

**Spring Branch Independent School District
Agenda Item Information**

Date of Board Meeting: August 25, 2008

Subject: Quarterly Energy Report, April – June 2008

Administrator Responsible:

Name: Ruben Reyes

Position: Associate Superintendent for Operations

Purpose of Agenda Item:

- Information only Action needed Report

Additional Information and/or Backup:

See attached Presentation and Report.

Q4 Energy Use Index Comparison

| | | <i>SQFT</i> | <i>EUI_0607</i> | <i>EUI_0708</i> | <i>Difference</i> |
|--------------------------|--------------------------------|------------------|-----------------|-----------------|-------------------|
| <i>High School</i> | | | | | |
| 1 | Memorial High | 311115 | 12,722 | 12,109 | -613 |
| 3 | Spring Woods High | 336366 | 11,163 | 11,628 | 465 |
| 5 | Northbrook High | 394609 | 10,074 | 8,035 | -2,039 |
| 6 | Stratford High | 320000 | 14,919 | 16,461 | 1,542 |
| 7 | Guthrie Center | 83614 | 16,344 | 19,430 | 3,086 |
| 14 | Westchester Academy | 294963 | 18,161 | 15,128 | -3,033 |
| 38 | Spring Branch Education Center | 268780 | 9,436 | 8,794 | -642 |
| <i>High School Total</i> | | 2,009,447 | 12,800 | 12,226 | -575 |

Middle School

| | | | | | |
|----------------------------|----------------------|------------------|---------------|--------------|---------------|
| 41 | Landrum Middle | 177665 | 9,810 | 10,118 | 308 |
| 42 | Memorial Middle | 188852 | 8,529 | 8,526 | -3 |
| 43 | Spring Branch Middle | 226208 | 7,290 | 6,849 | -441 |
| 44 | Spring Woods Middle | 200616 | 9,483 | 9,038 | -445 |
| 45 | Spring Forest Middle | 192559 | 9,071 | 9,189 | 118 |
| 46 | Spring Oaks Middle | 189660 | 14,081 | 9,623 | -4,458 |
| 47 | Northbrook Middle | 203020 | 17,468 | 11,557 | -5,911 |
| <i>Middle School Total</i> | | 1,378,580 | 10,786 | 9,220 | -1,565 |

Elementary

| | | | | | |
|-----|---------------------------|-------|--------|--------|-------|
| 101 | Bendwood | 38830 | 11,710 | 12,235 | 525 |
| 102 | Bunker Hill Elementary | 58385 | 11,686 | 12,049 | 363 |
| 103 | Edgewood Elementary | 68978 | 11,740 | 13,204 | 1,464 |
| 104 | Frostwood Elementary | 60625 | 11,487 | 12,368 | 881 |
| 105 | Hollibrook Elementary | 95043 | 10,010 | 10,211 | 201 |
| 106 | Housman Elementary | 76895 | 9,879 | 10,899 | 1,020 |
| 107 | Hunters Creek Elementary | 61937 | 9,693 | 9,867 | 174 |
| 108 | Meadow Wood Elementary | 72722 | 8,757 | 12,105 | 3,348 |
| 109 | Memorial Drive Elementary | 58965 | 12,320 | 13,117 | 797 |
| 110 | Pine Shadows Elementary | 86910 | 12,671 | 13,479 | 808 |
| 111 | Ridgecrest Elementary | 88853 | 10,061 | 10,409 | 348 |
| 112 | Rummel Creek Elementary | 72615 | 11,641 | 12,152 | 511 |
| 113 | Shadow Oaks Elementary | 84558 | 13,240 | 13,686 | 446 |
| 114 | Spring Branch Elementary | 77352 | 10,328 | 11,918 | 1,590 |

