

# Deferred Maintenance Boiler Replacement Plan

Facilities Committee Meeting August 21, 2024



**OAKLAND UNIFIED  
SCHOOL DISTRICT**

*Community Schools, Thriving Students*

## Ask of the Board

Review the overall plan for future consideration in budget allocations to address the deferred maintenance needs of the district and to provide feedback on strategies Facilities and B and G will be using to reduce costs and reuse boilers from facilities projects.

# OUSD is a Historical District in the State

| School Name                                          | Street_Address          | Year_Opened |
|------------------------------------------------------|-------------------------|-------------|
| Edna Brewer Middle School                            | 3748 13th Avenue        | 1913        |
| Oakland Technical High School                        | 4351 Broadway           | 1913        |
| United for Success/ LIFE Academy (Simmons)           | 2101 35th Avenue        | 1922        |
| Elmhurst Community Prep / Alliance (Elmhurst Campus) | 1800 98th Street        | 1923        |
| Roosevelt Middle School                              | 1926 19th Avenue        | 1923        |
| Crocker Highlands Elementary School                  | 525 Midcrest Road       | 1925        |
| East Oakland Pride (Webster ES)                      | 8000 Birch Street       | 1926        |
| Sequoia Elementary School                            | 3730 Lincoln Avenue     | 1926        |
| Laurel Elementary School                             | 3750 Brown Avenue       | 1927        |
| Street Academy                                       | 417 29th Street         | 1927        |
| Castlemont High School / LPS Oakland R&D             | 8601 MacArthur          | 1928        |
| Oakland High School                                  | 1023 MacArthur          | 1928        |
| Westlake Middle School                               | 2629 Harrison Street    | 1928        |
| Fremont High School                                  | 4610 Foothill Boulevard | 1931        |
| Anthony Chabot Elementary School                     | 6686 Chabot Road        | 1935        |
| Coliseum College Prep (Havenscourt)                  | 1390 66th Avenue        | 1935        |
| Melrose Leadership Acad.(Maxwell Park)               | 4730 Fleming Avenue     | 1936        |

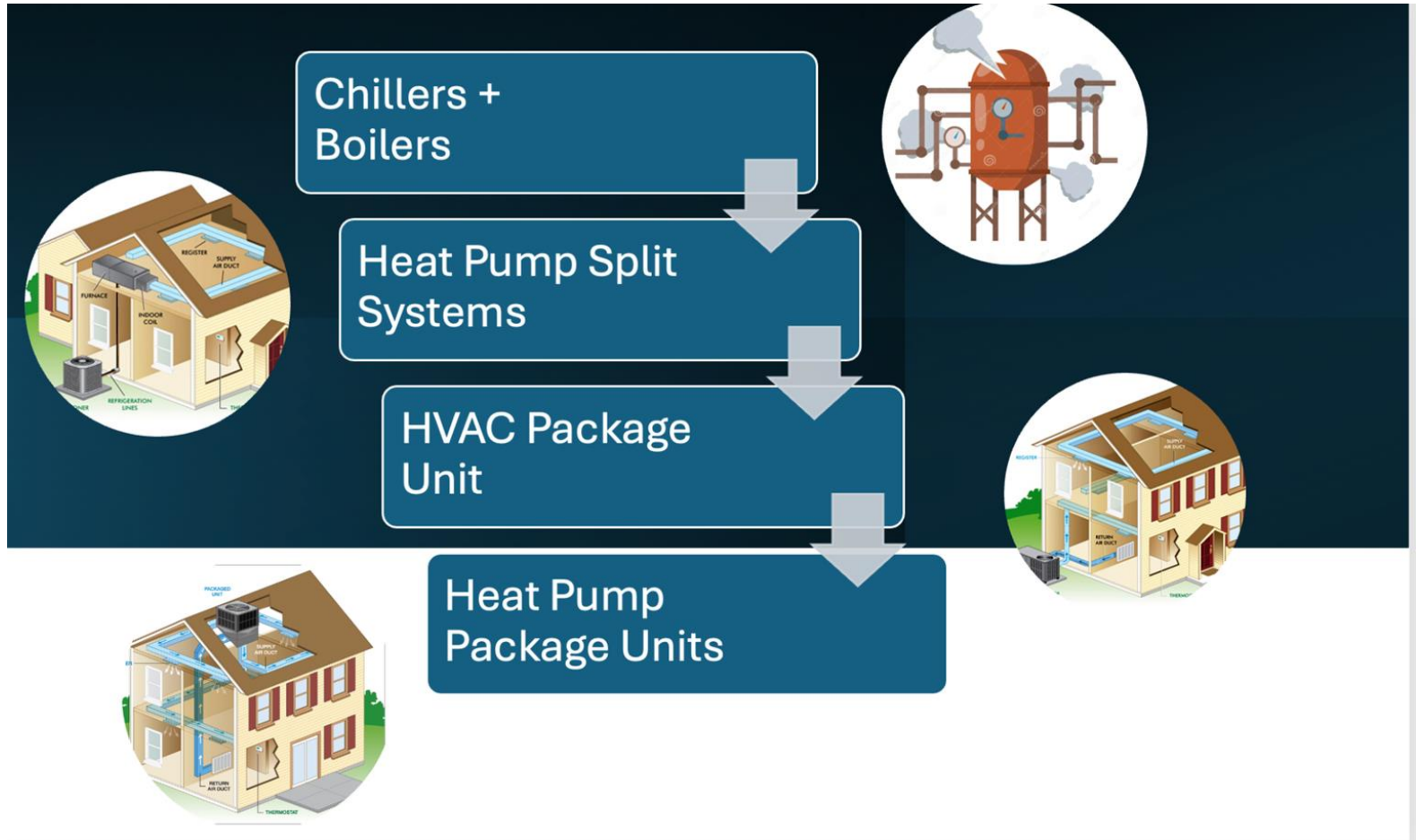
The **17** oldest schools in OUSD.

