



DENTON
INDEPENDENT
SCHOOL DISTRICT



SEMI-ANNUAL UTILITY REPORT - JULY TO DEC. 2018

Paul Andress – Executive Director of Operations – DISD

Debbie Monschke – Assistant Superintendent – DISD

Angela Alfonso – Utility Specialist – DISD

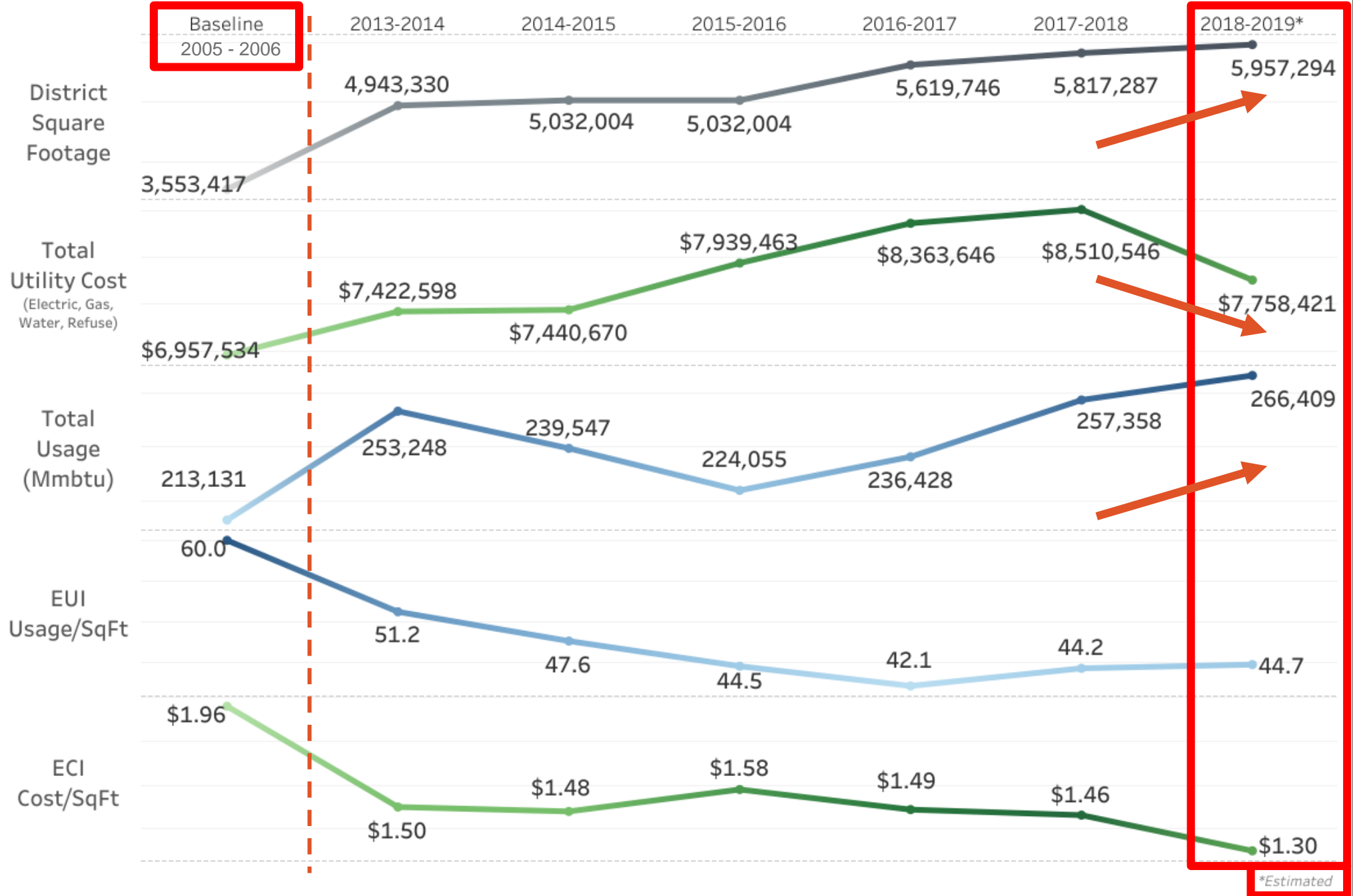
Arnoldo Villarreal – Project Manager – TD

