



DENTON INDEPENDENT  
SCHOOL DISTRICT



## Semi-Annual UTILITY Report – July 2021 to June 2022

Paul Andress – Executive Director of Operations – DISD

Angela Alfonso – Utility Specialist – DISD

Arnoldo Villarreal – Project Manager – TD

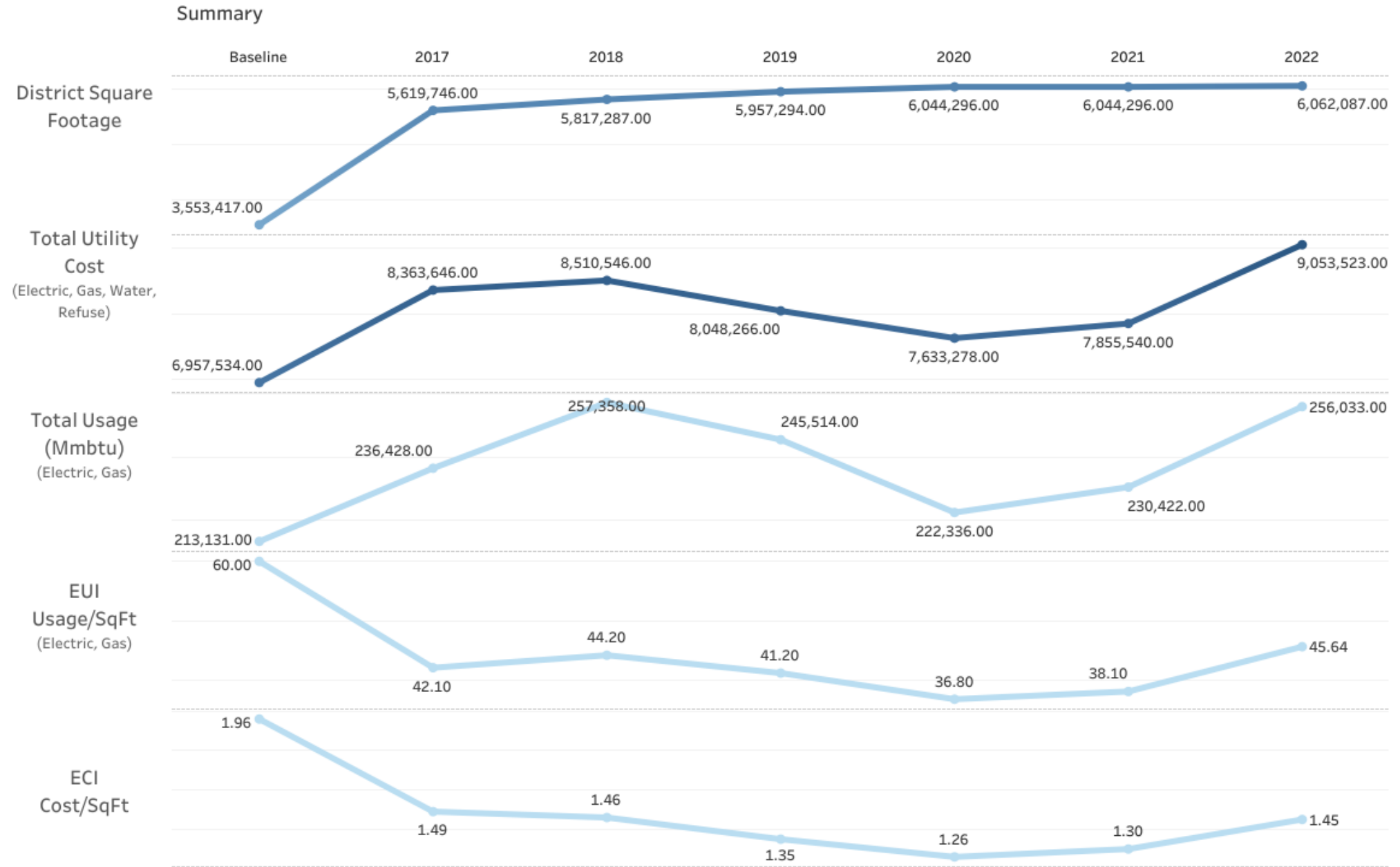
Brian Lillard – Vice President – TD

Daniel Wine – Account Manager – TD

Brandon Hoke, P.E. – Engineering - TD

Donna Kisor, P.E. – Engineering – TD

# Utility Performance Trends



\* Estimated



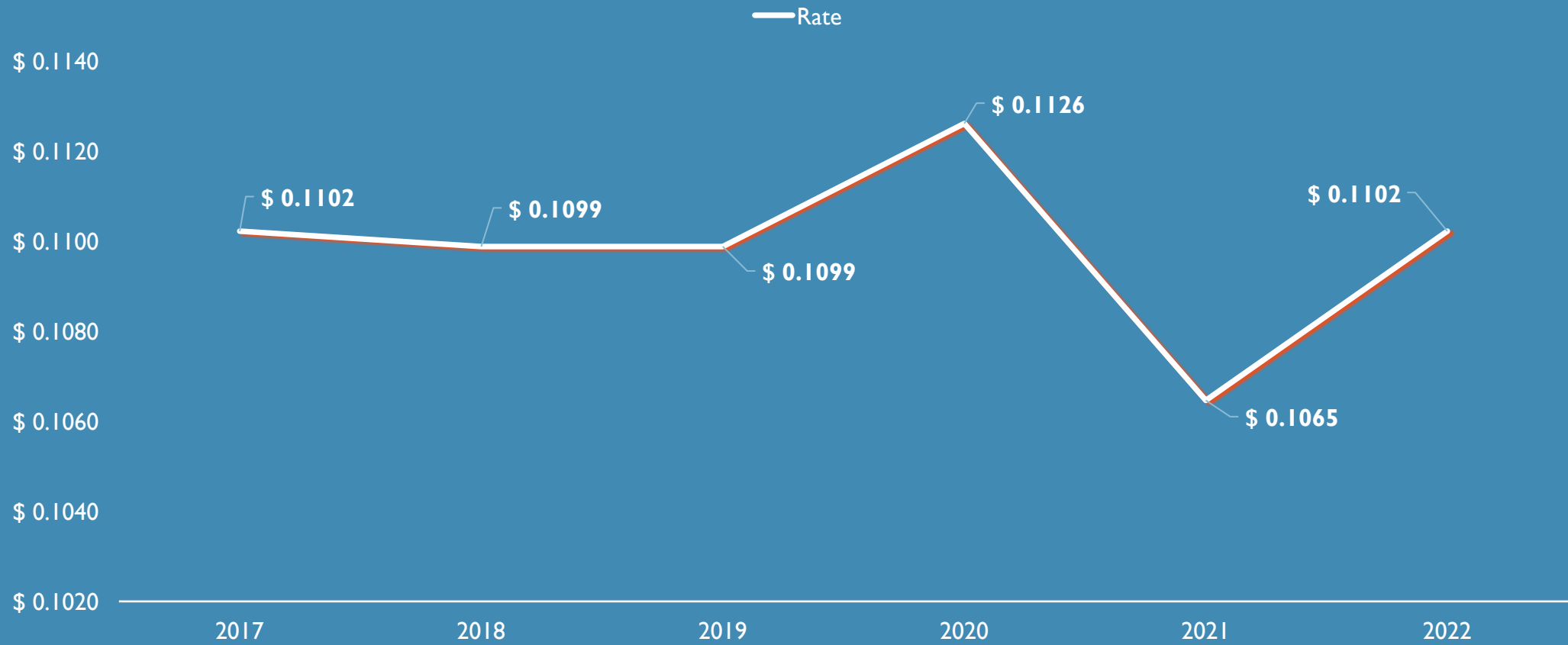
### Comparison by Utility

	July 2020 - Jun 2021	July 2021 - Jun 2022	% Change	Cost Change (\$)
Electric	\$5,160,261	\$5,992,802	16%	\$832,541
Gas	\$428,322	\$641,611	50%	\$213,289
Irrigation Water	\$528,059	\$627,531	19%	\$99,473
Potable, Sewer & Storm Water	\$915,444	\$884,445	-3%	(\$31,000)
Refuse	\$837,570	\$907,133	8%	\$69,564
<b>Total</b>	<b>\$7,869,657</b>	<b>\$9,053,523</b>	<b>15.04%</b>	<b>\$1,183,866</b>

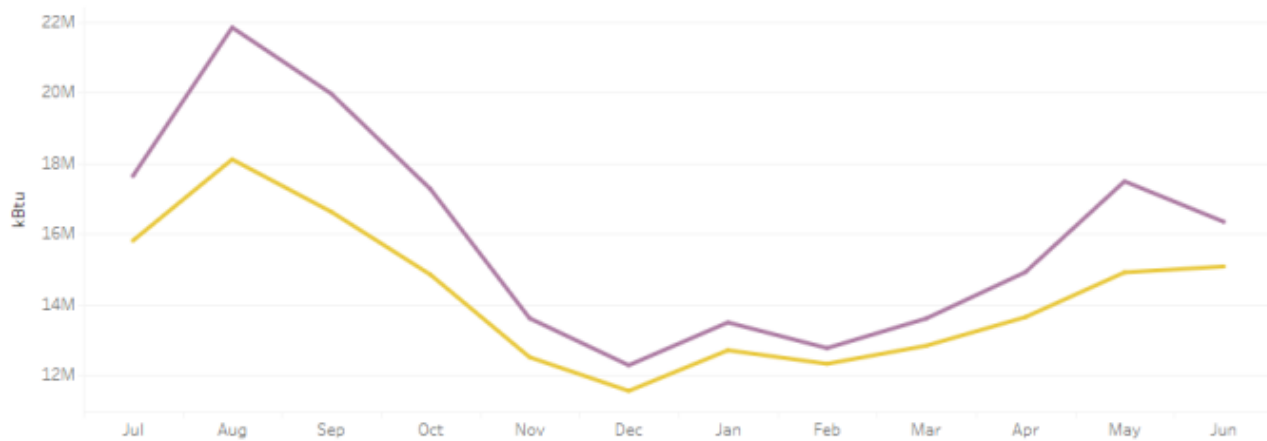
# All Schools Energy Performance Change Compared To Last Year