| | | <i>SQFT</i> | <i>EUI_0607</i> | <i>EUI_0708</i> | <i>Difference</i> |
|-------------------------|----------------------------|------------------|-----------------|-----------------|-------------------|
| 115 | Valley Oaks Elementary | 75697 | 9,844 | 11,779 | 1,935 |
| 116 | Westwood Elementary | 56409 | 13,945 | 13,796 | -149 |
| 117 | Woodview Elementary | 70508 | 10,598 | 10,209 | -389 |
| 118 | Wilchester Elementary | 71798 | 13,373 | 10,542 | -2,831 |
| 119 | Sherwood Elementary | 69371 | 11,204 | 10,736 | -468 |
| 120 | Spring Shadows Elementary | 83904 | 12,893 | 13,509 | 616 |
| 121 | Nottingham Elementary | 66393 | 12,377 | 9,123 | -3,254 |
| 122 | Terrace Elementary | 74349 | 12,401 | 12,105 | -296 |
| 123 | Thornwood Elementary | 69038 | 15,534 | 18,912 | 3,378 |
| 124 | Cedar Brook Elementary | 82179 | 16,780 | 14,896 | -1,884 |
| 125 | Treasure Forest Elementary | 82149 | 12,156 | 13,050 | 894 |
| 126 | Buffalo Creek Elementary | 82179 | 11,984 | 13,757 | 1,773 |
| <i>Elementary Total</i> | | 1,886,642 | 11,848 | 12,315 | 466 |
| <i>PK School</i> | | | | | |
| 128 | Wildcat Way School | 26000 | 16,948 | 19,777 | 2,829 |
| 129 | Panda Path School | 15618 | 1,123 | 986 | -137 |
| 130 | Lion Lane School | 26000 | 15,859 | 18,290 | 2,431 |
| 131 | Bear Blvd. School | 26000 | 17,070 | 16,735 | -335 |
| 132 | Tiger Trail School | 26000 | 17,787 | 18,659 | 872 |
| <i>PK School Total</i> | | 119,618 | 14,854 | 16,096 | 1,242 |
| <i>District EUI</i> | | 5,394,287 | 11,998 | 11,575 | -423 |

Utilities by Quarter

| <i>Quarter</i> | <i>Use 2006-2007</i> | <i>Use 2007-2008</i> | <i>Use Difference</i> | <i>Cost 2006-2007</i> | <i>Cost 2007-2008</i> | <i>Cost Difference</i> |
|-------------------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|----------------------------|
| Q1 | | | | | | |
| <i>Electricity</i> | 19,661,175 | 17,783,015 | -10% | \$1,636,353 | \$1,978,679 | 21% |
| <i>Natural Gas</i> | 48,485 | 51,547 | 6% | \$64,258 | \$67,345 | 5% |
| <i>Water</i> | 27,946 | 22,481 | -20% | \$174,567 | \$173,457 | -1% |
| Quarter Cost Summary | | | | \$1,875,178 | \$2,219,481 | |
| Q2 | | | | | | |
| <i>Electricity</i> | 16,380,929 | 16,928,117 | 3% | \$1,416,087 | \$1,881,370 | 33% |
| <i>Natural Gas</i> | 210,613 | 181,114 | -14% | \$206,250 | \$211,127 | 2% |
| <i>Water</i> | 24,702 | 29,894 | 21% | \$162,553 | \$220,739 | 36% |
| Quarter Cost Summary | | | | \$1,784,890 | \$2,313,236 | |
| Q3 | | | | | | |
| <i>Electricity</i> | 14,203,055 | 14,097,504 | -1% | \$1,240,314 | \$1,614,344 | 30% |
| <i>Natural Gas</i> | 288,660 | 237,152 | -18% | \$282,291 | \$288,768 | 2% |
| <i>Water</i> | 21,469 | 24,188 | 13% | \$142,668 | \$186,548 | 31% |
| Quarter Cost Summary | | | | \$1,665,273 | \$2,089,660 | |
| Q4 | | | | | | |
| <i>Electricity</i> | 16,668,412 | 17,265,766 | 4% | \$1,580,698 | \$1,943,167 | 23% |
| <i>Natural Gas</i> | 106,932 | 58,855 | -45% | \$112,648 | \$91,667 | -19% |
| <i>Water</i> | 19,367 | 24,399 | 26% | \$128,956 | \$153,520 | 19% |
| Quarter Cost Summary | | | | \$1,822,302 | \$2,188,355 | |
| Year to date Cost Summary | | | | \$7,147,643 | \$8,810,732 | |
| Year to date Cost Difference | | | | | \$1,663,089 | |