Orland Hilliard, CEM – Account Manger – TD

Bob Wilken, CEM – Executive Account Manager – TD

Brandon Hoke, EIT – Engineering - TD

Utility Performance Trends



*Estimated

6-month period

Comparison by Utility

	July 2017 - Dec. 2017	July 2018 - Dec. 2018	% Change	Cost Change (\$)
Electric	\$3,083,036	\$3,007,051	-2%	(\$75,985)
Gas	\$174,763	\$173,643	-1%	(\$1,120)
Irrigation Water	\$339,604	\$350,845	3%	\$11,241
Potable, Sewer & Storm Water	\$444,679	\$426,572	-4%	(\$18,107)
Refuse	\$366,630	\$350,910	-4%	(\$15,720)
Total	\$4,408,712	\$4,309,022	-2.26%	(\$99,691)

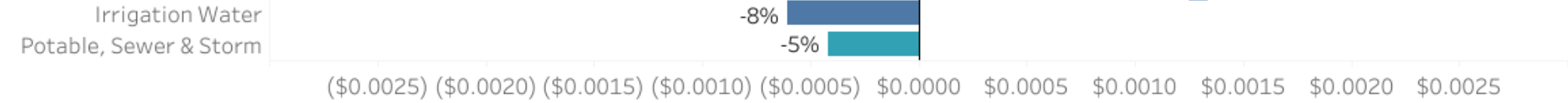
All Schools Energy Performance Change Compared To Last Year



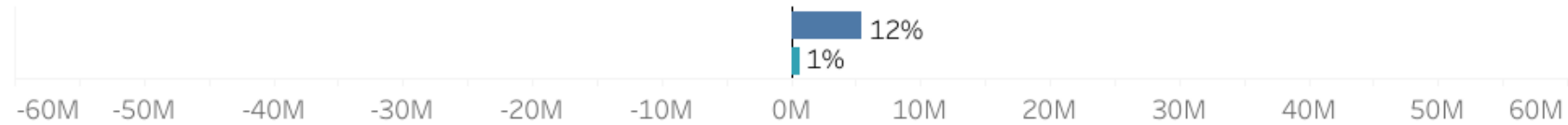
Water and Refuse Performance Change Compared To Last Year

