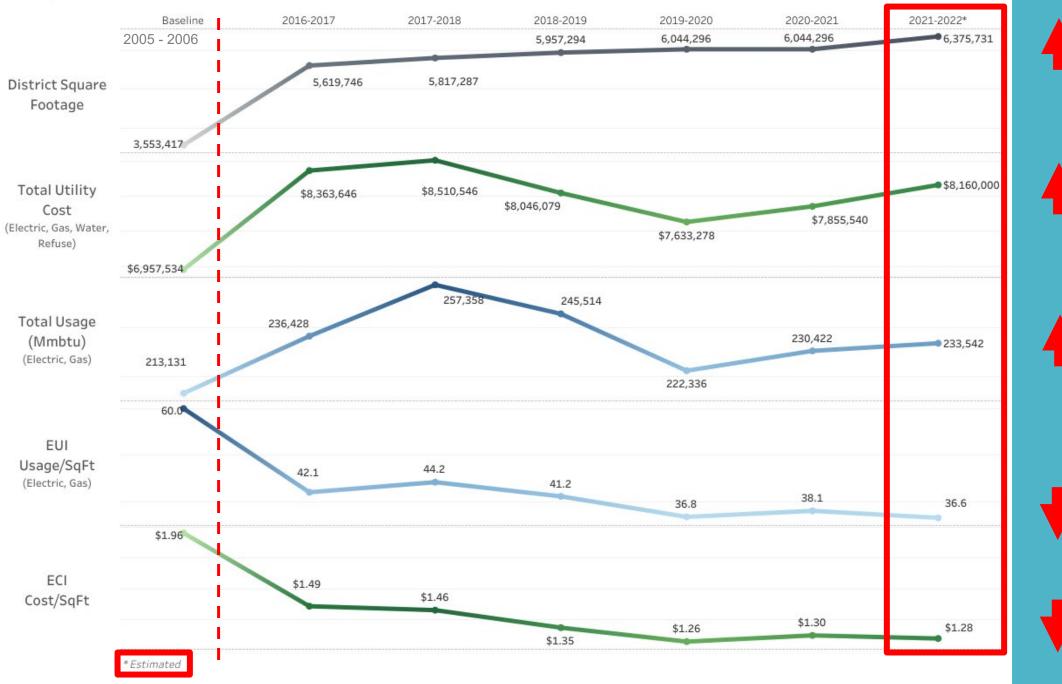




Semi-Annual UTILITY Report - July to Dec. 2021

Paul Andress – Executive Director of Operations – DISD
Angela Alfonso – Utility Specialist – DISD
Arnoldo Villarreal – Project Manager – TD
Brian Lillard – Vice President – TD
Daniel Wine – Account Manager – TD
Donna Kisor, P.E. – Engineering – TD
Brandon Hoke, P.E. – Engineering - TD

Utility Performance Trends



Comparison b	by Utility			1
	July 2020 - Dec 2020	July 2021 - Dec 2021	% Change	Cost Change (\$)
Electric	\$2,681,200	\$3,082,536	15%	\$401,335
Gas	\$146,942	\$194,041	32%	\$47,098
Irrigation Water	\$351,004	\$408,962	17%	\$57,958
Potable, Sewer & Storm Water	\$491,375	\$457,731	-7%	(\$33,644)
Refuse	\$393,106	\$453,788	15%	\$60,682
Total	\$4,063,628	\$4,597,057	13.13%	\$533,430

#### Electric Gas Effective Rate 2.3% Electric 43.6% Gas (\$0.0050) (\$0.0040) \$0.0000 \$0.0010 \$0.0020 \$0.0050 (\$0.0030) (\$0.0020) (\$0.0010) \$0.0030 \$0.0040 Consumption (kBtu) 12.4% Electric Gas -8.1% -20M -17.5M -15M -12.5M -10M -7.5M -5M -2.5M 0M 2.5M 5M 7.5M 10M 12.5M 15M 17.5M 20M Weather Normalized Consumption (kBtu) -0.6% Electric Gas -12.3% -30M -25M -20M -5M 0M 5M 10M 15M 20M 25M 30M 35M 40M 45M 50M -50M -45M -40M -35M -15M -10M Cost \$401,335 Electric