The Median school is Urban Promise Academy that was built in **1949**.

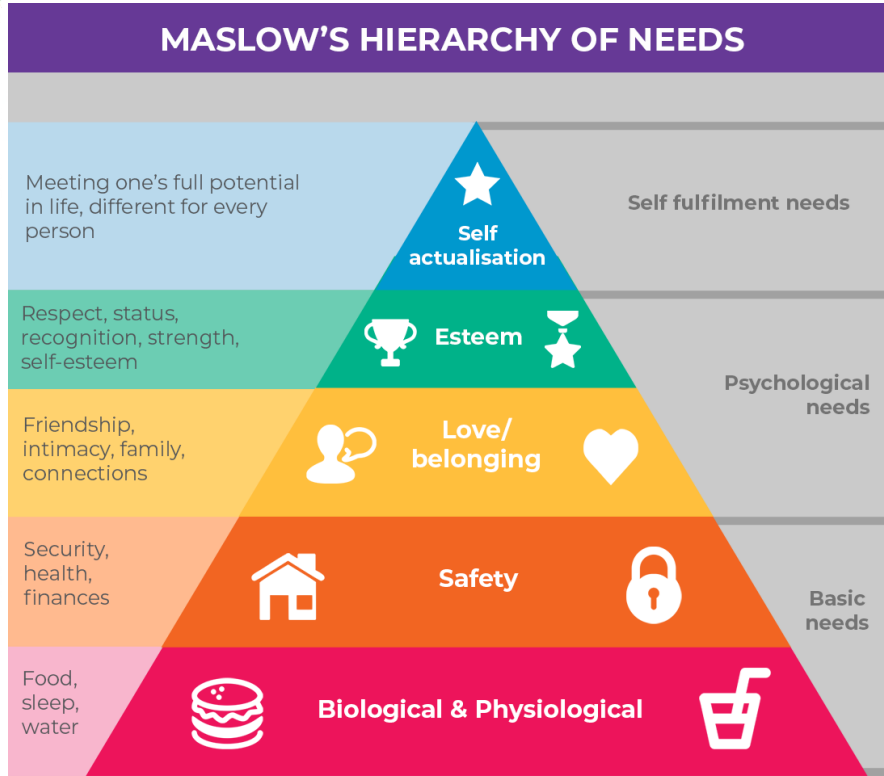
*Notes: The schools listed on this table may have had partial facilities work. The schools have been identified on the year they were built.*