- Irrigation Water
- Potable, Sewer & Storm
- Rainfall
- Refuse

Effective Rate



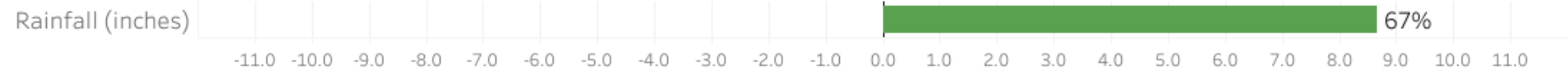
Consumption



Cost



Rainfall

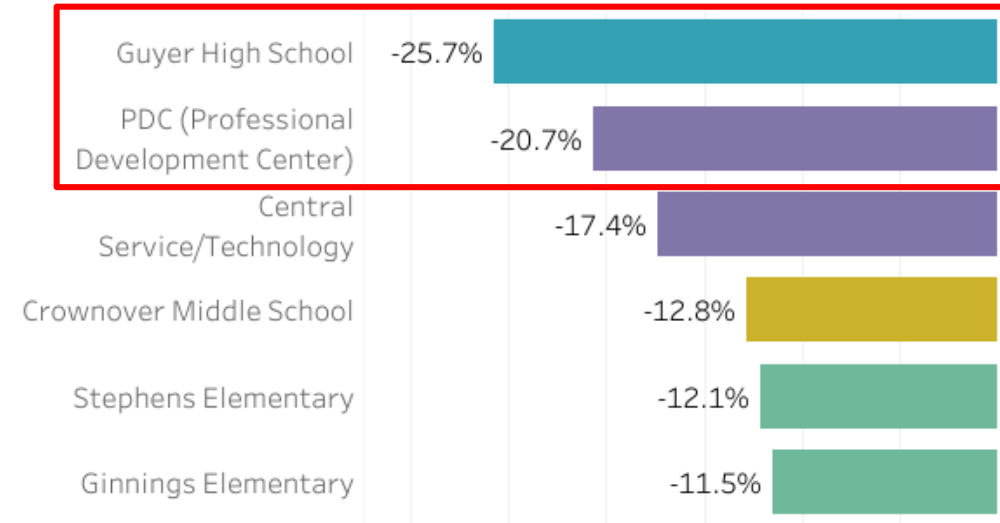


Refuse

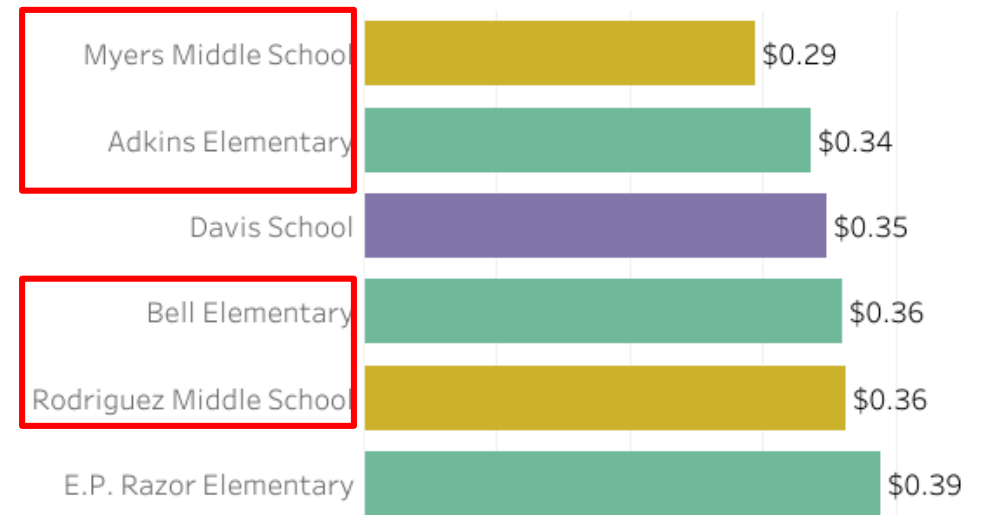


Electric - Top Performers

Largest % Decrease in Usage



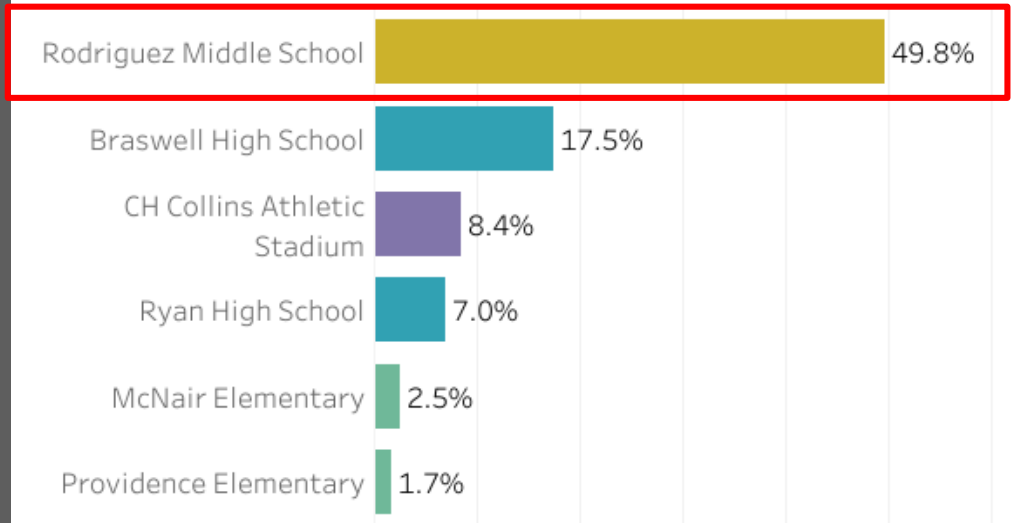
Lowest Cost per SqFt



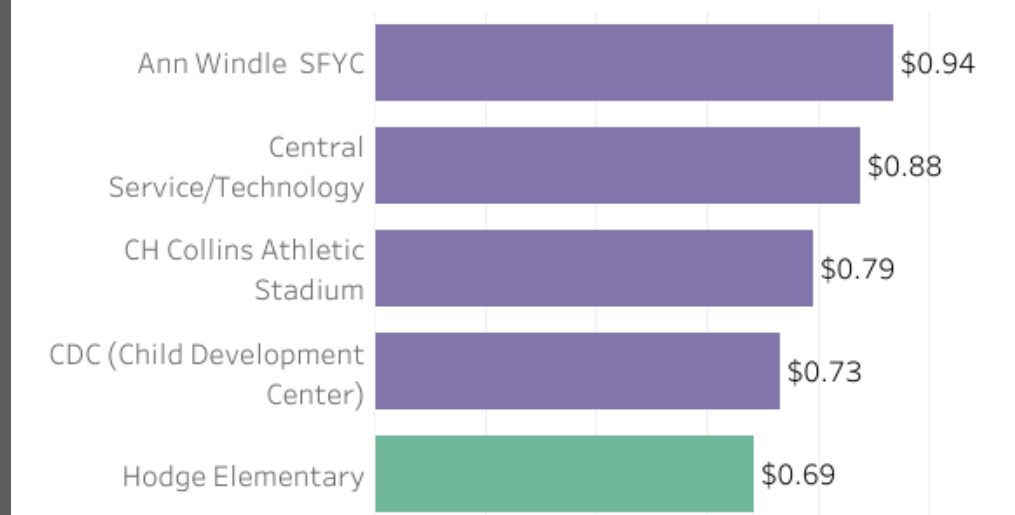
Opportunities



Highest % Increase in Usage

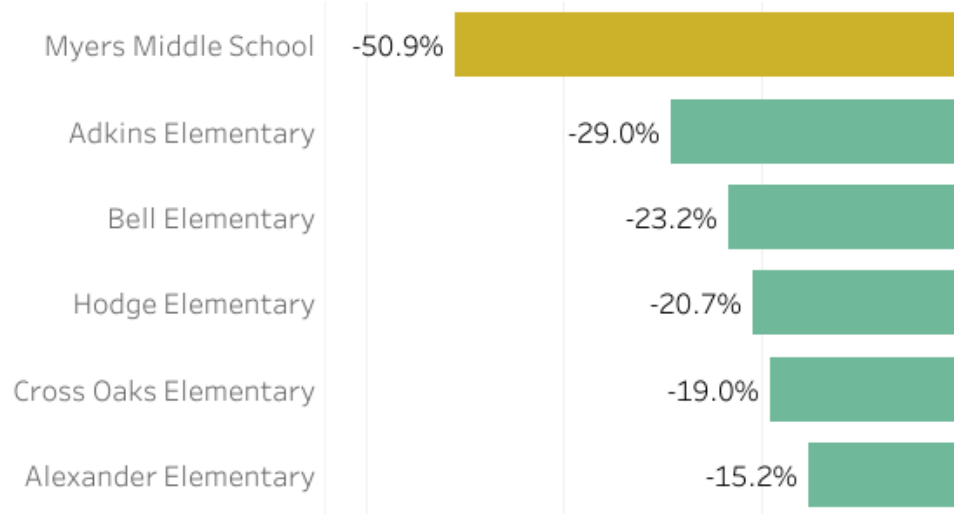


Highest Cost per SqFt

