



Energy Management Report

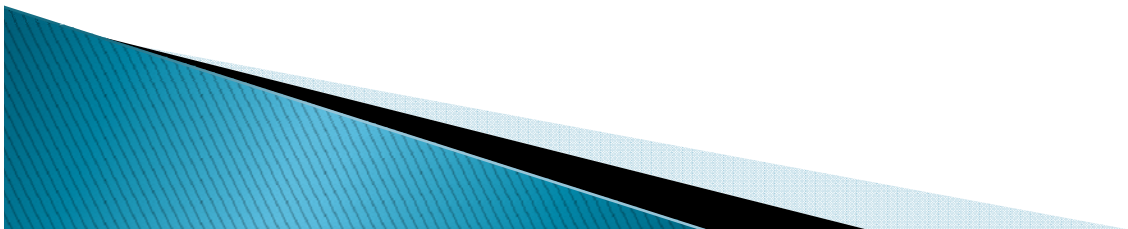
Year Three of Program

Mid-Year Report

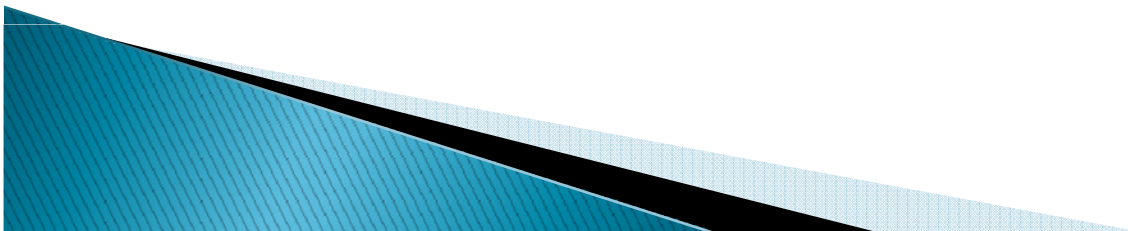
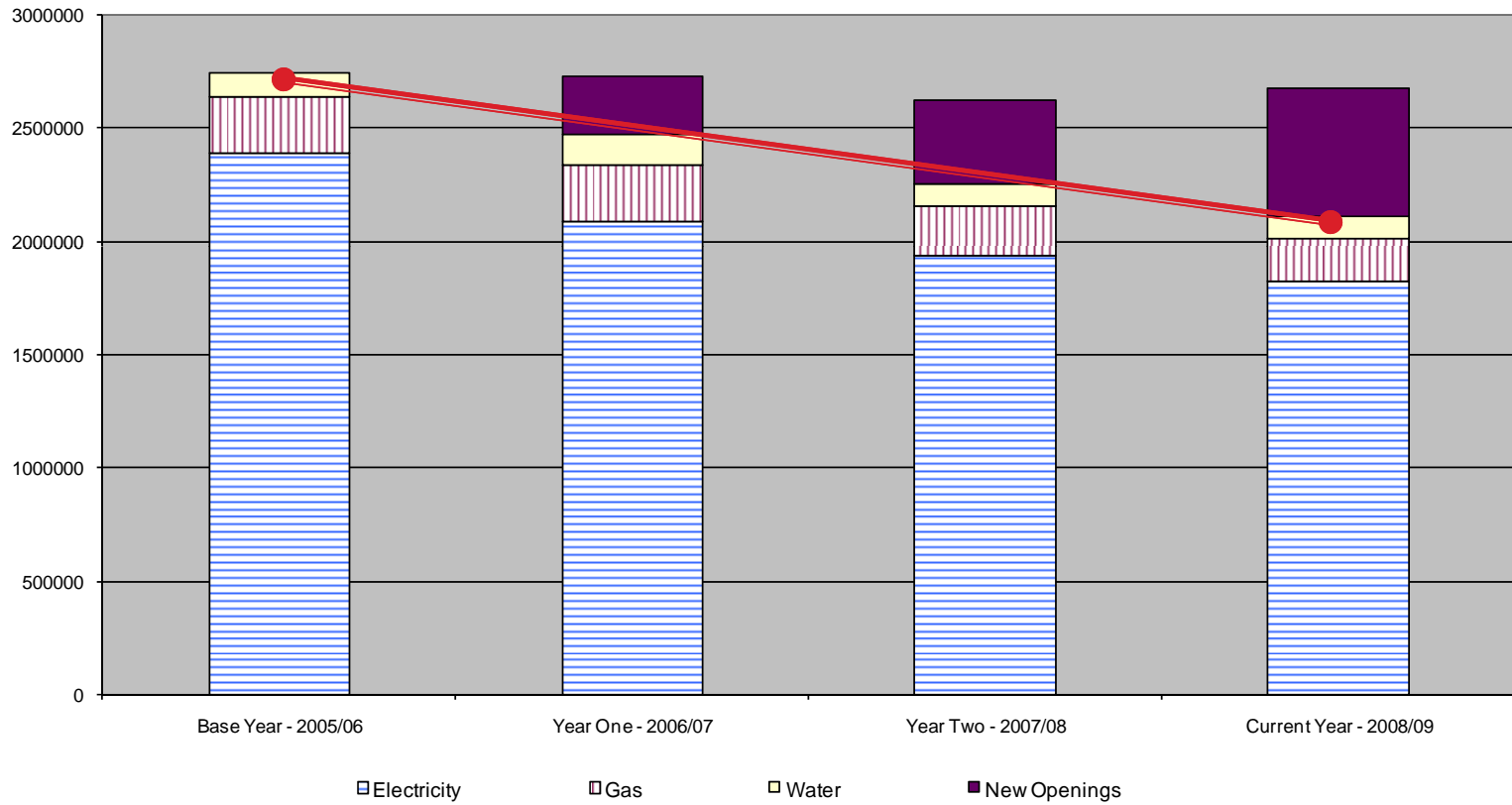
July – December 2008