# ELECTRIC RATE HISTORY \$/KW

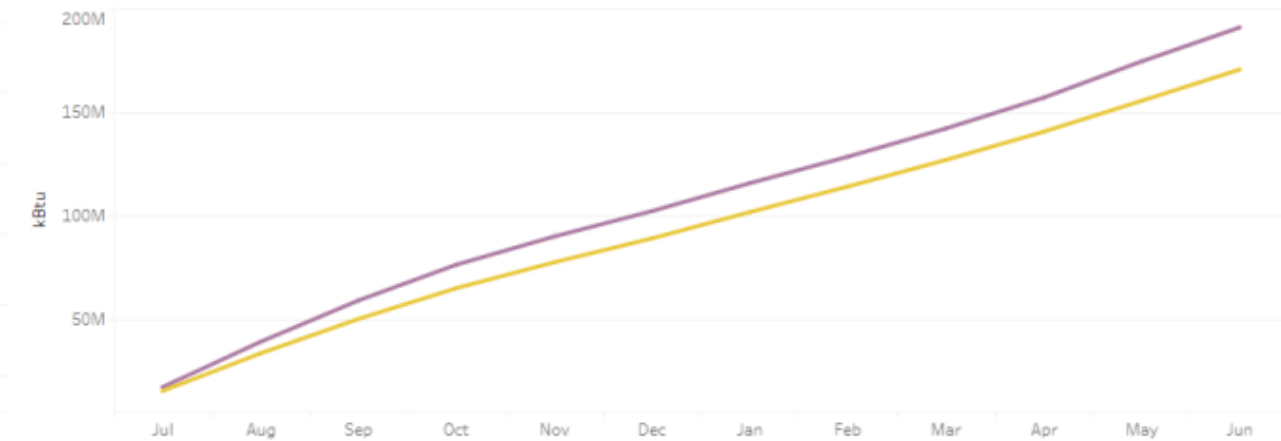


### Electric Consumption

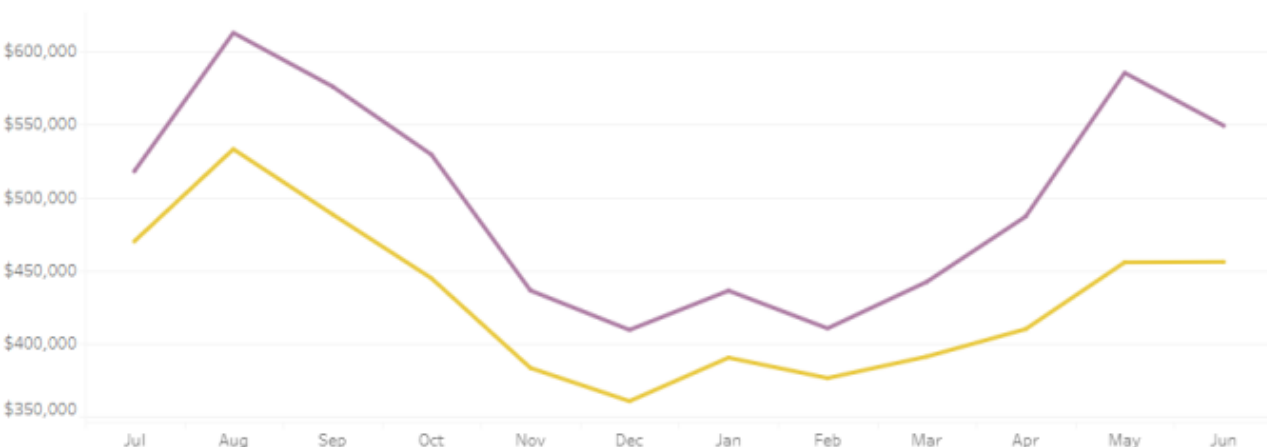


FY 2021 FY 2022

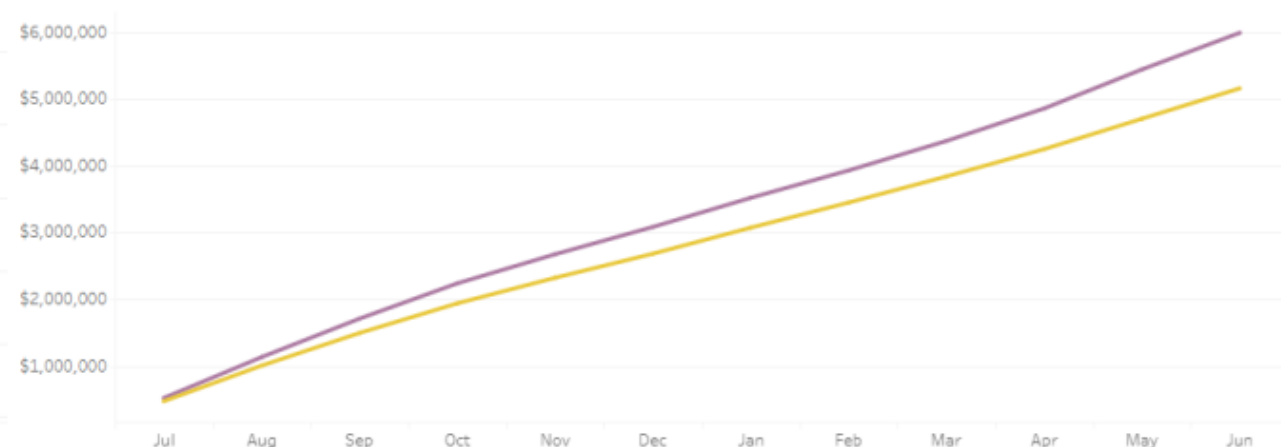
### Electric Consumption Running Total



### Electric Cost

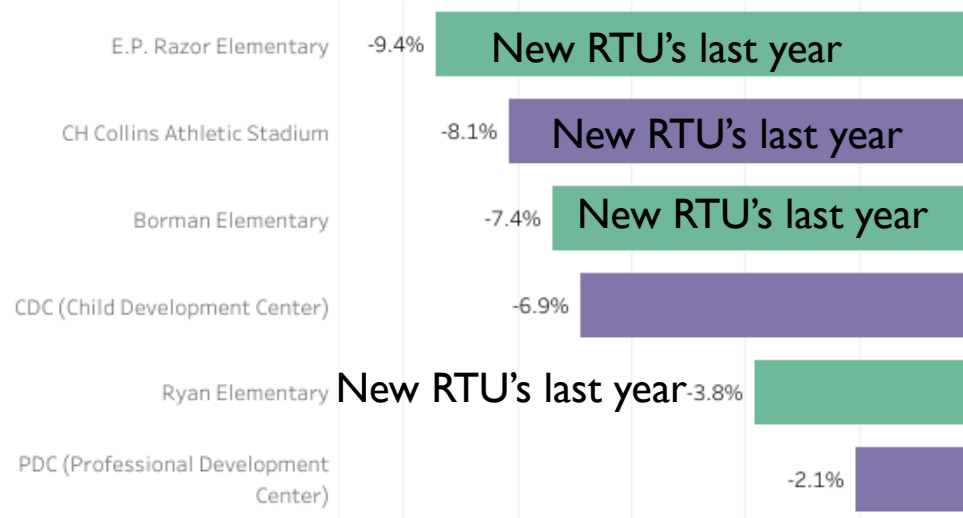


### Electric Cost Running Total

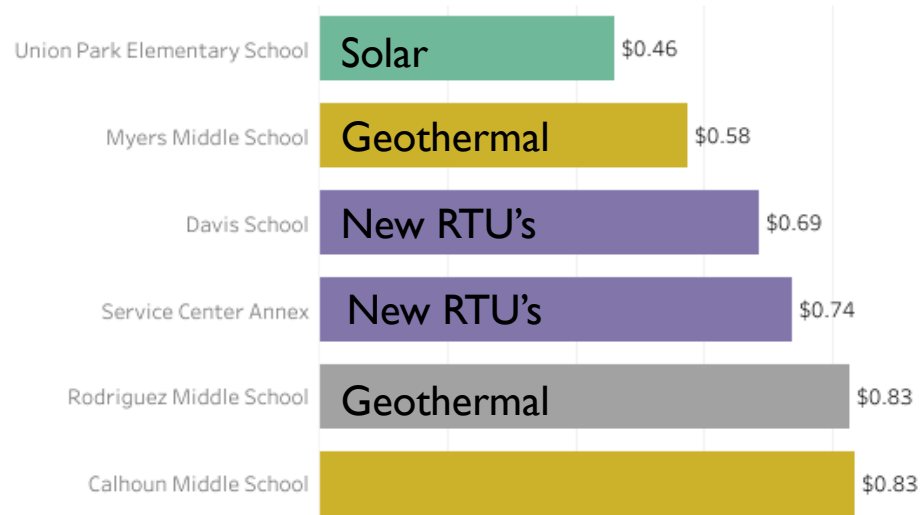


# Electric - Top Performers

## Largest % Decrease in Usage



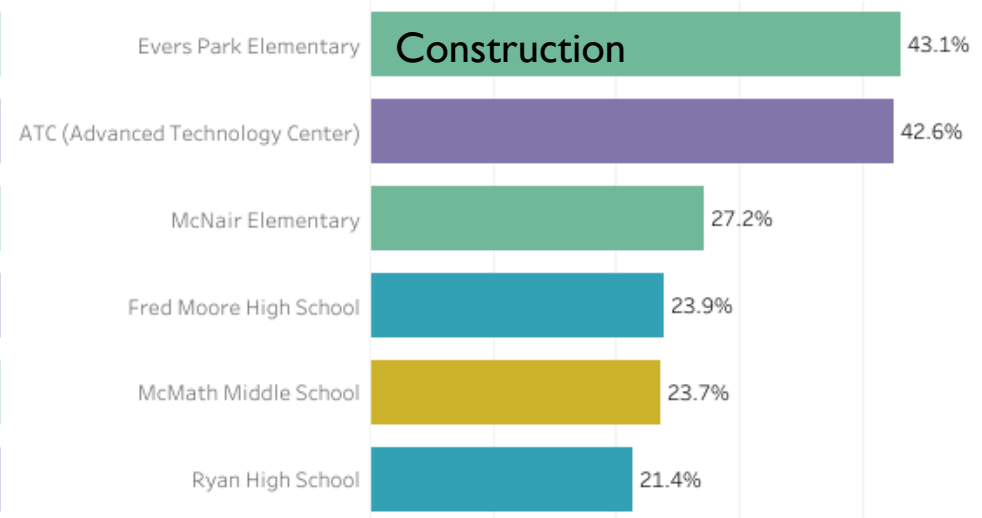
## Lowest Cost per SqFt



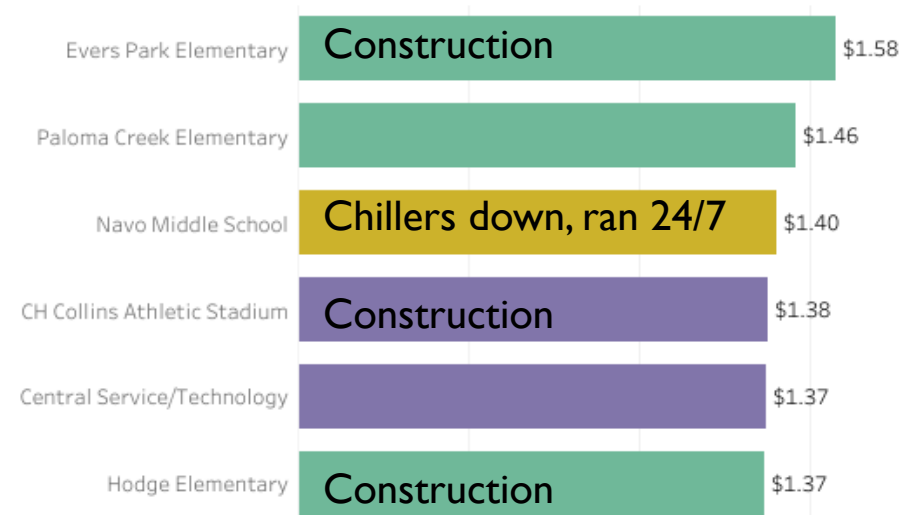
# Opportunities

- Auxiliary
- Elementary Schools
- Middle Schools
- High Schools

## Highest % Increase in Usage



## Highest Cost per SqFt



# SOLAR UPDATE – UNION PARK ELEMENTARY



Meter readings for February through October