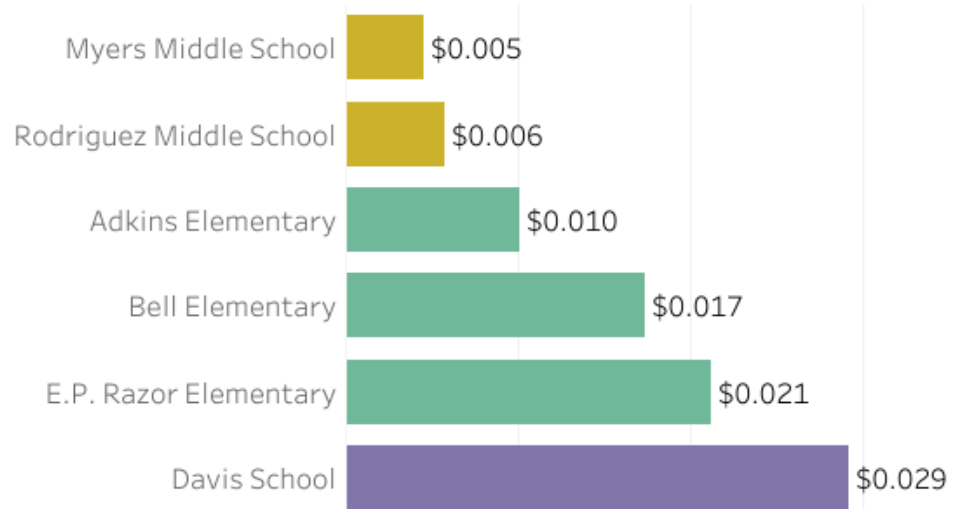


Gas - Top Performers

Largest % Decrease in Usage



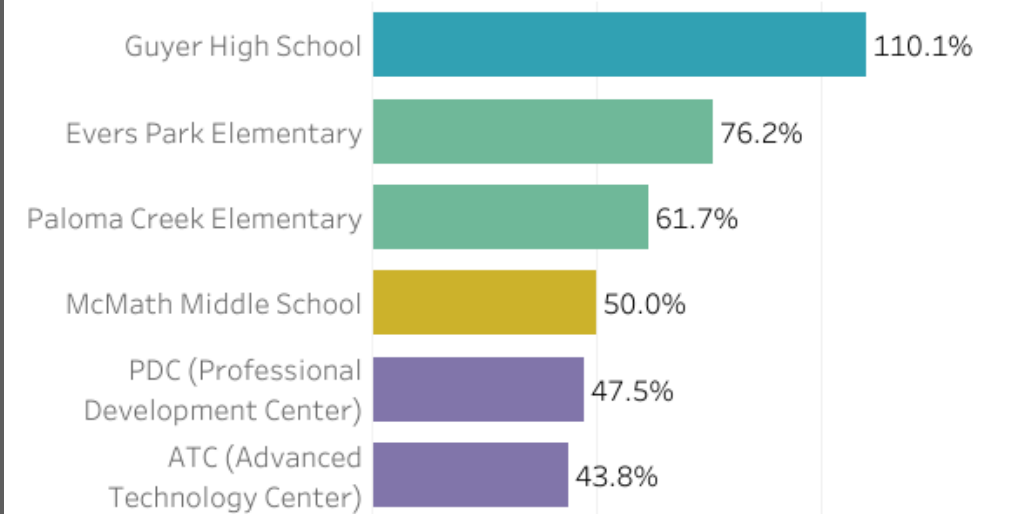
Lowest Cost per SqFt



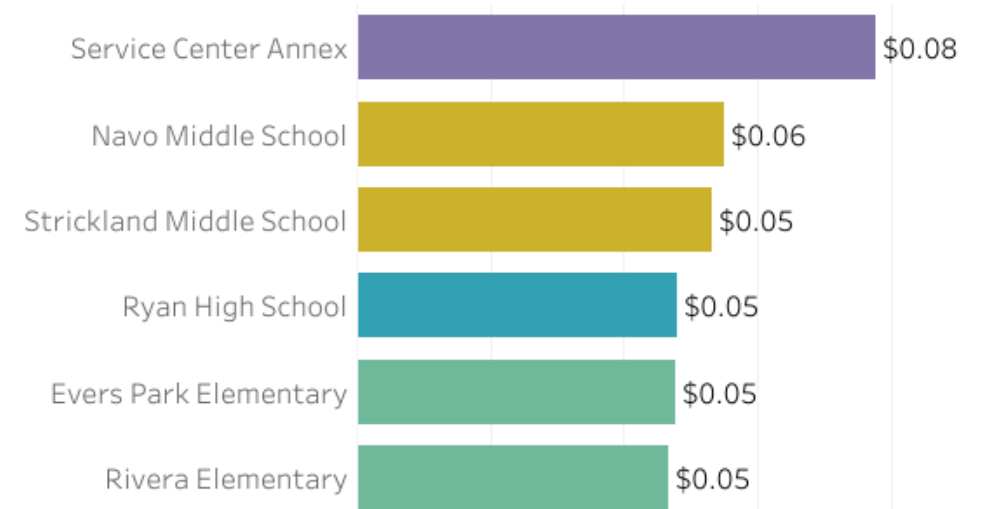
Opportunities



Highest % Increase in Usage

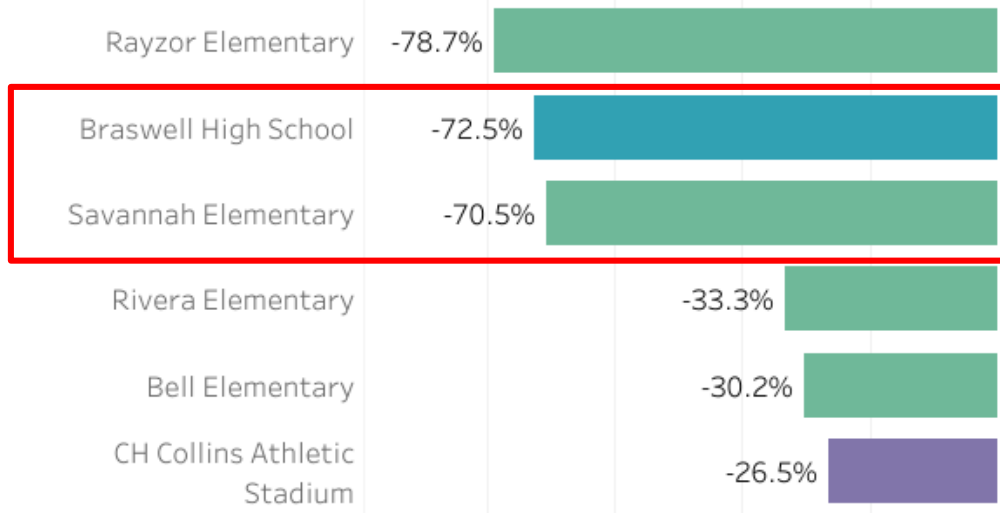


Highest Cost per SqFt

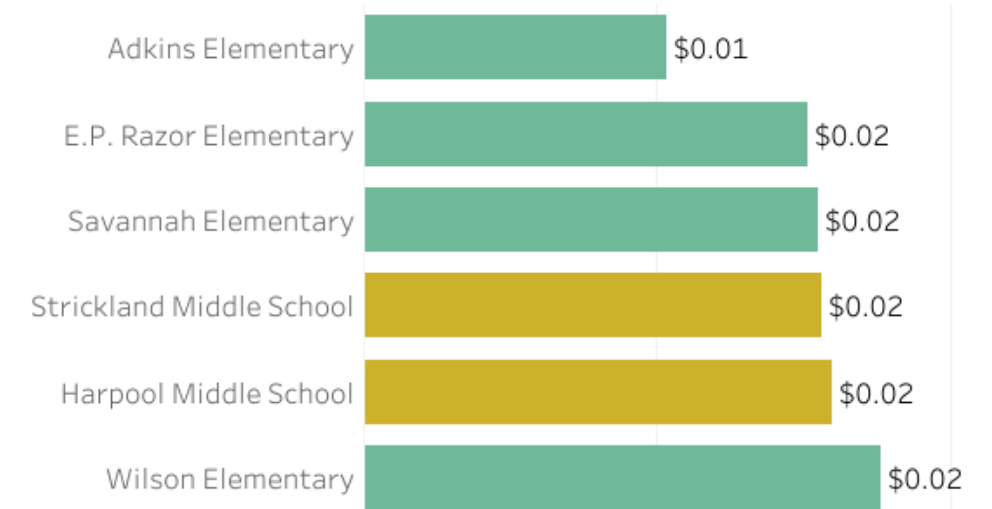


Potable Water - Top Performers

Largest % Decrease in Usage



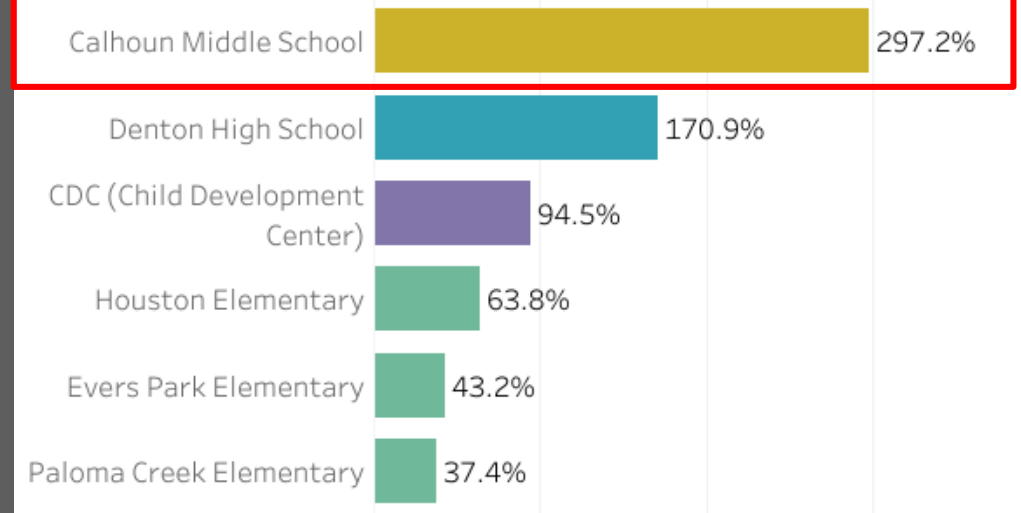
Lowest Cost per SqFt



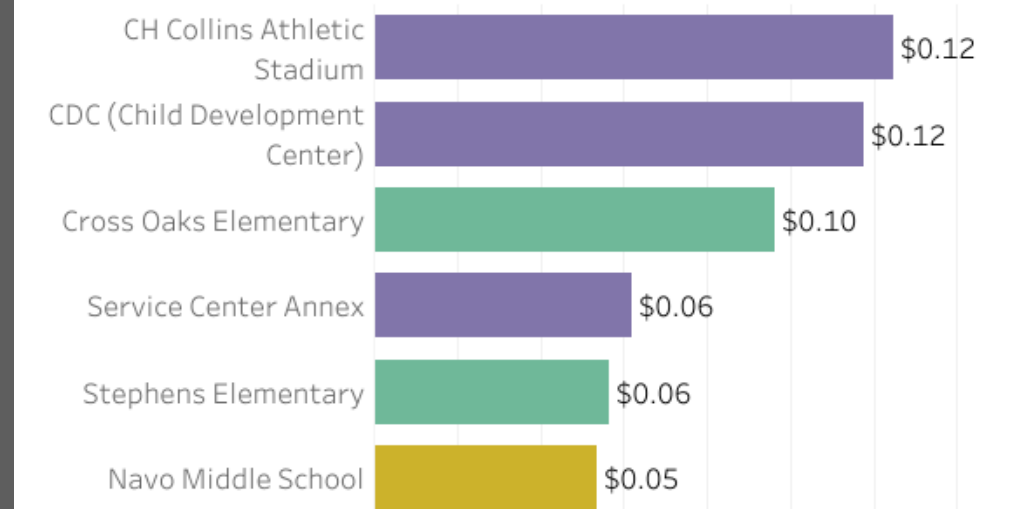
Opportunities