Accomplishments

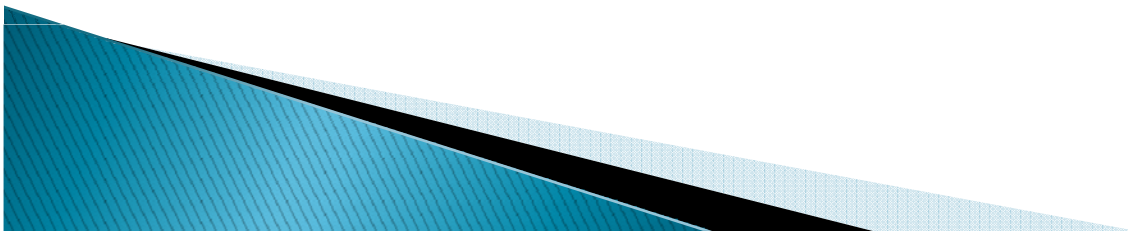
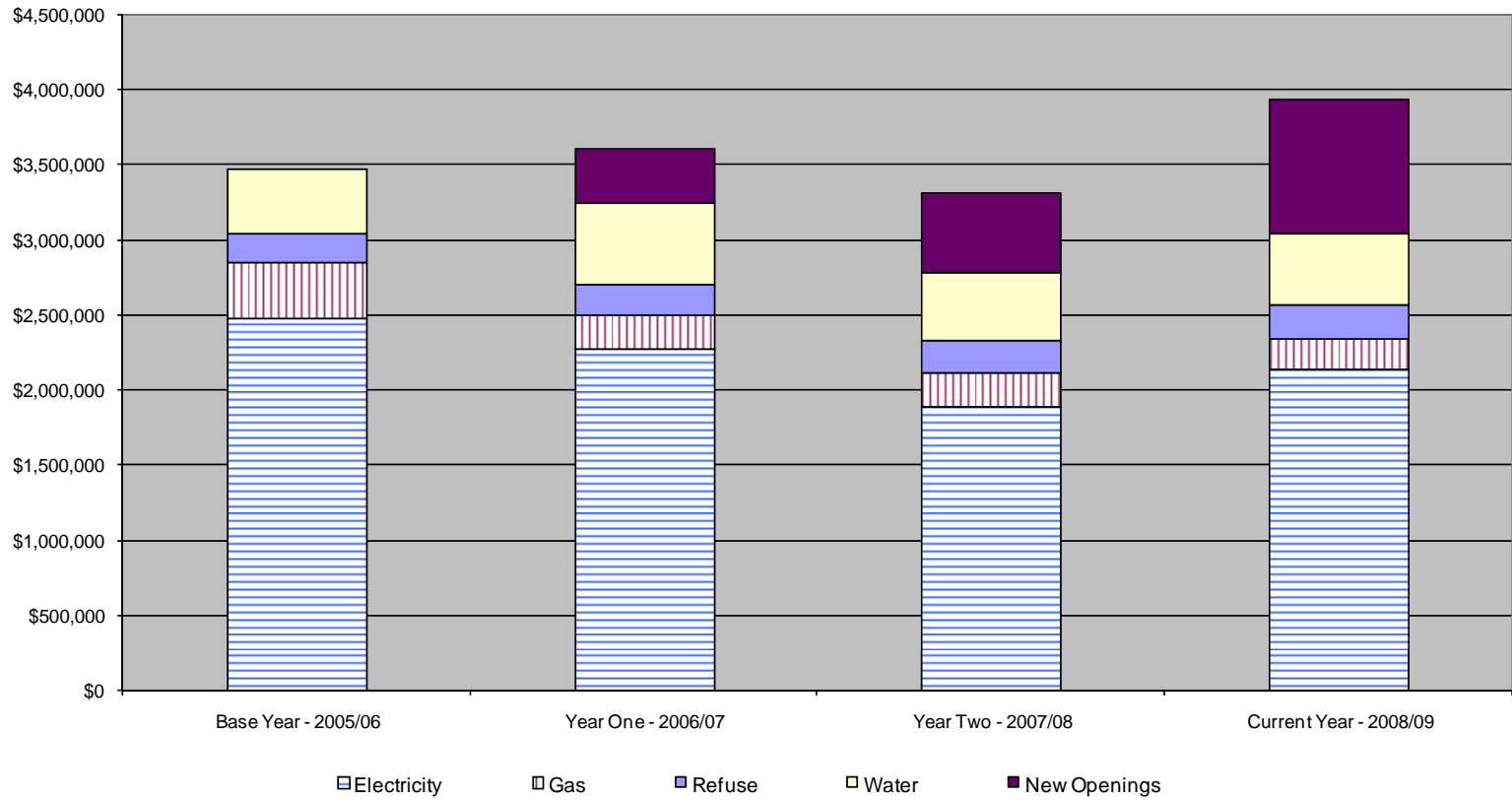
- Confirmed automatic shutdown of classroom computers.
- Continued efforts to tightly manage HVAC Systems through the EMS system.
- Finalized and fine tuned HVAC, Control and Lighting Systems from summer MEP retrofit work.
- Assisted with Geothermal application for new campuses.
- Performed in-depth analysis on water costs and consumption.