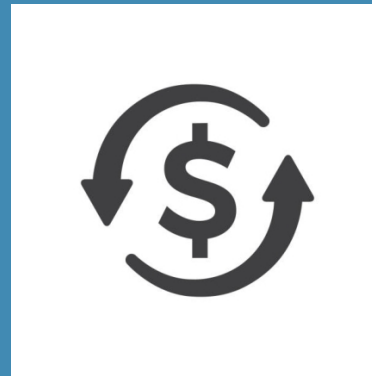


RUNNING COST AVOIDANCE:

**\$27,934.17**

AVERAGE PER MONTH:

**\$3,103.80**



INSTALLATION COST OF SOLAR:

**\$565,257**

**Simple Payback = 12-15 years**

Years in Service = 3.25

THE SOLAR PROJECT TO DATE HAS HAD THE FOLLOWING IMPACTS:

(BASED ON 182,452.82 KWH OF ENERGY AVOIDANCE)

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



GENERATED THE SAME AS **16.3** HOMES ELECTRICITY USE

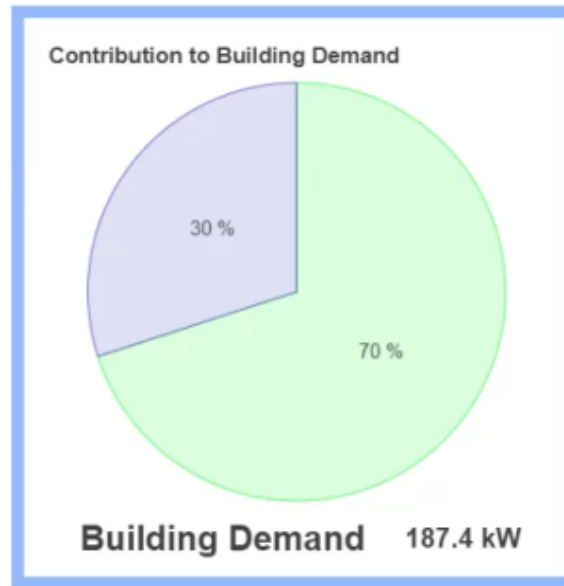


REMOVED **27.9** CARS OFF THE ROAD



REDUCED CARBON EMISSIONS BY **129** METRIC TONS OF CO2

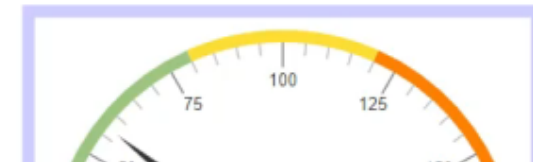
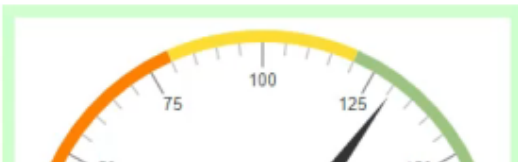




