

**THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA**

**ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT**

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May 8, 2017

Signature on File

TO: Janet Phelps, Principal  
**Pasadena Lakes Elementary**

FROM: Alison Witoshynsky, Project Manager  
Environmental Health & Safety Department

SUBJECT: Indoor Air Quality (IAQ) Assessment

**For Custodial Supervisor Use Only**

Custodial Issues Addressed

Custodial Issues Not Addressed

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On May 5, 2017, I conducted an assessment at **Pasadena Lakes Elementary School**. Attached are findings and recommendations for further assessment, remediation, or corrective actions needed.

The IAQ assessment did identify one or more existing conditions impacting IAQ and has generated appropriate work orders to correct deficiencies in systems and maintenance that could contribute to decreased indoor air quality. At the time of the assessment, these concerns were not an immediate health or safety concern to building occupants. However, due to individual sensitivities and predisposing health factors, it is possible that some building occupants may elicit a health response to agents and / or conditions identified during the evaluation. Therefore, to further improve IAQ, prevent development of future IAQ-related problems, and to reduce the potential for IAQ-related complaints by building occupants, the IAQ Assessment Team recommends appropriate follow up of each item identified and listed in the attached evaluation.

*Please ensure that your Head Facilities Serviceperson receives a copy of this correspondence so that the recommendations requiring their attention can be addressed. In an attempt to separate IAQ issues from general maintenance items, the attached assessment may contain direction for site based staff to generate a work order through COMPASS. Within two weeks a representative from the Custodial/Grounds Department will conduct a follow-up visit to ensure that all site based custodial issues have been appropriately addressed.*

Should any questions arise, or if the current concerns continue after the attached recommendations have been addressed, please feel free to contact us at 754-321-4200.

AW:smn

Enc.

cc: Shelley Meloni, Director, Pre-Construction  
Mark Dorsett, Manager, Zone 1, Physical Plant Operations Division  
Broward Teachers Union  
Federation of Public Employees  
Gerald Devio, Supervisor II Custodial  
Benjamin Osborne, Supervisor II Custodial  
Mark Murray, Supervisor II Custodial  
Sam Bays, Director, Maintenance Operations  
Kurt Wirz, Area Manager Trades



# IAQ Assessment

Pasadena Lakes Elementary

Evaluation Date May 5, 2017

Time of Day 1000

Outdoor Conditions    Temperature 79.3    Relative Humidity 93.4    Ambient CO2 475

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">131</span>	<span style="border: 1px solid black; padding: 2px;">71.4</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">67.8</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">948</span>	<b>MAX 700 &gt; Ambient</b>	<span style="border: 1px solid black; padding: 2px;">~25</span>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
<span style="border: 1px solid black; padding: 2px;">2' X 4' Lay in</span>		<span style="border: 1px solid black; padding: 2px;">Drywall</span>		<span style="border: 1px solid black; padding: 2px;">12" x 12" Vinyl</span>			
<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>	

Ceiling Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	HVAC Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	HVAC Return Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>
Walls Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Supply Duct Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Return Duct Clean	<span style="border: 1px solid black; padding: 2px;">No</span>
Flooring Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Ceiling at Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>		
Room Surfaces Clean	<span style="border: 1px solid black; padding: 2px;">No</span>				

Trash Removed	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Exhaust Fans Working	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Unapproved Chemicals / Cleaners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>
Signs of Pests	<span style="border: 1px solid black; padding: 2px;">No</span>	Drain Traps Wet	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Air Fresheners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>
Room Cluttered	<span style="border: 1px solid black; padding: 2px;">No</span>	Food if Stored in Room is in Sealed Containers	<span style="border: 1px solid black; padding: 2px;">N/A</span>		

Mechanical Equipment Location	<span style="border: 1px solid black; padding: 2px;">Roof top not readily accessible</span>	Mechanical Room Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>
Filters Installed Properly	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Filters Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>
Condensate Pan Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Cooling Coil Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>
		Inside of HVAC Unit Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>

Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Roof top</span> ▼	Fresh Air Intake Free of Obstruction	<span style="border: 1px solid black; padding: 2px;">N/A</span>
Pollutant Sources Near Air Intake	<span style="border: 1px solid black; padding: 2px;">Not readily accessible</span> ▼		

**Observations**

**IAQ RESPONSE PROTOCOL NOT COMPLETED PRIOR TO ARRIVAL.**

Room is being used by two teachers, including occupant of FISH 134.