# Types of Heating And Cooling at OUSD



# Deferred Maintenance Priorities



## Deferred Maintenance Projects

*Students learning, playing, growing, connecting, **THRIVING** at all campuses.*

**Joy:** Bleachers, Sports Fields, Gardens/Trees & Irrigation, Signage, Murals, Gyms

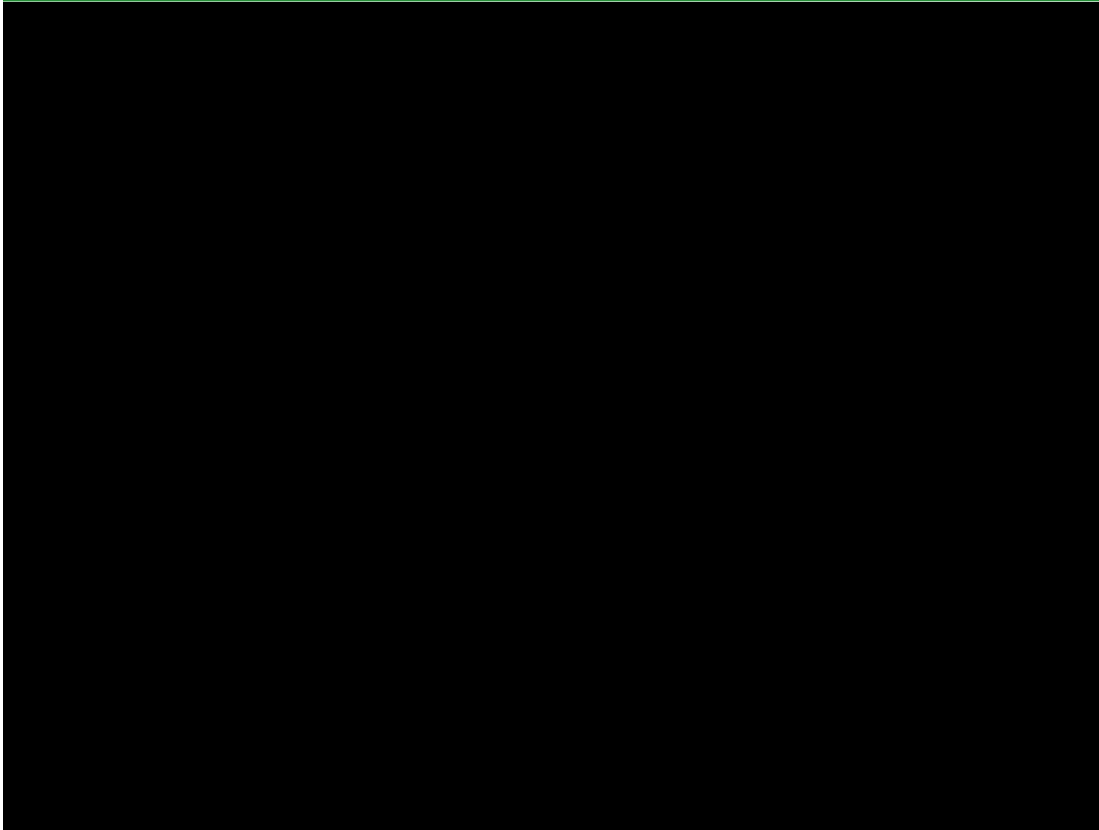
**Safety:** Fencing, Blinds, Locks, Windows, Video Cameras, Door Entry Systems, Phones, Intercoms

**Quality Indicators:** Exterior/Interior Paint, Landscaping, Play Structures

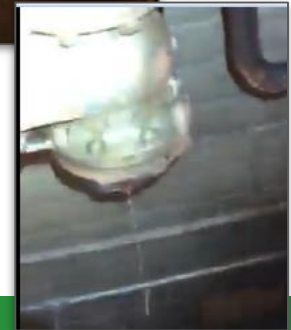
**Structures:** Flooring, Roofing, Asphalt, Accessibility

**Systems:** HVAC, Boilers and Heating Systems, Cafeteria/ Kitchens, Sewers, Electrical, Plumbing, Lighting

# Burbank Boiler Condition



Multiple areas of boiler leaking when providing heat to classrooms



# Providing Classroom Heat During Winter Months



67 of 110 heating systems are powered by gas fired boilers.