Total Consumption Comparison (July – December)

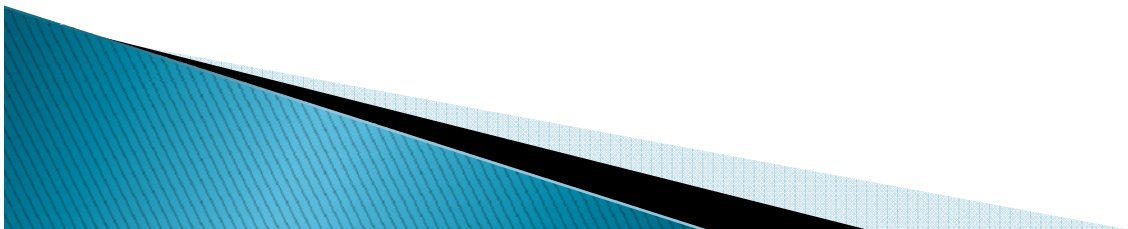


Total Cost Comparison (July – December)



Summary

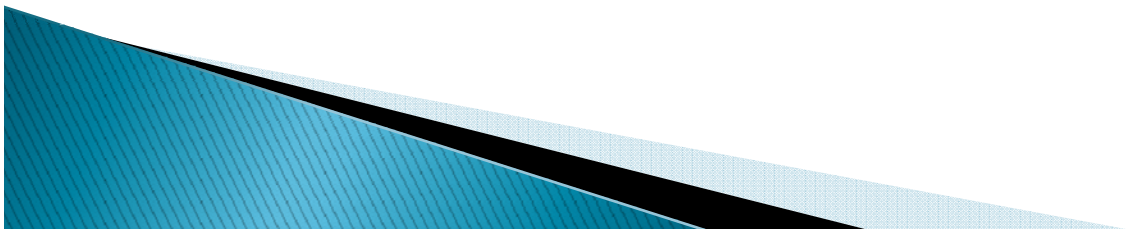
- Total spend on utilities was \$3,928,897 compared to \$3,311,716 last year. This is a cost increase of \$617,181 for the first six months of the school year.
- Of this increase, brand new openings cost \$306,666 (Blanton, Harpool and Stephens).
- A higher average Energy Cost Adjustment (ECA) from DME (.0475 versus .0353) accounts for roughly \$258,227 of this increase with water increases accounting for the remainder. [The ECA has since dropped to .030 as of May 1st.](#)
- Same school costs without new openings (ATC, Navo, Savannah, Nelson, Paloma, Blanton, Harpool or Stephens) are down \$445,693 under the 2005-2006 base year.