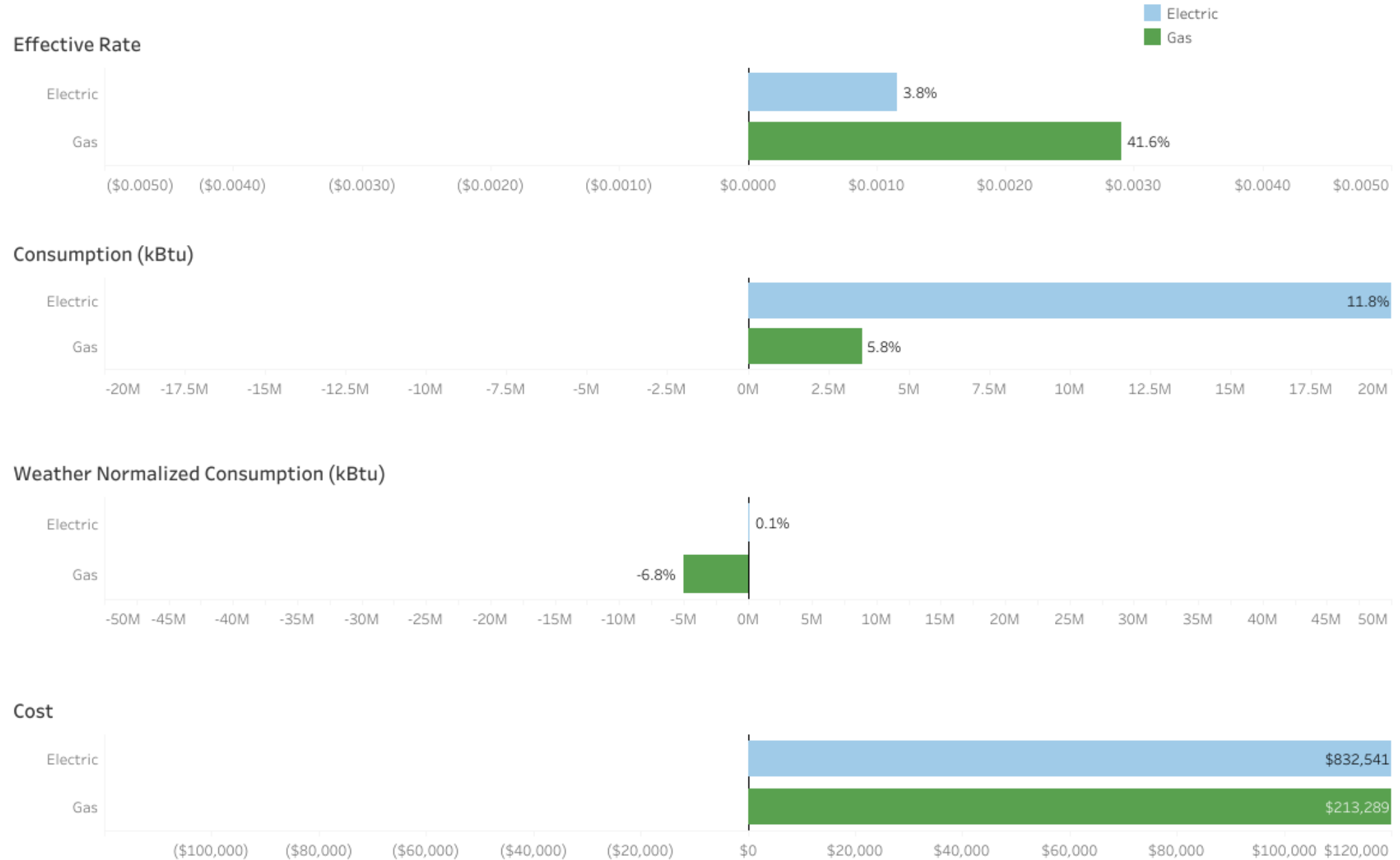
08-Nov-22 12:22 PM CST

Today's Forecast 78.0 °F/65.0 °F  
Mostly Cloudy  
Precip: 6 %

Tomorrow's Forecast 80.0 °F/63.0 °F  
Partly Sunny  
Precip: 0 %

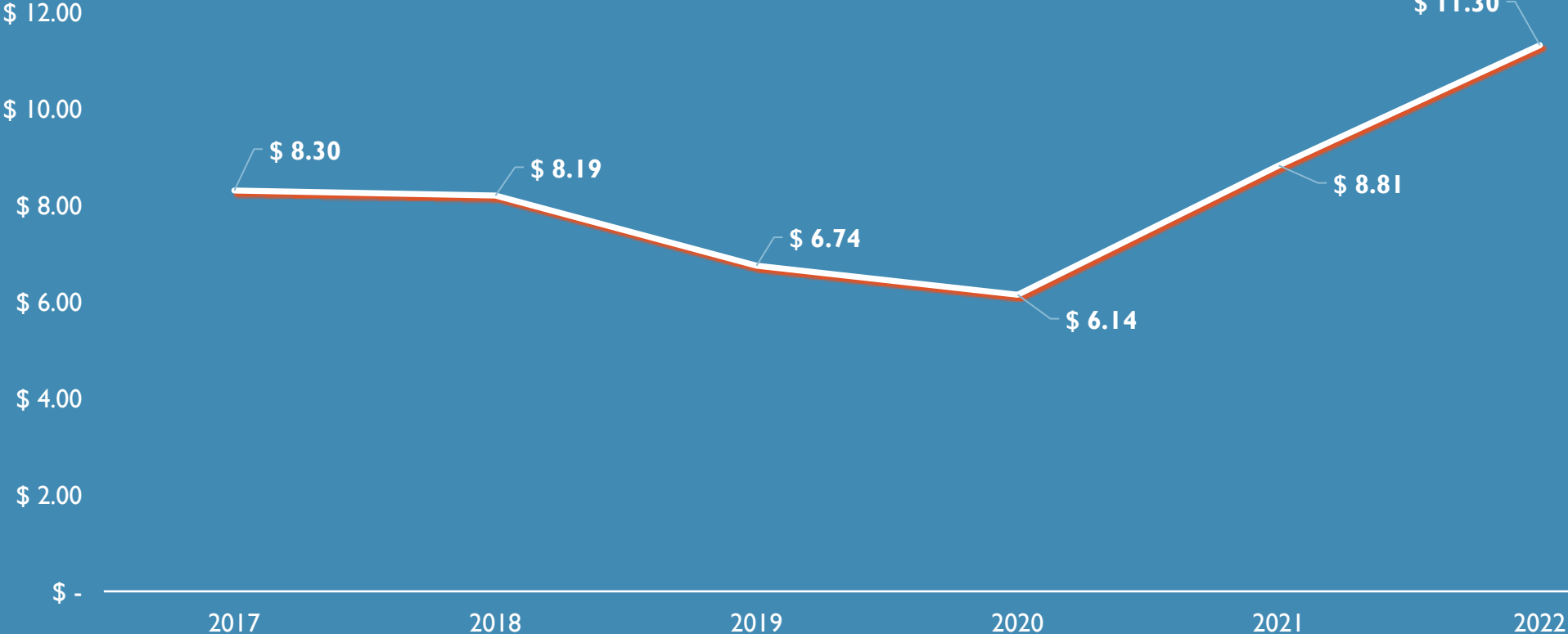


# All Schools Energy Performance Change Compared To Last Year




# GAS RATE MCF

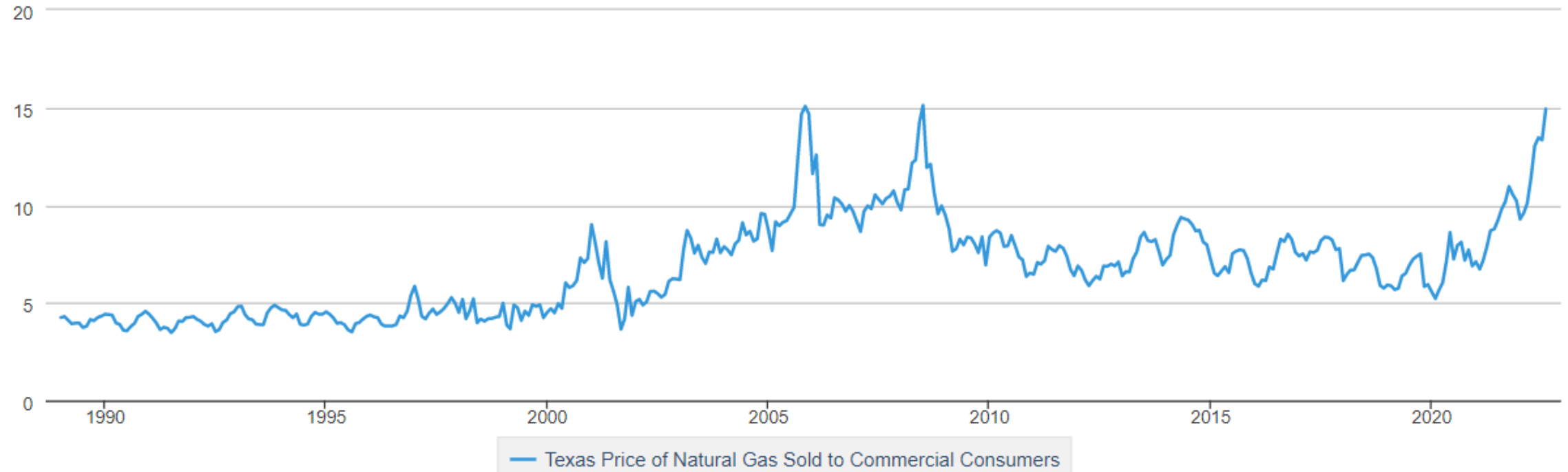
— Rate



## Texas Price of Natural Gas Sold to Commercial Consumers

 [DOWNLOAD](#)

