers and efficient outdoor lighting retrofits in the current bond package – implementation has not been done yet
- Continuing to explore other energy conservation opportunities to present to the Board, some of which are Thermal Storage, Demand Response, Building Performance Management (BPM) – presenting to board a pilot BPM program
- Detected and fixed domestic water leak at Calhoun on 1/3/2014
- Detected and fixed domestic water leak at Evers Park on 1/6/2014
- Analyzed and fixed irrigation water leak at ATC
- Myers Middle School came on line adding 181,474 SqFt
- Evaluating LED lighting proposal at Denton Guyer High School