Analysis of Utility Type

Electricity:

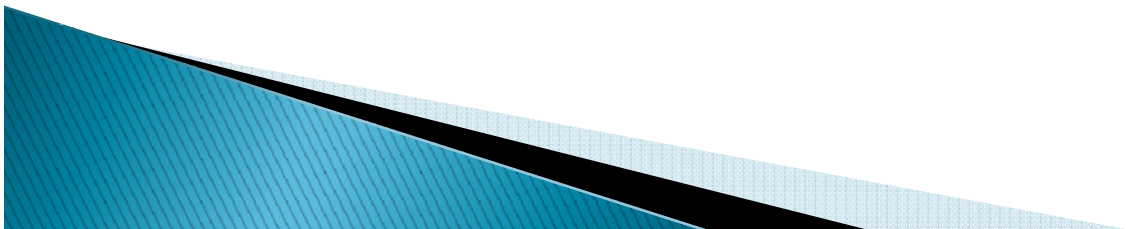
- Unit cost (rate) increased by 20.8%
- Consumption decreased by 6.6% (not including new openings)
- 3.8% less cooling degree days
- Net increase in dollars of \$258,784 (not including new openings)



Analysis of Utility Type (continued)

Gas:

- Unit cost (rate) increased 1.6%
- Consumption decreased 11.3% (not including new openings)
- 22.4% less heating degree days
- Net decrease in dollars of \$28,780 (not including new openings)



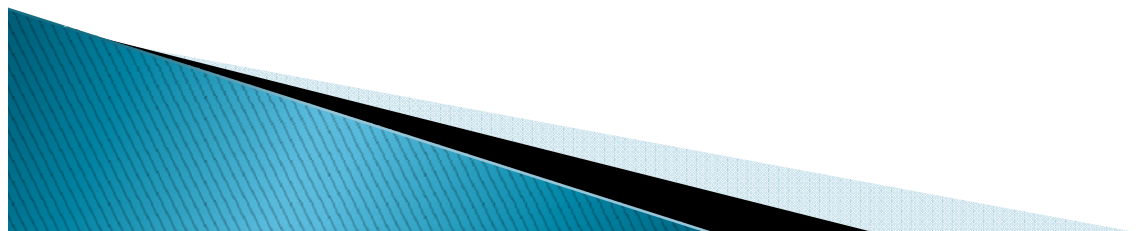
Analysis of Utility Type (continued)

Water:

- Unit cost (rate) increased 3.5%
- Consumption increased 8.2% (not including new openings)
- Rainfall decreased by 4.5%
- Net increase in dollars of \$63,772 (not including new openings)

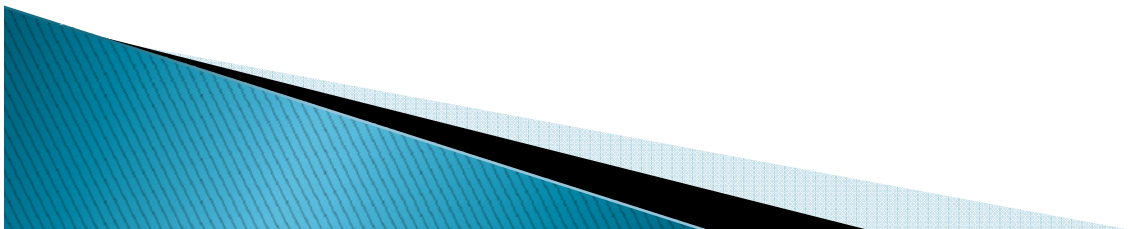
Refuse:

- Net increase in dollars of \$11,278 (not including new openings)