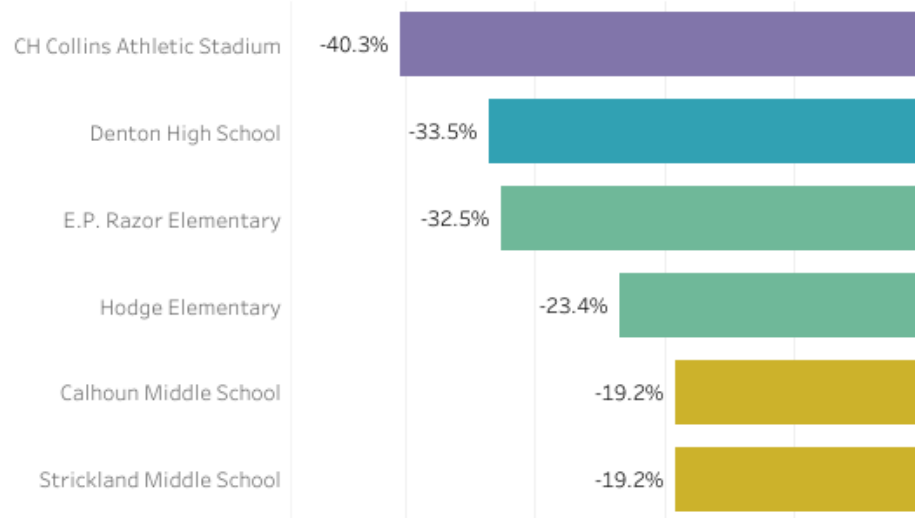
Dollars per Thousand Cubic Feet



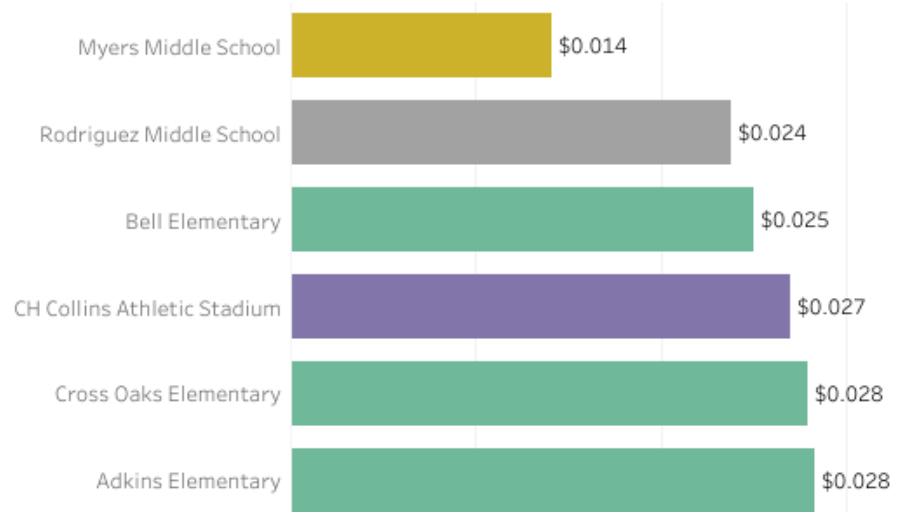
Source: U.S. Energy Information Administration