\$47,098

\$60,000

\$80,000

\$100,000 \$120,000

\$40,000

\$20,000

\$0

## All Schools Energy Performance Change Compared To Last Year

Gas

(\$100,000)

(\$80,000)

(\$60,000)

(\$40,000)

(\$20,000)



Water and Refuse Performance Change Compared To Last Year

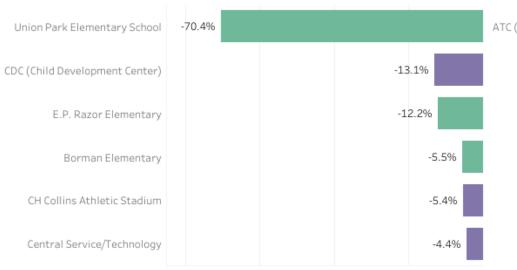
## Electric - Top Performers

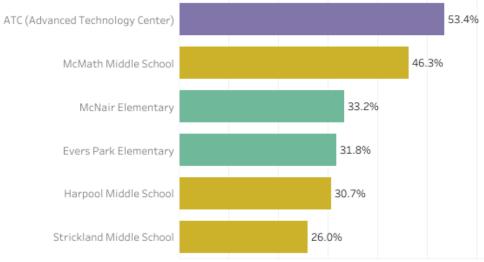
Largest % Decrease in Usage

## Opportunities

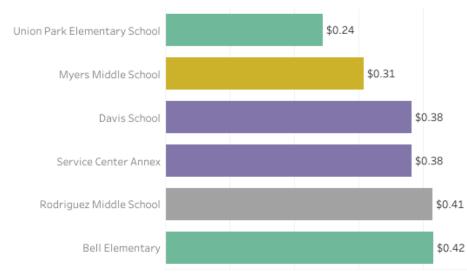


#### Highest % Increase in Usage

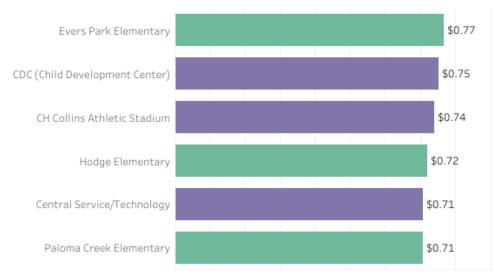




#### Lowest Cost per SqFt



#### Highest Cost per SqFt



## SOLAR UPDATE - UNION PARK ELEMENTARY





RUNNING COST AVOIDANCE:

\$7,703.92

AVERAGE PER MONTH:

\$2,567.97



INSTALLATION COST OF SOLAR: \$565,257

ROI = 17.89

THE SOLAR PROJECT TO DATE HAS HAD THE FOLLOWING IMPACTS: (BASED ON 48,870.07 KWH OF ENERGY AVOIDANCE)

https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator



GENERATED THE SAME AS **6.7** HOMES ELECTRICITY USE AND ON TRACK FOR **27** HOMES THIS YEAR.



REMOVED **7.5** CARS OFF THE ROAD AND ON TRACK FOR **29.8** CARS THIS YEAR.



REDUCED CARBON EMISSIONS BY **34.6** METRIC TONS OF CO2 AND ON TRACK TO REDUCE **139** METRIC TONS OF CO2 THIS YEAR.

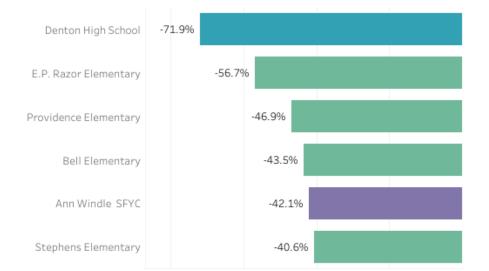
## Gas - Top Performers

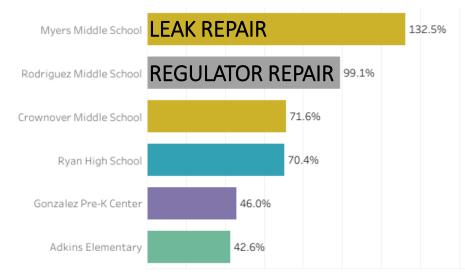
Largest % Decrease in Usage

## Opportunities

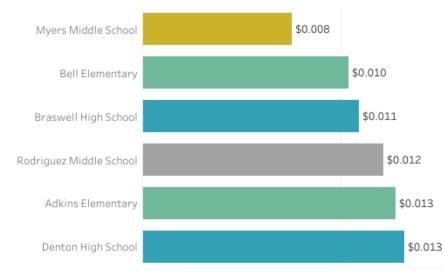
#### Auxiliary Elementary Schools Middle Schools High Schools