Highest % Increase in Usage



Highest Cost per SqFt



Energy Efficient Building Impact

	Evers Park Elementary	Rivera Elementary	Bell Elementary	Adkins Elementary
Cost /SQFT	\$0.72	\$0.69	\$0.38	\$0.35
Usage/SQFT	27 kBtu	27 kBtu	14 kBtu	13 kBtu
July 2018 - Dec. 2018	\$61,898	\$58,767	\$33,528	\$30,761
Total Usage	2,358,373 kBtu	2,287,173 kBtu	1,236,941 kBtu	1,114,887 kBtu
Square Footage	85,855	84,598	88,925	88,674

6 Month Cost difference between two school energy models: \$56,376



Equivalent of 1.06 Teacher Salaries over 6 months

FY 05/06
Baseline
SQFT
3,553,417

FY 05-06
Baseline ECI
(Cost/SQFT)
\$1.96

FY 18/19
SQFT
5,957,294

Estimated Cost at
Baseline ECI
\$11,676,296

Estimated FY 18/19
Costs
\$7,758,421

Estimated Annual
Savings
\$3,917,875

RECENT ACCOMPLISHMENTS

1. Utility Team Efficiency Innovation Meeting
 - Implemented a schedule reduction of 1 hour per day district wide
2. Analyzed various solar power options available to Denton ISD
3. Evaluating the application of VRF in Denton ISD
4. Monthly reports have had a beneficial impact
 - Potable water leak found at Calhoun MS during this period
 - Billing issues identified at Savannah and CDC
5. Implemented HVAC scheduling audits to ensure systems operate efficiently year round.
6. Finalizing the LED retrofit
7. Finalized the smart irrigation systems.

LOOKING AHEAD

1. Solar Panels at Union Park
2. More Frequent Scheduling Audits
3. Possibly implementing VRF at Wilson
 1. Geothermal not a good option at this site
4. Controls system upgrades from INET to TRIDIUM (2018 Bond)
5. Recruiting a student to help with irrigation normalization effort