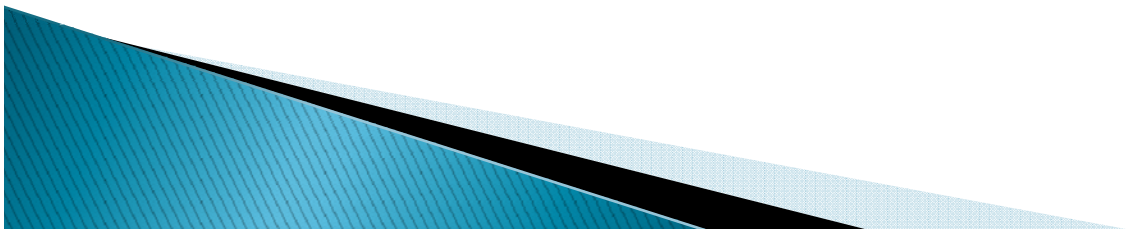
Campuses with the Largest Decrease in Utility Use

- Fred Moore High -27% (HVAC and Control Retrofits)
- Ginnings Elementary -26% (No Summer School)
- Denton High -24% (HVAC, Control and Lighting Retrofits)
- Paloma Creek Elementary -23% (Electricity)
- Rivera Elementary -17% (HVAC and Control Retrofits)
- Calhoun Middle -17% (HVAC, Control and Lighting Retrofits)



Campuses with the Largest Increase in Utility Use

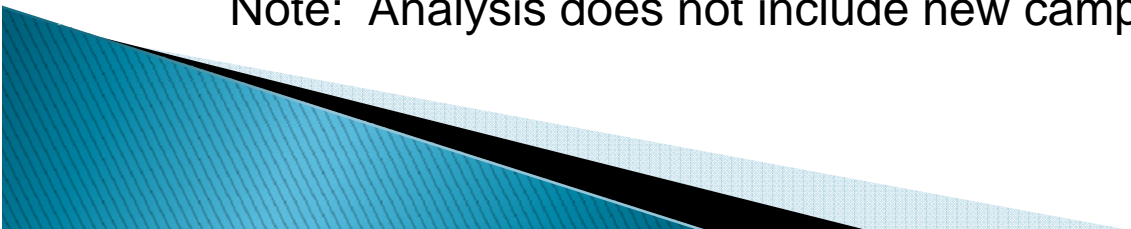
- Central Services +55% (Metering Correction and Water Leak)
- Lee Elementary +19% (Summer School)
- Evers Park Elementary +8% (Water & Gas)
- Strickland Middle +4% (Gas and Water)
- Service Center Annex +2% (Gas)
- Guyer High +1% (Electric)



House Bill 3693

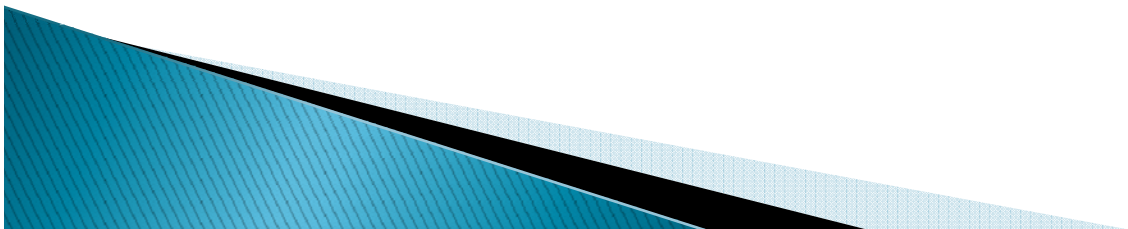
- The District is required to set a goal to reduce electrical consumption by 5% for each year from 2007 for the next six years (as of May 2007).
- For the budget year 07-08, electrical consumption is was down 2.1%, currently down 6% for the first half of 08-09.
- Although not called for in the bill, gas consumption was down 15.1% in 07-08 and is down 13% in the first half of 08-09.
- Water was down 13.5% in 07-08, but is up 1% so far this year.

Note: Analysis does not include new campuses.



Looking Forward

- Continue to tightly manage building operation through the use of information and the EMS/Control System (Approximately 5,000 Pieces of HVAC Equipment).
- Finalize evaluation, make recommendation and assist with the implementation of energy conservation measures (retrofits).
- Initiatives to address water usage, waste and rates.
- Assist with the implementation of Geothermal on the new campuses.
- On site monthly analysis to identify areas of concern for immediate investigation and corrective action.



Preliminary Look at Energy Conservation Measures

Simple Payback

- Lighting Upgrades 4.5 Years
- HVAC Controls 5.6 Years
- Intelligent Irrigation Controls 5.6 Years
- Thermal Storage 5.2 Years
- Indoor Water Conservation 8.0 Years
- Solar Water Heating 13.4 Years
- Solar Energy 17.8 Years
- Wind Energy 34.8 Years

