

# RISK MANAGEMENT...


managing risk with responsibility

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**TO:** Nancy Seiler, Principal  
Tamarac Elementary School

**FROM:** Aston A. Henry, Jr., Supervisor  
Risk Management Department 

**SUBJECT:** Indoor Environmental Quality Assessment  
Tamarac Elementary School  
FISH 201, 206, 207, 208, 210 & Building # 2

On October 25, 2002, the Indoor Environmental Quality (IEQ) Assessment Team conducted an assessment of **FISH 201, 206, 207, 208, 210 and Building #2** at Tamarac Elementary School. The evaluation consisted of a walkthrough of the identified areas to assess the current conditions of these locations with regard to indoor environmental quality. This assessment included observation of the carpet, floor tiles, ceiling tiles, false ceiling plenum, accessible ventilation supply and interior walls for signs of water intrusion.

Outlined below are the findings of this assessment along with recommendations for further assessment and/or remediation:

1. The indoor environmental quality assessment of **FISH 201** revealed signs of visible microbial growth. The Head Facilities Serviceperson reported complaints of possible mold and mildew. The assessment team did identify visible signs of microbial growth on the tackable wall surface. Visible signs of water intrusion were identified on the date of the assessment. The roof should be inspected for leaks and repaired as appropriate. The tackable wall surface on the east wall and within the closet of this classroom revealed signs of water damage as well as microbial growth. The cabinets within this classroom revealed minor signs of microbial growth and should be cleaned with wexcide. The remaining tackable wall surfaces should be cleaned with wexcide. Several stained ceiling tiles were identified on the date of the assessment. The carpet revealed signs of staining and soiling. The air supply vents and the return air register grill revealed signs of dust and debris buildup.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on October 25, 2002.

	Temperature	Humidity	CO2
FISH 201	70.3f	65%	702

*The humidity level measured on the date of the assessment exceeds the ASHRAE (American Society of Heating and Refrigeration and Air-Conditioning Engineers) recommended criteria range of 60%.*

## RECOMMENDED COURSE OF ACTION

The Maintenance Department will initiate a work order to address the following items:

- Evaluate and repair as appropriate, the air-handling unit servicing this classroom in order to lower the humidity level.
- Evaluate and clean if necessary, the coils servicing this location.
- Inspect the roof for leaks and repair as appropriate.
- Remove damaged tackable wall surfaces on the east wall and within the closet of this classroom and repair as appropriate.
- Remove stained and damaged carpet and install a new tile floor.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items no later than February 8, 2003.

Site-Based Staff will complete the following items immediately:

- Site-based maintenance staff will clean the air-conditioning vents and return air register grills with a wexcide disinfectant solution in order to remove dust and debris buildup.
  - Site-based maintenance staff will remove all stained ceiling tiles and install new ceiling tiles.
  - Site-based maintenance staff will clean all cabinets with a wexcide disinfectant solution in order to remove microbial growth.
  - Site-based maintenance staff will clean all remaining tackable wall surfaces with a wexcide disinfectant solution.
  - Site-based maintenance staff will raise the temperature on the thermostat to 73.0F.
  - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.
2. The indoor environmental quality assessment of FISH 206 revealed signs of visible microbial growth. The Head Facilities Serviceperson reported complaints of possible mold and mildew. The assessment team did identify visible signs of microbial growth on the tackable wall surface on the west wall. Visible signs of water intrusion were identified on a number of ceiling tiles. The tile floor appeared clean on the date of the assessment. The air supply grill and the return air register grill revealed signs of dust and debris buildup.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on October 25, 2002.

	Temperature	Humidity	CO2
FISH 206	68.4f	66%	620

*The humidity level measured on the date of the assessment exceeds the ASHRAE (American Society of Heating and Refrigeration and Air-Conditioning Engineers) recommended criteria range of 60%.*

## RECOMMENDED COURSE OF ACTION

### The Maintenance Department will initiate a work order to address the following items:

- Evaluate and repair as appropriate, the air-handling unit servicing this location in order to lower the humidity level..
- Evaluate and clean if necessary, the coils servicing this location.
- Evaluate the roof for leaks and repair as appropriate.
- Remove damaged tackable wall surface from the west wall and repair and appropriate.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items no later than February 8, 2003.

### Site-Based Staff will complete the following items immediately:

- Site-based maintenance staff will clean the air-conditioning vents and return air register grills with a wexcide disinfectant solution in order to remove dust and debris buildup.
- Site-based maintenance staff will remove all stained ceiling tiles and install new ceiling tiles.
- Site-based maintenance staff will raise the temperature on the thermostat to 73.0F.
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.

3. The indoor environmental quality assessment of FISH 207 revealed signs of visible microbial growth. The Head Facilities Serviceperson reported complaints of possible mold and mildew. The assessment team did identify visible signs of microbial growth on the tackable wall surface within the closet ( FISH 207B) of this classroom. The carpet revealed signs of staining and soiling. The ceiling tiles and walls appeared clean on the date of the assessment. The air supply grill and the return air register grill revealed minor signs of dust and debris buildup.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on October 25, 2002.