#### Highest % Increase in Usage

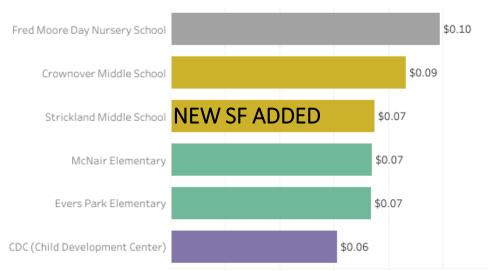




Lowest Cost per SqFt



### Highest Cost per SqFt

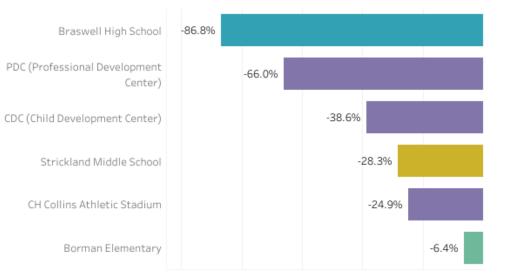


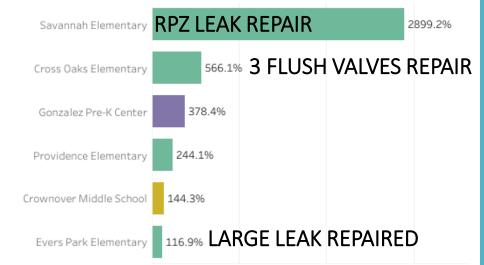
## Potable Water - Top Performers

## Opportunities

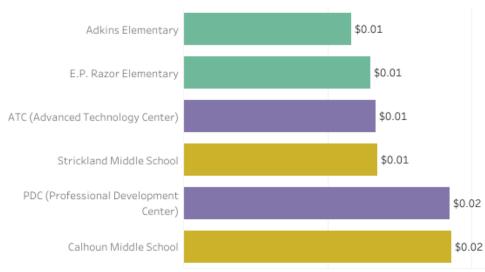
Highest % Increase in Usage

## Auxiliary Elementary Schools Middle Schools High Schools

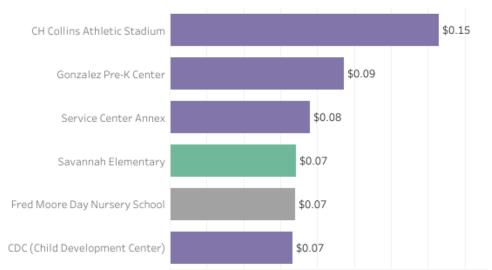




Lowest Cost per SqFt

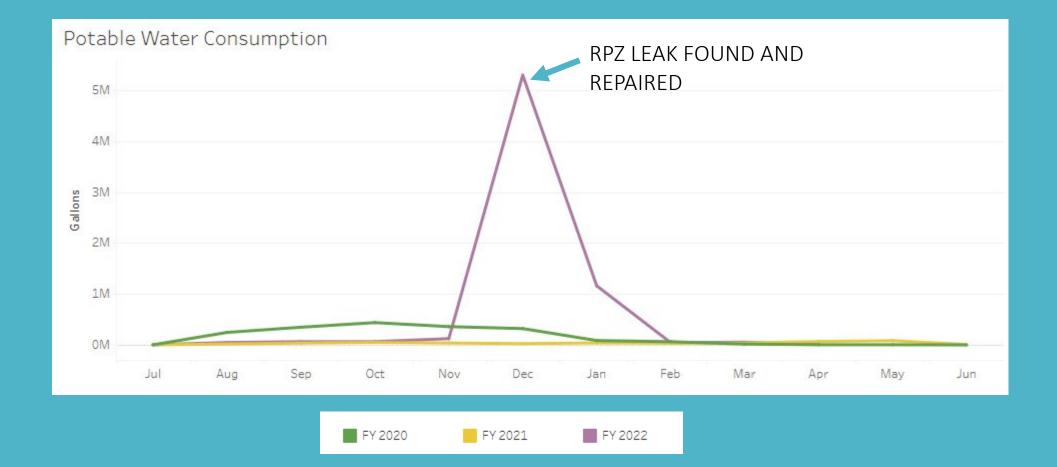


#### Highest Cost per SqFt



### Largest % Decrease in Usage

## SAVANNAH ELEMENTARY



## Irrigation Water - Top Performers

## Opportunities

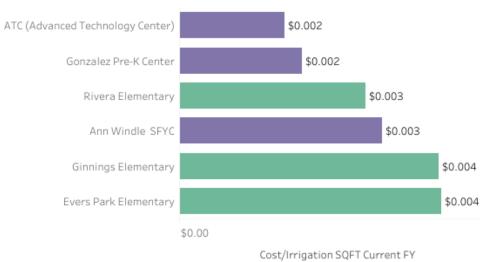
Highest % Increase in Usage



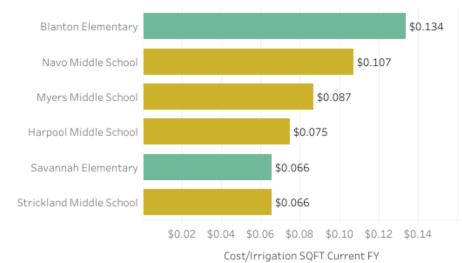
#### ADDITIONAL WATERING 586396.9% Houston Elementary Evers Park Elementary -100.0% Ginnings Elementary Pecan Creek Elementary 9263.9% -100.0% **10 HEADS REPAIRED** -100.0% Strickland Middle School 3166.7% Rivera Elementary -100.0% ATC (Advanced Technology Center) Blanton Elementary 