**Corrective Actions to be Completed by Site Based Staff**

Clean dust from ceiling tiles or replace	▼
Clean HVAC Return/Supply Grill with Wexside	▼
Remove return grill and vacuum	▼
Thoroughly clean horizontal & elevated surfaces	▼
	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Install new ceiling tile upon repair, cuts needed	▼
Set Temperature to 72 - 78 degrees	▼
Repair HVAC to Reduce Humidity Levels	▼
	▼
	▼
	▼
	▼

# IAQ Assessment

Pasadena Lakes Elementary

Evaluation Date May 5, 2017

Time of Day 1000

Outdoor Conditions Temperature 79.3

Relative Humidity 93.4

Ambient CO2 475

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">134</span>	<span style="border: 1px solid black; padding: 2px;">67.6</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">81.3</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">762</span>	<span style="border: 1px solid black; padding: 2px;">MAX 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">0</span>
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">~ 10 SF of Drywall, 20 tiles</span>	
Ceiling	<span style="border: 1px solid black; padding: 2px;">2' X 4' Lay in/Drywall</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;">Yes</span>	<span style="border: 1px solid black; padding: 2px;"></span>		
Walls	<span style="border: 1px solid black; padding: 2px;">Drywall</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>		
Floor	<span style="border: 1px solid black; padding: 2px;">12" x 12" Vinyl</span>		<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;">No</span>	<span style="border: 1px solid black; padding: 2px;"></span>		
Ceiling Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	HVAC Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	HVAC Return Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>		
Walls Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Supply Duct Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Return Duct Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>		
Flooring Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	Ceiling at Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>				
Room Surfaces Clean	<span style="border: 1px solid black; padding: 2px;">No</span>						
Trash Removed	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Exhaust Fans Working	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Unapproved Chemicals / Cleaners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>		
Signs of Pests	<span style="border: 1px solid black; padding: 2px;">No</span>	Drain Traps Wet	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Air Fresheners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>		
Room Cluttered	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Food if Stored in Room is in Sealed Containers	<span style="border: 1px solid black; padding: 2px;">N/A</span>				
Mechanical Equipment Location	<span style="border: 1px solid black; padding: 2px;">Roof top not readily accessible</span>				Mechanical Room Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	
Filters Installed Properly	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Filters Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Inside of HVAC Unit Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>		
Condensate Pan Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Cooling Coil Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>				
Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Roof top</span> ▼				Fresh Air Intake Free of Obstruction	<span style="border: 1px solid black; padding: 2px;">N/A</span>	
Pollutant Sources Near Air Intake	<span style="border: 1px solid black; padding: 2px;">Not readily accessible</span> ▼						

**Observations**

**IAQ RESPONSE PROTOCOL NOT COMPLETED PRIOR TO ARRIVAL.** Active Roof Leak within FISH 134 (back portion of wall) and in adjacent hallway FISH 008. Multiple ceiling tiles wet, stained, missing. Water damage and visible mold on drywall ceiling above missing ceiling tiles. Puddles of water on the floor and storage cabinet counters. All supply registers dusty, all ceiling tiles surrounding supply register dusty. Return register dusty. Single ceiling tile at front of classroom. Carpet in center of room needs vacuuming and deep cleaning during summer. FISH 136A has stained ceiling tile and a missing ceiling tile at back of room needing replacement.

**Corrective Actions to be Completed by Site Based Staff**

Thoroughly clean ALL surfaces	▼
Encourage occupant to reduce clutter	▼
Clean HVAC Return & Supply Grills with Wexcide	▼
Remove and replace A/C Filters	▼
Tape and date HVAC filters	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Set Temperature to 72 - 78 degrees	▼
Repair HVAC to Reduce Humidity Levels	▼
Evaluate and repair cause of water damaged	▼
(drywall and ceiling tiles)	▼
Install new ceiling tiles upon repair, cuts needed	▼
	▼
	▼
	▼

# IAQ Assessment

Pasadena Lakes Elementary

Evaluation Date May 5, 2017

Time of Day 1000

Outdoor Conditions Temperature 79.3

Relative Humidity 93.4

Ambient CO2 475

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
156	67.6	72 - 78	81.3	30% - 60%	762	MAX 700 > Ambient	0
Noticeable Odor		Visible water damage / staining?		Visible microbial growth?		Amount of material affected	
Ceiling		Walls		Floor			
2' X 4' Lay in/Drywall		Drywall		12" x 12" Vinyl		6 tiles	
Ceiling Clean		Walls Clean		Flooring Clean		Room Surfaces Clean	
No		Yes		No		No	
HVAC Supply Grills Clean		Inside of Supply Duct Clean		Ceiling at Supply Grills Clean		HVAC Return Grills Clean	
No		Yes		No		No	
Trash Removed		Signs of Pests		Room Cluttered		Exhaust Fans Working	
Yes		No		Yes		Yes	
Unapproved Chemicals / Cleaners in Room		Air Fresheners in Room		Food if Stored in Room is in Sealed Containers			
No		No		N/A			
Mechanical Equipment Location		Filters Installed Properly				Condensate Pan Clean	
Roof top not readily accessible		N/A		N/A		N/A	
Filters Clean		Cooling Coil Clean		Mechanical Room Clean		Inside of HVAC Unit Clean	
N/A		N/A		N/A		N/A	
Fresh Air Intake Location		Pollutant Sources Near Air Intake				Fresh Air Intake Free of Obstruction	
Roof top		Not readily accessible				N/A	