2 boilers per school are required to ensure heat is provided adequately. School size is a key factor with larger schools requiring more boilers.



The median age for a boiler is 24 years, while the oldest boiler is 111 years old.



Boiler Types at OUSD:

Steam Boilers  
Hydronic Boilers



Boiler Systems have complex infrastructure and piping systems that run throughout the school.



Replacing the boiler system with more efficient and modern systems can increase the cost of replacement by up to 10x.



# Heat Shop Team



These boiler assessments will be integrated into the updated **Facilities Master Plan** and validated by the engineers supporting the plan's development.

Our OUSD's Building and Grounds Heat Shop team is responsible for the ongoing assessment, repair, and maintenance of heating and cooling systems across all 110 OUSD sites, as well as at certain charter school locations.



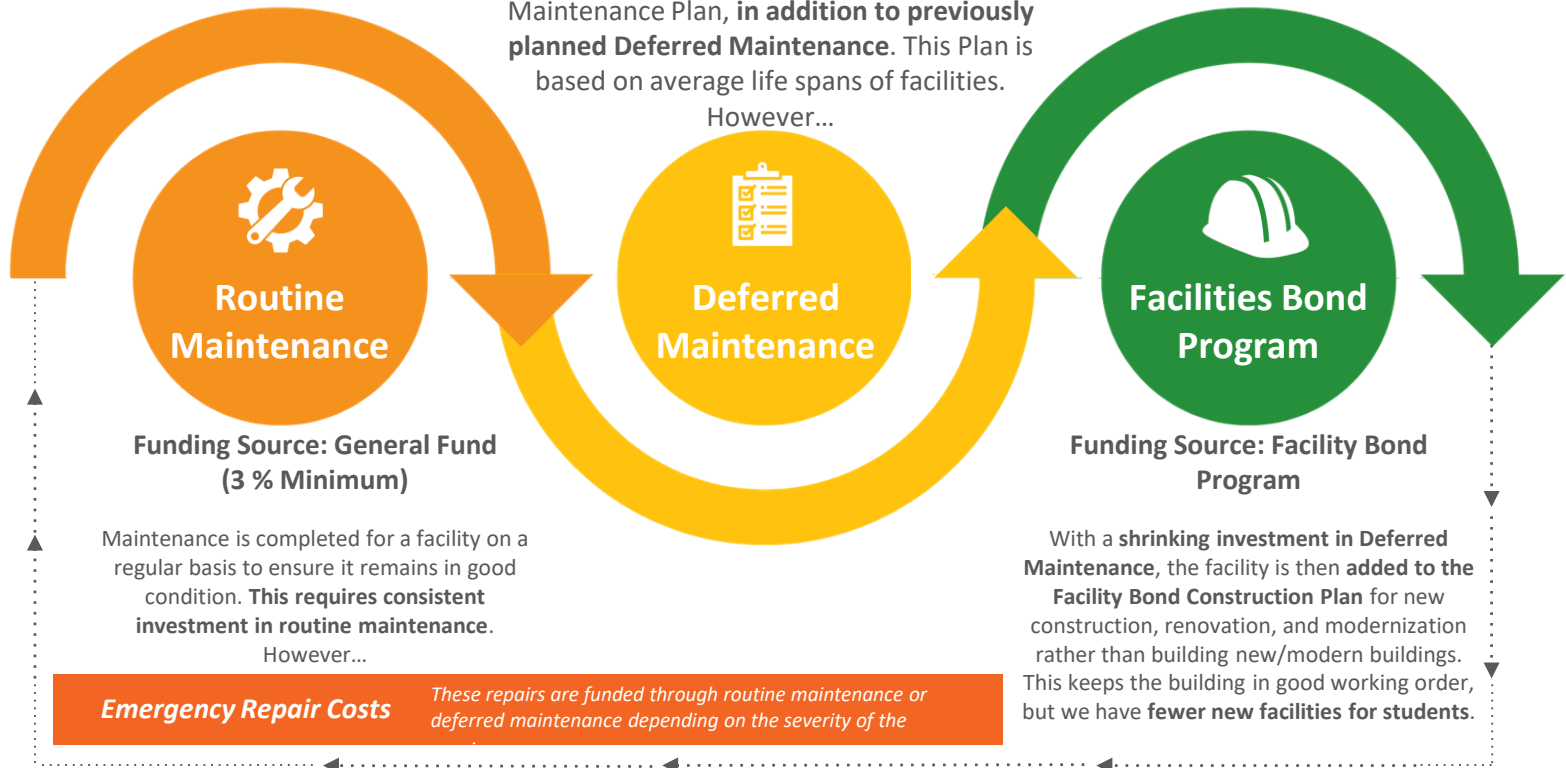
# Limited Routine Maintenance

## *Cascading Impact*

Funding Source: General Fund (\$3M)

If the facility does not stay in good condition, then it is added to the Five-Year Deferred Maintenance Plan, **in addition to previously planned Deferred Maintenance**. This Plan is based on average life spans of facilities.

However...



# District Wide Boiler Assessment and Database

| Site Number | School Name                   | Board District | Project Description | Year | Status            |
|-------------|-------------------------------|----------------|---------------------|------|-------------------|
| 210         | Edna M Brewer Middle School   | 4              | Boilers             | 1913 | Needs replacement |
|             | Lakeview                      | 3              | Boilers             | 1913 | Needs replacement |
| 103         | Brookfield Village Elementary | 7              | Boilers             | 1944 | Needs replacement |
| 211         | Montera Middle School         | 4              | Boilers             | 1959 | Needs replacement |
| 168         | Carl Munck Elementary         | 6              | Boilers             | 1960 | Needs replacement |