Quarterly Energy Use Comparison

| | <i>2006-2007 Use</i> | <i>2007-2008 Use</i> | <i>Difference</i> | <i>Percent</i> |
|--------------------|----------------------|----------------------|-------------------|----------------|
| Q4 | | | | |
| Electricity | | | | |
| High School | 6,152,343 | 6,126,072 | -26,271 | -0.43% |
| Middle School | 3,505,031 | 3,434,768 | -70,263 | -2.00% |
| Elementary | 5,719,367 | 6,173,452 | 454,085 | 7.94% |
| PK School | 484,224 | 529,920 | 45,696 | 9.44% |
| Support | 807,447 | 1,001,554 | 194,107 | 24.04% |
| | 16,668,412 | 17,265,766 | 597,354 | 3.58% |
| Natural Gas | | | | |
| High School | 46,208 | 24,202 | -22,006 | -47.62% |
| Middle School | 28,526 | 9,722 | -18,804 | -65.92% |
| Elementary | 27,835 | 21,270 | -6,565 | -23.59% |
| PK School | 1,222 | 1,150 | -72 | -5.89% |
| Support | 3,141 | 2,511 | -630 | -20.06% |
| | 106,932 | 58,855 | -48,077 | -44.96% |
| Water | | | | |
| High School | 8,579 | 11,534 | 2,955 | 34.44% |
| Middle School | 3,952 | 5,552 | 1,600 | 40.49% |
| Elementary | 5,865 | 6,071 | 206 | 3.51% |
| PK School | 611 | 746 | 135 | 22.09% |
| Support | 360 | 496 | 136 | 37.78% |
| | 19,367 | 24,399 | 5,032 | 25.98% |