**Observations**

**IAQ RESPONSE PROTOCOL NOT COMPLETED PRIOR TO ARRIVAL.**

**Kitchen. Multiple stained ceiling tiles throughout front area of serving line.**

**Corrective Actions to be Completed by Site Based Staff**

Remove and replace A/C Filters	▼
Tape and date HVAC filters	▼
	▼
	▼
	▼
	▼
	▼
	▼

**Corrective Actions to be Completed by PPO**

Set Temperature to 72 - 78 degrees	▼
Repair HVAC to Reduce Humidity Levels	▼
Evaluate and repair cause of water damaged ceiling material	▼
Install new ceiling tile upon repair, cuts needed	▼
	▼
	▼
	▼

# IAQ Assessment

Pasadena Lakes Elementary

Evaluation Date May 5, 2017

Time of Day 1045

Outdoor Conditions    Temperature 793

Relative Humidity 93.4

Ambient CO2 475

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">205</span>	<span style="border: 1px solid black; padding: 2px;">71.5</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">67.9</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">821</span>	<span style="border: 1px solid black; padding: 2px;">MAX 700 &gt; Ambient</span>	<span style="border: 1px solid black; padding: 2px;">8</span>
Noticeable Odor		<span style="border: 1px solid black; padding: 2px;">No</span>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<span style="border: 1px solid black; padding: 2px;">2' X 4' Lay in</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>
Walls	<span style="border: 1px solid black; padding: 2px;">Drywall/Tackboard</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>
Floor	<span style="border: 1px solid black; padding: 2px;">12" x 12" Vinyl</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;"></span>

Ceiling Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	HVAC Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	HVAC Return Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>
Walls Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Inside of Supply Duct Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	Inside of Return Duct Clean	<span style="border: 1px solid black; padding: 2px;">N/A</span>
Flooring Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	Ceiling at Supply Grills Clean	<span style="border: 1px solid black; padding: 2px;">No</span>		
Room Surfaces Clean	<span style="border: 1px solid black; padding: 2px;">No</span>				

Trash Removed	<span style="border: 1px solid black; padding: 2px;">No</span>	Exhaust Fans Working	<span style="border: 1px solid black; padding: 2px;">N/A</span>	Unapproved Chemicals / Cleaners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>
Signs of Pests	<span style="border: 1px solid black; padding: 2px;">No</span>	Drain Traps Wet	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Air Fresheners in Room	<span style="border: 1px solid black; padding: 2px;">No</span>
Room Cluttered	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Food if Stored in Room is in Sealed Containers	<span style="border: 1px solid black; padding: 2px;">N/A</span>		

Mechanical Equipment Location	<span style="border: 1px solid black; padding: 2px;">FISH 211</span>	Mechanical Room Clean	<span style="border: 1px solid black; padding: 2px;">No</span>
Filters Installed Properly	<span style="border: 1px solid black; padding: 2px;">Yes</span>	Filters Clean	<span style="border: 1px solid black; padding: 2px;">No</span>
Condensate Pan Clean	<span style="border: 1px solid black; padding: 2px;">No</span>	Cooling Coil Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>
		Inside of HVAC Unit Clean	<span style="border: 1px solid black; padding: 2px;">Yes</span>

Fresh Air Intake Location	<span style="border: 1px solid black; padding: 2px;">Thru exterior wall</span>	Fresh Air Intake Free of Obstruction	<span style="border: 1px solid black; padding: 2px;">Yes</span>
Pollutant Sources Near Air Intake	<span style="border: 1px solid black; padding: 2px;">No</span>		

**Observations**

**IAQ RESPONSE PROTOCOL NOT COMPLETED PRIOR TO ARRIVAL.**

Teacher reports sickness over many months. Ceiling tiles throughout room are bowed and dusty at the Supply grill. The floor is dirty and teacher reports that it has not been moped/cleaned regularly, only sweeping. Interior of cabinets are dusty. Room is cluttered especially the back storage room which includes cardboard boxes. Trash was full, but likely from days activities. There was some staining on the wall next to the trash can.

**Corrective Actions to be Completed by Site Based Staff**

Clean dust from ceiling tiles or replace	▼
Remove return grills and vacuum	▼
Clean HVAC Return/Supply Grill with Wexcide	▼
Encourage occupant to reduce clutter	▼
Remove cardboard boxes, store items in plastic	▼
Sweep floor in the mechanical room	▼
Thoroughly clean ALL surfaces	▼
Thoroughly clean and sanitize flooring	▼

**Corrective Actions to be Completed by PPO**

Set Temperature to 72 - 78 degrees	▼
Repair HVAC to Reduce Humidity Levels	▼
Install new ceiling tile upon repair, cuts needed	▼
Vacuum/Clean HVAC supply grills and drops	▼
	▼
	▼
	▼
	▼