| 114         | Global Family School          | 5              | Boilers             | 1960 | Needs replacement |
| 812         | Kaiser ECE                    | 4              | Boilers             | 1960 | Needs replacement |
| 133         | Lincoln Elementary            | 2              | Boilers             | 1960 | Needs replacement |
|             | Prescott CDC                  | 3              | Boilers             | 1960 | Needs replacement |
| 352         | Ruddsdale Continuation School | 7              | Boilers             | 1960 | Needs replacement |
| 228         | United for Success Academy    | 5              | Boilers             | 1965 | Needs replacement |
| 204         | West Oakland Middle School    | 3              | Boilers             | 1975 | Needs replacement |
| 206         | Bret Harte Middle School      | 4              | Boilers             | 1980 | Needs replacement |
| 229         | Elmhurst United Middle School | 7              | Boilers             | 1980 | Needs replacement |
| 335         | Life Academy 6-12             | 5              | Boilers             | 1980 | Needs replacement |
| 305         | Oakland Technical High School | 1              | Boilers             | 1980 | Needs replacement |
| 308         | PEC Young Adult Program       | 1              | Boilers             | 1980 | Needs replacement |
| 154         | Madison Park Academy TK-5     | 7              | Boilers             | 1983 | Needs replacement |
| 309         | Ralph J Bunche High School    | 3              | Boilers             | 1983 | Needs replacement |
| 136         | Horace Mann Elementary        | 5              | Boilers             | 1985 | Needs replacement |
| 232         | Coliseum College Prep Academy | 6              | Boilers             | 1990 | Needs replacement |
| 122         | Grass Valley Elementary       | 7              | Boilers             | 1990 | Needs replacement |

## System Improvements:

1. Creating “building system” database that will be housed internally on OUSD servers.
2. Updated annually to reflect changing conditions or investments.
3. Drives decisions in deferred maintenance investments.