# Gas - Top Performers

## Largest % Decrease in Usage



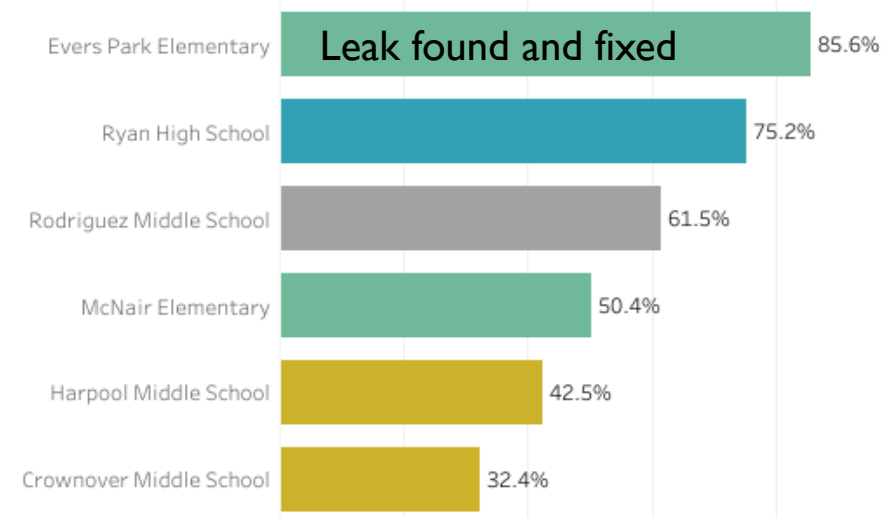
## Lowest Cost per SqFt



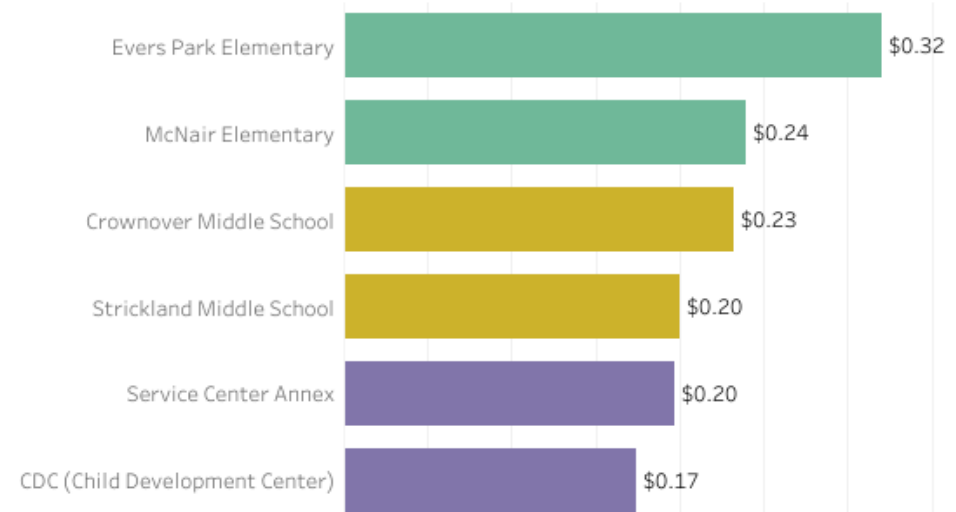
# Opportunities

- Auxiliary ■
- Elementary Schools ■
- Middle Schools ■
- High Schools ■

## Highest % Increase in Usage



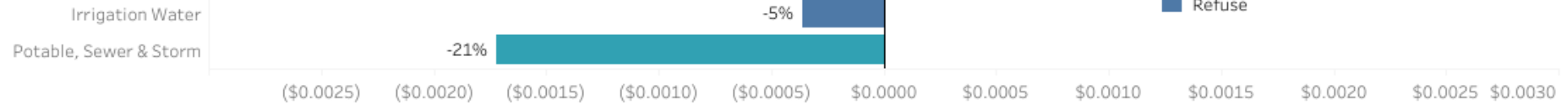
## Highest Cost per SqFt



# Water and Refuse Performance Change Compared To Last Year

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

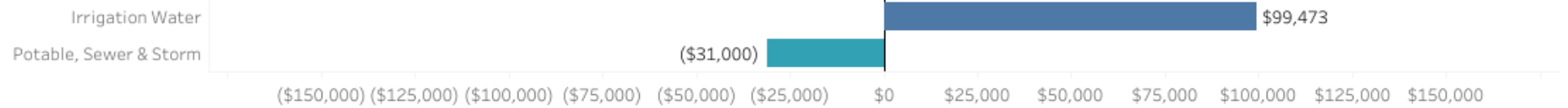
## Effective Rate



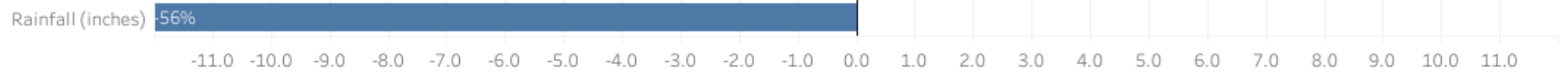
## Consumption



## Cost



## Rainfall

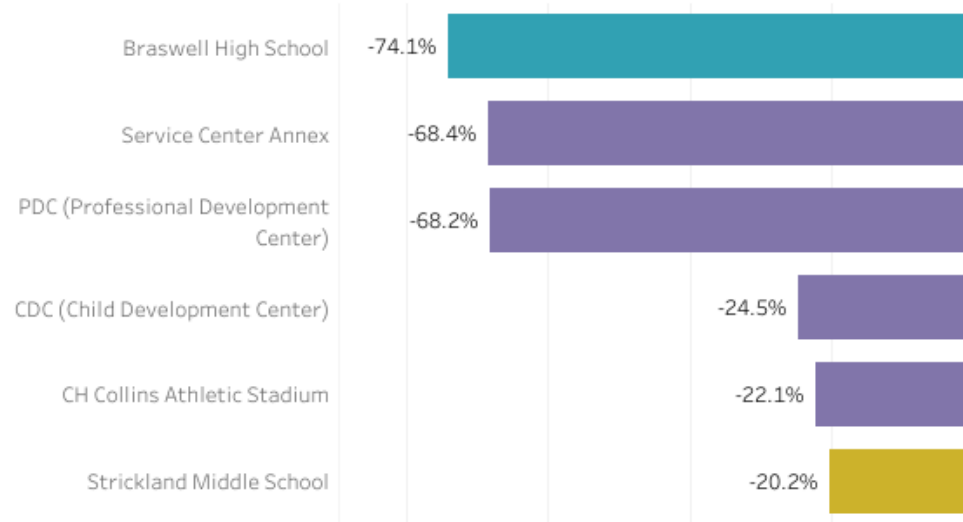


## Refuse

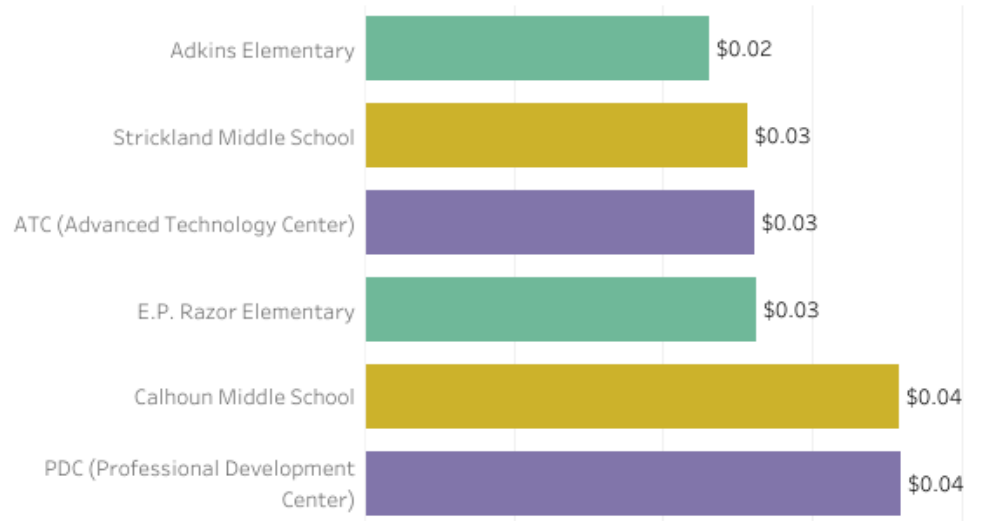


# Potable Water - Top Performers

## Largest % Decrease in Usage



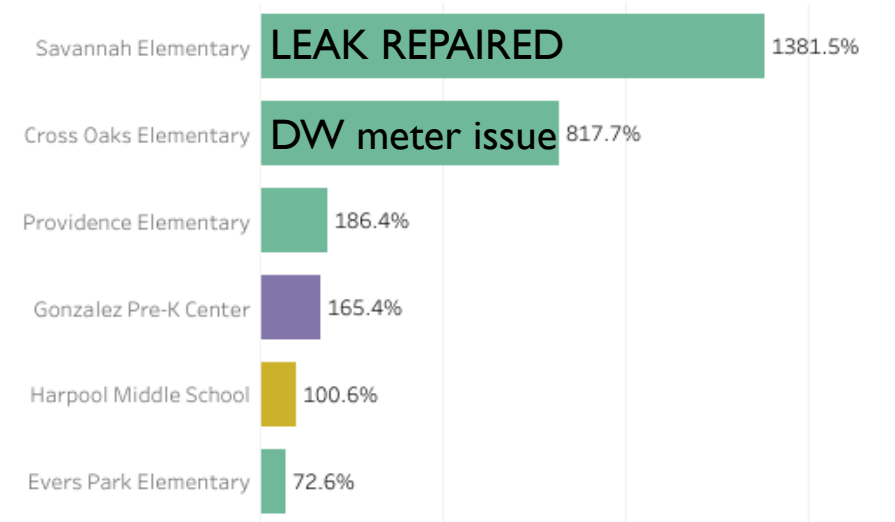
