

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

**ENVIRONMENTAL HEALTH & SAFETY DEPARTMENT**

**TELEPHONE (754) 321-4200**

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May 25, 2017

Signature on File

TO: Michelle Kefford, Principal  
**Flanagan High**

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

SUBJECT: Indoor Air Quality (IAQ) Assessment

<u>For Custodial Supervisor Use Only</u>	
<input type="checkbox"/>	Custodial Issues Addressed
<input type="checkbox"/>	Custodial Issues Not Addressed
<hr/>	
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On May 24, 2017, I conducted an assessment at **Flanagan High 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

Flanagan, Charles W. High

Evaluation Date May 24, 2017

Time of Day 1:10

Outdoor Conditions    Temperature 93.4

Relative Humidity 56.7

Ambient CO2 468

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">532A</span>	<span style="border: 1px solid black; padding: 2px;">72.9</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">52.4</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">666</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		<span style="border: 1px solid black; padding: 2px;">Yes</span>	Visible water damage / staining?		Visible microbial growth?		Amount of material affected
Ceiling	<span style="border: 1px solid black; padding: 2px;">Concrete</span>		<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;">growth at upper corner (~1SF)</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;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">growth at upper corner (~1SF)</span>
Floor	<span style="border: 1px solid black; padding: 2px;">Quarry Tile</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">~30 SF stained</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;">N/a</span>	HVAC Return Grills Clean	
Walls Clean		<span style="border: 1px solid black; padding: 2px;">No</span>	Inside of Supply Duct Clean		<span style="border: 1px solid black; padding: 2px;">N/A</span>	Inside of Return Duct Clean	
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;">N/a</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	
Signs of Pests		<span style="border: 1px solid black; padding: 2px;">No</span>	Drain Traps Wet		<span style="border: 1px solid black; padding: 2px;">N/A</span>	Air Fresheners in Room	
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 529 (2 units)</span>			Mechanical Room Clean	
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>	Inside of HVAC Unit Clean	
Condensate Pan Clean		<span style="border: 1px solid black; padding: 2px;">Yes</span>	Cooling Coil Clean		<span style="border: 1px solid black; padding: 2px;">No</span>		
Fresh Air Intake Location			<span style="border: 1px solid black; padding: 2px;">Roof top</span> ▼			Fresh Air Intake Free of Obstruction	
Pollutant Sources Near Air Intake			<span style="border: 1px solid black; padding: 2px;">Not readily accessible</span> ▼			<span style="border: 1px solid black; padding: 2px;">N/A</span>	

**Observations**

**Organic Chemical Storage Room.**  
 Acid odor near storage cabinet. Room may not be vented/exhausting properly. Exhaust fan grills rusted/dirty. Spotty growth on entry door frame, dust layer between frame and door. Dust on upper wall area near ceiling. Layer of dusty/debris over everything. Cardboard boxes in room. Not all items stored on shelves. Trash and unused chemicals present, not properly stored.

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

Science dept. personnel should inventory items	▼
and chemicals.	▼
Document items requested for removal/disposal	▼
Room too cluttered to clean properly	▼
Remove cardboard boxes	▼
Thoroughly clean ALL surfaces	▼
Remove, replace, & date A/C Filters	▼
	▼

**Corrective Actions to be Completed by PPO**

Evaluate and repair exhaust fans	▼
Clean exhaust grills	▼
Evaluate/Repair HVAC dampers & exhaust	▼
interlocks	▼
Evaluate HVAC coil for cleaning	▼
	▼
	▼
	▼

# IAQ Assessment

Flanagan, Charles W. High

Evaluation Date May 24, 2017

Time of Day 1:10

Outdoor Conditions    Temperature 93.4

Relative Humidity 56.7

Ambient CO2 468

Fish	Temperature	Range	Relative Humidity	Range	CO <sup>2</sup>	Range	# Occupants
<span style="border: 1px solid black; padding: 2px;">532B</span>	<span style="border: 1px solid black; padding: 2px;">76.5</span>	<span style="border: 1px solid black; padding: 2px;">72 - 78</span>	<span style="border: 1px solid black; padding: 2px;">46.8</span>	<span style="border: 1px solid black; padding: 2px;">30% - 60%</span>	<span style="border: 1px solid black; padding: 2px;">672</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		<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;">Concrete</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</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;">Quarry Tile</span>		<span style="border: 1px solid black; padding: 2px;">Yes</span>		<span style="border: 1px solid black; padding: 2px;">No</span>		<span style="border: 1px solid black; padding: 2px;">~30 SF stained</span>
Ceiling Clean		<span style="border: 1px solid black; padding: 2px;">Yes</span>	HVAC Supply Grills Clean		<span style="border: 1px solid black; padding: 2px;">N/a</span>	HVAC Return Grills Clean	
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;">N/A</span>	Inside of Return Duct Clean	
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;">N/a</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	
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Mechanical Equipment Location			<span style="border: 1px solid black; padding: 2px;">FISH 529 (2 units)</span>			Mechanical Room Clean	
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Condensate Pan Clean		<span style="border: 1px solid black; padding: 2px;">Yes</span>	Cooling Coil Clean		<span style="border: 1px solid black; padding: 2px;">No</span>		
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Pollutant Sources Near Air Intake			<span style="border: 1px solid black; padding: 2px;">Not readily accessible</span> ▼			<span style="border: 1px solid black; padding: 2px;">N/A</span>	

**Observations**

**Non-Organic Chemical Storage Room. Room may not be venting properly. Exhaust fan grills rusted/dirty. Spotty growth on entry door frame, dust layer between frame and door. Dust on upper wall area near ceiling. Layer of dusty/debris over everything. Cardboard boxes in room. Not all items stored on shelves. Trash and unused chemicals present, not properly stored.**

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

Science dept. personnel should inventory items	▼
and chemicals.	▼
Document items requested for removal/disposal	▼
Remove cardboard boxes	▼
Room too cluttered to clean properly	▼
Thoroughly clean and sanitize flooring	▼
Thoroughly clean elevated & horizontal surfaces	▼
Remove, replace, & date A/C Filters	▼

**Corrective Actions to be Completed by PPO**

Evaluate and repair exhaust fans	▼
Clean exhaust grills	▼
Evaluate/Repair HVAC dampers & exhaust	▼
interlocks	▼
Evaluate HVAC coil for cleaning	▼
	▼
	▼
	▼