Quarterly Energy Report

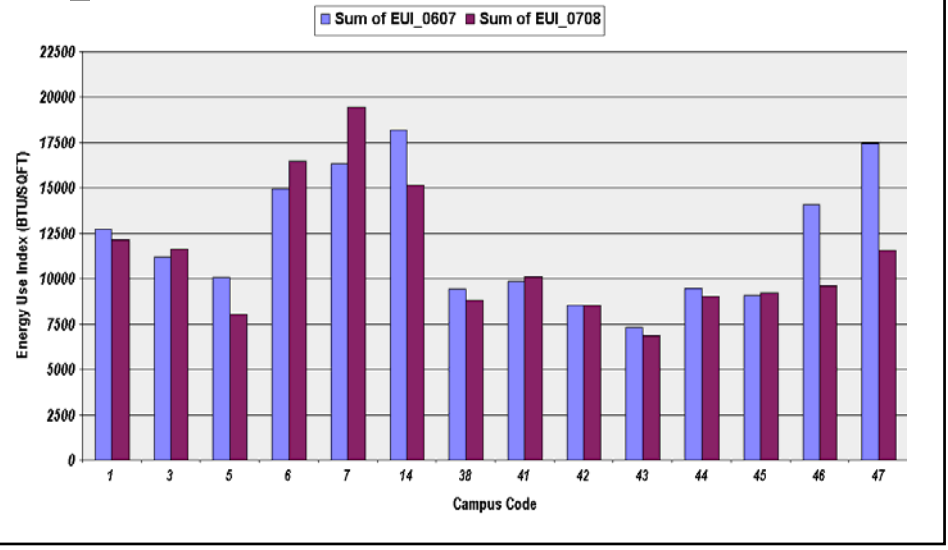
April – June 2008

*Presented by
Rebecca Cordeiro de Peredo*

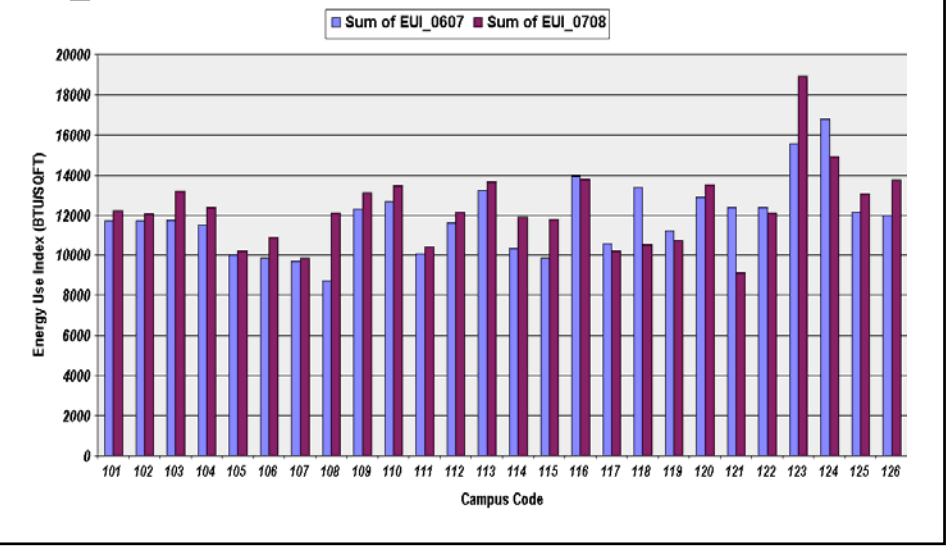
Utilities Summary: Apr-Jun

| Utility | Use 05-06 | Use 06-07 | Use Difference | Cost 05-06 | Cost 06-07 | Cost Difference |
|-------------|--------------|--------------|-------------------|---------------|---------------|--------------------|
| Electricity | 16,668,412 | 17,265,766 | 3.58 % | \$1,580,698 | \$1,943,167 | 22.93 % |
| Natural Gas | 106,932 | 58,855 | (44.96) % | \$112,648 | \$91,667 | (18.63) % |
| Water | 19,367 | 24,399 | 25.98 % | \$128,956 | \$153,520 | 19.05 % |
| Total Cost | | | | \$1,822,302 | \$2,188,355 | 20.09 % |