## Lowest Cost per SqFt



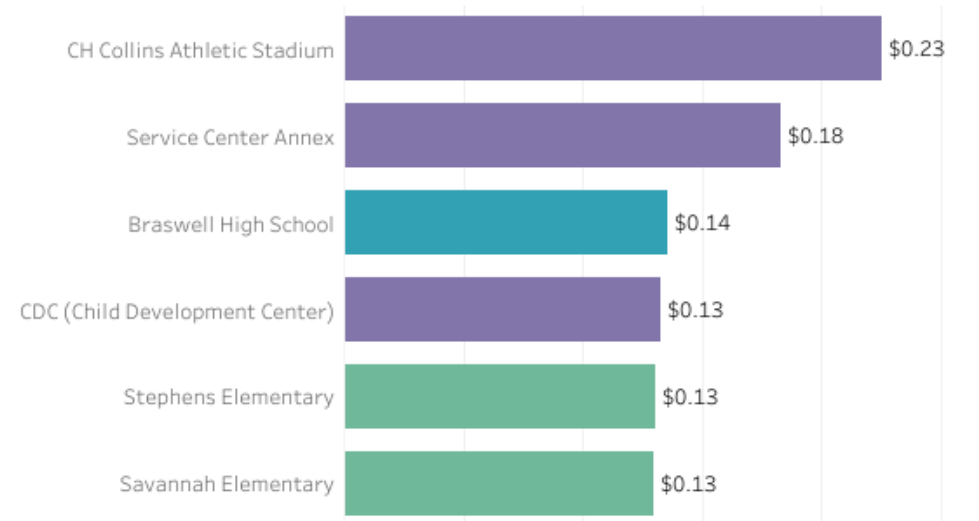
# Opportunities

- Auxiliary ■
- Elementary Schools ■
- Middle Schools ■
- High Schools ■

## Highest % Increase in Usage

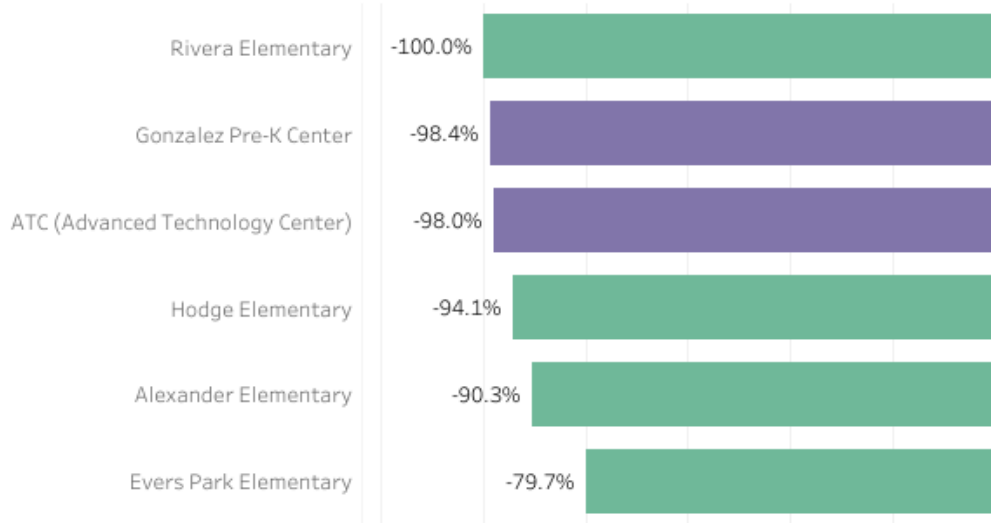


## Highest Cost per SqFt



# Irrigation Water - Top Performers

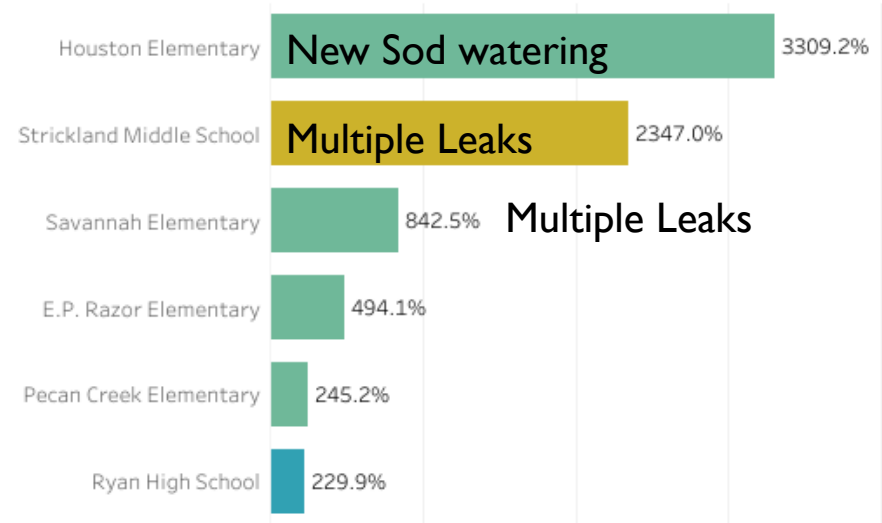
## Largest % Decrease in Usage



# Opportunities

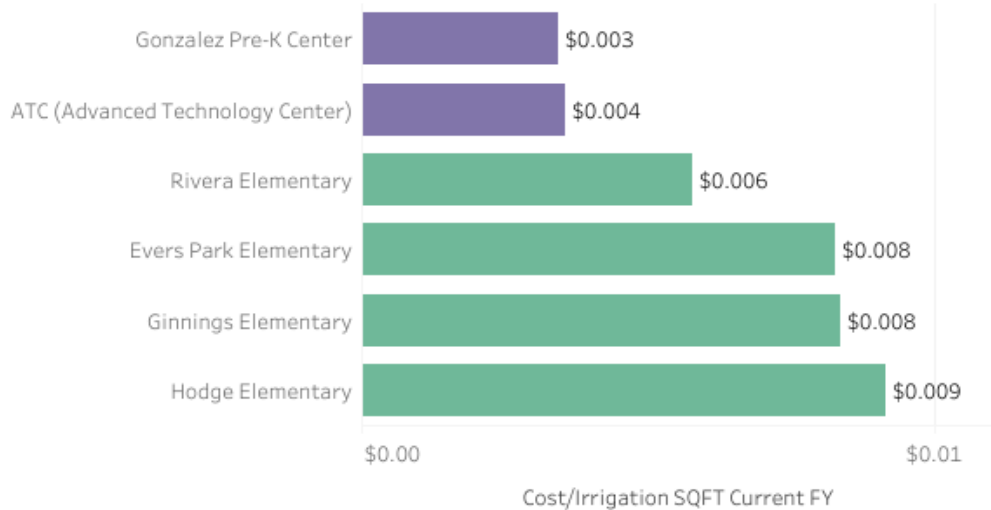
- Auxiliary
- Elementary Schools
- Middle Schools
- High Schools

## Highest % Increase in Usage

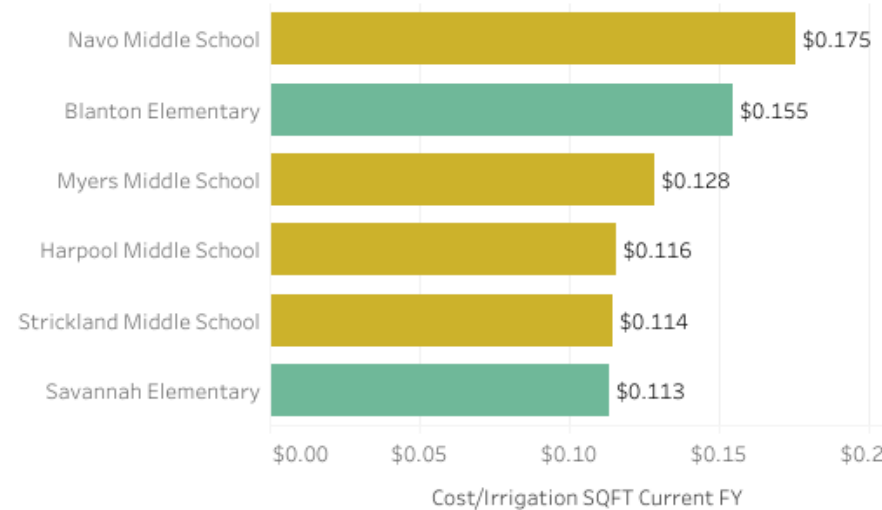


# New Smart meter detection system works well once online

## Lowest Cost per SqFt



## Highest Cost per SqFt





THINGS WE ARE  
DOING TO REDUCE  
COSTS

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Audit All Schedules to  
ensure proper runtimes

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Finishing Controls  
Upgrades for 2018 Bond

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Bi-weekly Reporting  
emails to catch leaks

RECENT  
ACCOMPLISHMENTS

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Solar meter dashboard  
completed

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Completion of mechanical  
equipment replacements  
from 2018 bond

LOOKING  
AHEAD

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Fault detection software updates  
from Ryan HS

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Onboarding (new) Denton High  
School and Sandbrock Elementary

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Rate Increases at Mustang, Coserv

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Energy Audit of Paloma Creek