720.6% Alexander Elementary Savannah Elementary 639.5% -98.5% E.P. Razor Elementary 463.1% Gonzalez Pre-K Center -98.4%

#### Largest % Decrease in Usage

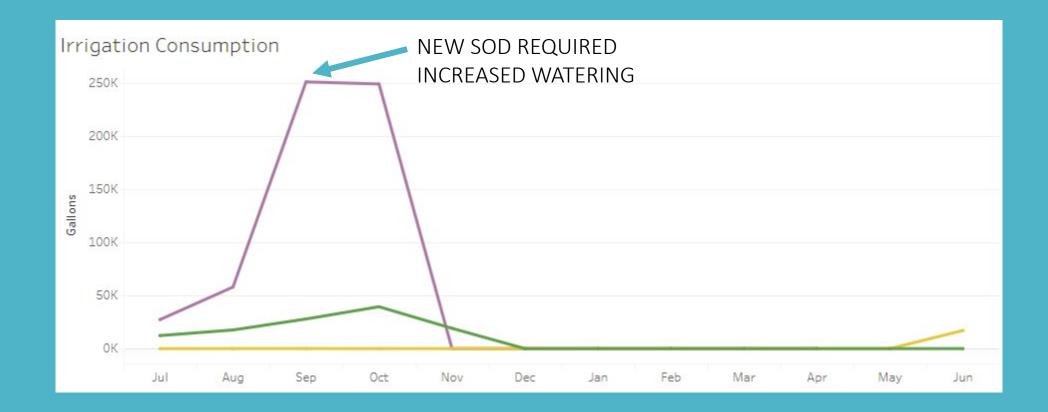
#### Lowest Cost per SqFt



#### Highest Cost per SqFt



## HOUSTON ELEMENTARY



FY 2020 FY 2021 FY 2022	F	Y 2020	FY 2021	FY 2022
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# RECENT ACCOMPLISHMENTS

Bi-weekly utility audits have continued to find items as outlined in this report

Union Park Solar tracking has been confirmed working. Those lessons learned are being applied to new solar campuses

Addition of district owned and monitored smart domestic water meters on 17 campuses (in progress)

# Looking Ahead

Solar tracking and reporting at Shultz

Fault detection software updates from Ryan HS

Close look at energy changes at schools with recent upgrades

Conversion of five schools to the newest smart irrigation control system

Implementation of Smart meters on irrigation systems to more quickly identify items requiring repair