## Previous 7 Boiler Replacements

| Enactment Date | School Site         | Board Agreement | Replacement   | Total Cost  |
|----------------|---------------------|-----------------|---------------|-------------|
| 6/7/23         | Burbank Preschool   | 23-1110         | 2 Boilers     | \$346,000   |
| 5/24/23        | Piedmont Elementary | 23-1095         | 2 Boilers     | \$461,000   |
| 5/24/23        | Oakland High        | 23-1093         | 2 Boilers     | \$299,000   |
| 1/12/22        | McClymonds Gym      | 21-2993         | 1 Boiler      | \$148,296   |
| 4/28/21        | Elmhurst United     | 21-0831         | Boiler System | \$1,215,570 |
| 4/7/20         | MLA Maxwell         | 20-0570         | 2 Boilers     | \$265,000   |
| 4/7/20         | Sankofa Academy     | 20-0562         | 2 Boilers     | \$195,000   |

# Sites with Critical Needs and Estimated Cost

## High Priority: Hydronic Boilers (\$350K per Boiler)

### **High School: (\$1M-1.4M)**

- 1) Oakland Technical School (2 boilers)
- 2) Madison Upper (6-12) (2 boilers)

### **Middle School: (\$500K-\$700K)**

- 1) Lowell Campus (WOMS/Ralph Bunche)
- 2) Edna Brewer Middle School (1 boiler)

### **Elementary/Early Childhood: (\$2.25M-\$3.15M)**

- 1) Lincoln Elementary (1 boiler)
- 2) MLA Sherman (2 boilers)
- 3) Global Family (2 boilers)
- 4) Brookfield Elementary (2 boilers)
- 5) Kaiser ECE (2 boilers)

### **Administrative Spaces/YAP (\$500K-\$700k)**

- 1) Santa Fe Special Education Center (2 boilers)

## Steam Boilers (\$350K per Boiler)-\$1.25M-2.1M)

1. Markham Elementary (1 boiler)
2. Parker (2 boilers)
3. Lakeview (2 boilers)
  - Enrollment Office
  - AIMS Charter School
1. Fruitvale Elementary (1 boiler)

## Chillers and gas heat and AC units

- 1) Oakland High School (4 Units)
- 2) Skyline High School (Gas package units)

## Elementary:

- 1) Highland CDC
- 2) MLK Elementary
- 3) Emerson Elementary
- 4) Hoover Elementary



# Examples of Boilers Current Condition



Leaky and rusted boiler pipes at MLK



Fruitvale boiler from 1946. It is rusted and only one works



Parker elementary boiler from 1936, rusted. Scope of work 1-2 months



# Charter OUSD Sites

Total of 15 OUSD sites are being utilized by charter schools

- Ten sites are being serviced by OUSD, with three requiring a full service
- Five sites have a long term lease and are managed independently

| Charter Schools                         |                         |                         |                      |                           | Annual General Maintenance |               |
|-----------------------------------------|-------------------------|-------------------------|----------------------|---------------------------|----------------------------|---------------|
| School Name                             | Address                 | Historical Name         | Boiler Present       | Service Extent            | Hours Annually             | Cost Estimate |
| Unity Middle School                     | 1180 70th Ave           | Rudsdale Hx (portables) | No boiler            | Deferred Maintenance Only | 80 hours                   | \$ 10,000.00  |
| Urban Montessori                        | 4551 Steal St           | Tilden Campus           | No boiler            | Deferred Maintenance Only | 80 hours                   | \$ 10,000.00  |
| Francophone                             | 9736 Lawlor St          | Toller Heights campus   | NA                   | Deferred Maintenance Only | 80 hours                   | \$ 10,000.00  |
| East bay innovation                     | 3400 Marshall Ave       | Marshall campus         | 1980                 | Deferred Maintenance Only | 160 hours                  | \$ 15,000.00  |
| Community School for Creating Education | 2111 International blvd |                         | 1980                 | Deferred Maintenance Only | 80 hours                   | \$ 10,000.00  |
| Education for Change                    | 3709 East 12th St       | Ascend                  | No boiler            | Deferred Maintenance Only | 80 hours                   | \$ 10,000.00  |
| Lakeview Charter School                 | 746 Grand Ave           | AIMS                    | 1913                 | Deferred Maintenance Only | 160 hours                  | \$ 15,000.00  |
| Learning without Limits                 | 2035 40th Ave           | Jefferson               | No boiler            | Full Service              | 80 hours                   | \$ 10,000.00  |
| Cox Academy                             | 9860 Sunnyside Ave      | Cox                     | 2010                 | Full Service              | 160 hours                  | \$ 15,000.00  |
| Bay Area Technology School              | 8251 Fontaine St        | King Estates            | 1960 x 2 and 2000 x1 | Full Service              | 160 hours                  | \$ 15,000.00  |