	Temperature	Humidity	CO2
FISH 207	70.3f	68%	666

*The humidity level measured on the date of the assessment exceeds the ASHRAE (American Society of Heating and Refrigeration and Air-Conditioning Engineers) recommended criteria range of 60%.*

## RECOMMENDED COURSE OF ACTION

The Maintenance Department will initiate a work order to address the following items:

- Evaluate and repair as appropriate, the air-handling unit servicing this location in order to lower the humidity level.
- Evaluate and clean if necessary, the coils servicing this location.
- Remove tackable wall surface in the closet (FISH 207B) and repair the walls as appropriate.
- Remove stained and damaged carpet and install a new tile floor.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items no later than February 8, 2003.

Site-Based Staff will complete the following items immediately:

- Site-based maintenance staff will clean the air-conditioning vents and return air register grills with a wexcide disinfectant solution in order to remove dust and debris buildup.
- Site-based maintenance staff will raise the temperature on the thermostat to 73.0F.
- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.

4. The indoor environmental quality assessment of FISH 208 revealed signs of visible microbial growth. The Head Facilities Serviceperson reported complaints of possible mold and mildew. The assessment team did identify visible signs of microbial growth on the north wall and on the ceiling tiles in the closet (FISH 208B). Visible signs of water intrusion were identified on a number of ceiling tiles. The Head Facilities Serviceperson informed the assessment team a prior roof leak has been repaired. Damaged ductwork was identified within the false ceiling plenum of the closet (FISH 208B). The tackable wall surface within the closet reveals signs of microbial growth. The carpet revealed signs of staining and soiling. The return air register grill revealed minor signs of dust and debris buildup. Below are the temperature, relative humidity and carbon dioxide levels measured in this location on October 25, 2002.

	Temperature	Humidity	CO2
FISH 208	68.6f	65%	612

*The humidity level measured on the date of the assessment exceeds the ASHRAE (American Society of Heating and Refrigeration and Air-Conditioning Engineers) recommended criteria range of 60%.*

## RECOMMENDED COURSE OF ACTION

The Maintenance Department will initiate a work order to address the following items:

- Evaluate and repair as appropriate, the air-handling unit servicing this location in order to lower the humidity level.

- Remove tackable wall surface on the north wall and within the closet (FISH 208B) and repair as appropriate.
- Remove stained, soiled and damaged carpet and install a new tile floor.
- Evaluate and repair as appropriate the damaged ductwork within the false ceiling plenum.
- Evaluate and clean if necessary, the coils servicing this location.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items no later than February 8, 2003.

**Site-Based Staff will complete the following items immediately:**

- Site-based maintenance staff will clean the air supply grill and the return air register grills with a wexcide disinfectant solution in order to remove dust and debris build up.
  - Site-based maintenance staff will remove stained and damaged ceiling tiles and install new ceiling tiles.
  - Site-based maintenance staff will raise the temperature on the thermostat to 73.0F.
  - Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.
5. The indoor environmental quality assessment of FISH 210 revealed signs of visible microbial growth. The Head Facilities Serviceperson reported complaints of possible mold and mildew. The assessment team did identify visible signs of microbial growth on the east wall and the rear wall of the closet (FISH 210C). Visible signs of a roof leak were apparent in the closet (FISH 210C). The air supply grill and return air register grill appeared clean on the date of the assessment. The carpet revealed signs of staining and soiling.

Below are the temperature, relative humidity and carbon dioxide levels measured in this location on October 25, 2002.

	Temperature	Humidity	CO2
FISH 210	70.7f	65%	675

*The humidity level measured on the date of the assessment exceeds the ASHRAE (American Society of Heating and Refrigeration and Air-Conditioning Engineers) recommended criteria range of 65%.*

**RECOMMENDED COURSE OF ACTION**

**The Maintenance Department will initiate a work order to address the following items:**

- Evaluate and repair as appropriate, the air handling unit servicing this classroom in hopes of lowering the humidity level.
- Remove tackable wall surface on the east wall and within the closet (FISH 210C).
- Evaluate the roof for leaks and repair as appropriate.
- Evaluate and clean if necessary, the coils servicing this location.

- Remove the stained and soiled carpet and install a new tile floor.
- The Maintenance Department will contact Aston Henry, Jr. of the Risk Management Department to provide a status on completion of the above items no later than February 8, 2003.

**Site-Based Staff will complete the following items immediately:**

- Continue to monitor this location for any signs of microbial growth as well as dust and debris accumulation and clean as appropriate.
6. An assessment of the roof on Building # 2 was also conducted on October 25, 2002. The roof has a buildup of leaves, shrubs, fungus as well as plants growing out of the roof. The roof drains are clogged. Trees growing over the roof should be cut back away from the roof of the building. **The Maintenance Department should evaluate the entire roof (Building #2) and repair as appropriate.**

The indoor environmental quality assessment revealed a number of items that should be addressed as soon as possible. Please have your site-based maintenance staff implement the above recommendations in order to improve the indoor environmental quality for all occupants within your school.

Generally, the IEQ Assessment Team did not identify any existing conditions significantly impacting IEQ and thereby presenting immediate health and safety concerns 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 IEQ, prevent development of future IEQ-related problems, and reduce the potential for IEQ-related complaints by building occupants, the IEQ Assessment Team recommends appropriate follow up of each item identified and previously listed.

Should any questions or concerns arise, or if these complaints continue after the above recommendations have been addressed, please feel free to contact me at (954) 765-8864.

AAH/tpo

- c: Dr. Joanne Harrison, North Area Superintendent  
 Sharon Airaghi, North Area Director School Improvement  
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