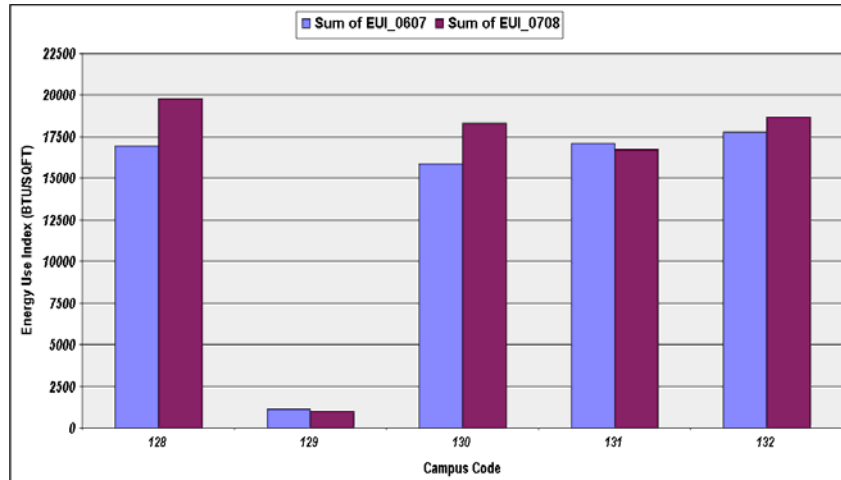
Energy Use Index - Secondary



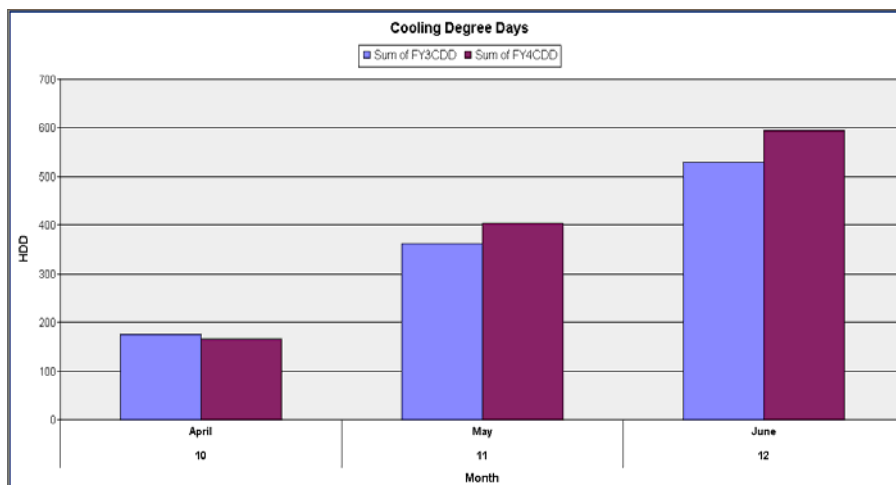
Energy Use Index-Elementary



Energy Use Index – Pre K



Weather – Cooling Degree Days



[Comments]

- Warmer weather this year resulting in increased cooling loads and decreased heating loads
- Less rain this year, prompting increased irrigation
- Increased after school activities this year, mainly at elementary campuses

[2007-2008 Summary]

| Utility | Use 06-07 | Use 07-08 | Difference | Diff. % | Cost 06-07 | Cost 07-08 | Cost Diff. | Diff % |
|-------------------|------------|------------|------------|---------|--------------------|--------------------|--------------------|--------------|
| Electricity | 66,913,571 | 66,074,402 | -839,169 | -1.3% | \$5,873,452 | \$7,417,560 | \$1,544,108 | 26.3% |
| Natural Gas | 654,690 | 528,668 | -126,022 | -19.3% | \$665,447 | \$658,907 | (\$6,539) | -1.0% |
| Water | 93,484 | 100,962 | 7,478 | 8.0% | \$608,743 | \$734,264 | \$125,520 | 20.6% |
| Total Cost | | | | | \$7,147,642 | \$8,810,731 | \$1,663,089 | 23.3% |

[Year End Notes]

- Energy Rebates SBISD received this year for renovations totaled **\$62,780**
- \$26,000 was used to purchase energy saving equipment such as
 - Variable Speed Drives
 - Small AC units for offices
 - Occupancy Sensors

[HB 3693 Compliance Update]

- **5% reduction each year for 6 years**

This year, compared to last year, we had:

- Increased SQFT: +0.5%
- Warmer weather: +7.1%
- Lower Enrollment: - 0.9%
- Increased Student Programs: Not Measured

Raw Data Use Difference: -1.25%

- *Using the calculation method recommended by SECO*

Adjusted Use Difference: -7.6%

[HB 3693 Compliance Update]

- **Public reporting of utility bills**
 - Currently Online
- **Use most efficient lighting for existing fixtures**
 - Through new construction/renovations

[Future Energy Efficiency Plans]

- Incentive Program
- Facility Inspections
- Energy Efficiency in Design Phase
- Building Controls Improvements
- Lighting Retrofits
- Variable Speed Drives