| Long Term Leases (No Service)  |                    |                 |                |                      |
|--------------------------------|--------------------|-----------------|----------------|----------------------|
| School Name                    | Address            | Historical Name | Boiler Present | Service Extent       |
| Achieve Academy                | 1700 29th Ave      | Hawthorne       | No boiler      | No service from OUSD |
| Aspire Berkley Maynard Academy | 6200 San Pablo Ave | Goden Gate      | Steam Boiler   | No service from OUSD |
| KIPP Bridges Academy           | 1700 Market St     | Lafayette       | N/A            | No service from OUSD |
| Lazear Academy                 | 824 29th Ave       | Lazear          | No boiler      | No service from OUSD |
| Oakland Military Institute     | 3877 Lusk St       | Long Fellow     | N/A            | No service from OUSD |



## **Assessment Leads to Savings for District by Reusing Boilers from Schools with Major Facilities Projects**

# McClymonds Modernization Project

## Transition to Heat Pump

Approximately \$2,000,0000 or more



## Long Term Benefits:

Energy  
Efficiency

Cost Savings

Environmental  
Benefits

Improved  
Comfort

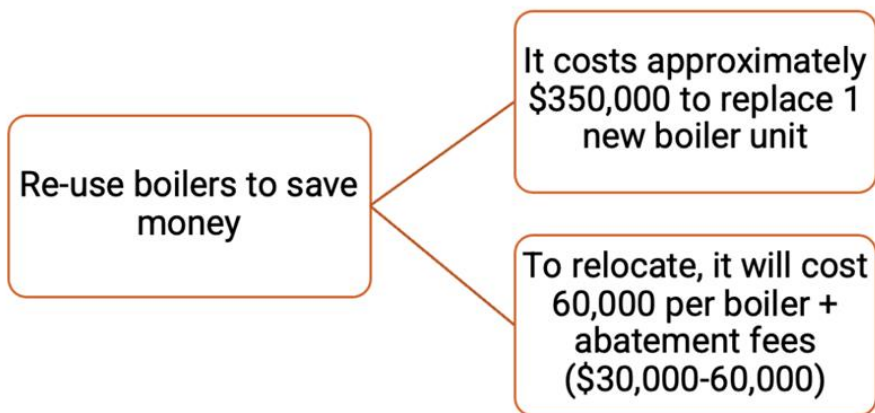
Versatility

Longevity and  
Reliability

Incentives and  
Rebates



# OUSD Cost-Effective Approach



## Advantages to relocating and re-using boilers:

- 1) **Cost Savings:** Relocating and reusing existing boilers can significantly reduce expenses for the district.
- 2) **Environmental Benefits:** Reusing boilers contributes to environmental sustainability by minimizing waste and resource consumption.
- 3) **Enhanced Service Efficiency:** This approach enables us to deliver faster and more efficient service to schools in need.

# Reuse McClymonds Boilers Plan



**Relocate once Heat  
Pump Operational**

Markham  
ES

McClymond  
HS  
Boiler  
Distribution

Burbank  
Preschool

Burbank  
Preschool

**Fall 2024**

**Relocate once Heat  
Pump Operational**

# MLA Maxwell Boilers Plan

- As part of the upcoming modernization project, this site will transition to a new Heat Pump system, enhancing both energy efficiency and climate control
  - Pending assessment and review, the two existing steam boilers will be relocated to Parker, where they will replace two aging boilers
- Benefits:
  - Upgrades to our facilities
  - Maximizes the utility of our existing resources

# THANK YOU

## Any Questions?

Additionally, for more information, please reach out:

### **Preston Thomas**

Chief Systems & Services Officer  
[preston.thomas@ousd.org](mailto:preston.thomas@ousd.org)

### **Marc White**

Director of Buildings & Grounds  
[marc.white@ousd.org](mailto:marc.white@ousd.org)





# Community Schools, Thriving Students



**OAKLAND UNIFIED  
SCHOOL DISTRICT**  
*Community Schools, Thriving Students*

[www.ousd.org](http://www.ousd.org)



[@OUSDnews](#)

1000 Broadway, Suite 300, Oakland, CA 94607