

Report to New Rochelle District-Wide Health & Safety Commission on Impact of Tropical Depression Ida on New Rochelle Schools (Robert Cox)

Overview

The following report is based on a tour on the morning of Saturday September 4, 2021 of school areas which suffered damage from Tropical Depression Ida which struck New Rochelle on September 1-2.

District-Wide Healthy and Safety Committee Co-Chair Robert Cox was guided on the tour by Facilities Director Carl Thurnau. The tour included discussions with staff from [Valcon Contracting Corp](#) (demolition, remediation), [WSP](#) (industrial hygienists) and Assistant Facilities Director James Heubel.

The tour included Isaac E. Young Middle School and New Rochelle High School are the two City School District of New Rochelle schools most impacted that suffered substantive damage. The tour did not include Daniel Webster Elementary School the only other school which experienced flooding; the damage was minor and quickly remediated.

The restoration process entails:

- removing water
- assessment of water damage
- review by insurance adjusters
- identify any potential asbestos issues
- demolition and debris removal
- reconstruction

The restoration effort has begun at both schools with the removal of water, an assessment of water damage by WSP, review of the AHERA (asbestos) records by district staff with Valcon and WSP. The demolition and debris removal will begin at Isaac then move on to the High School.

The district has the ambitious goal of re-opening Isaac on September 13. It may take longer but 45-50 workers will be at Isaac on Sunday September 5 to begin demolition work.

Insurance adjusters will be on site in the District to tour Isaac and the High School on September 7.

Contractors, primarily from the Bond Construction work, have already been contacted to take on the reconstruction work, as well as CS Arch, the district's architects, and Jacobs, the district's Construction Managers.

At first glance, the damage at Isaac and the High School looks better than it is because of the type of water that entered the buildings, the way the water got into sheetrock walls and loosened floor tiles and warped wood floors and doors. What cannot be conveyed through words and photos is the damp air and unpleasant odor. Some areas, especially those with standing water and carpeting smell especially bad.

A major obstacle to completing restoration is expected to be nationwide supply-chain issues. Acquiring some of the needed equipment, materials, machines and supplies may be difficult and, in some cases, take several months.

The biggest consideration in being able to re-open the two schools is ventilation, always a critical issue but more so due to COVID. The upper floors of Isaac and the High School did not sustain any storm damage but great care needs to be taken to limit the amount of "bad air" on the lower floors reaching the upper floors. It is why, for examples, the lower floors are not currently being dried out by large fans – to limit circulation throughout the building.

House 4 at the High School did not sustain damage. All electrical systems and HVAC in House 4 are independent from the main facility at the High School. The building is expected to be put into service next week.

Determining the Category of Water

To best understand the impact of the flood damage on re-opening the schools, it is necessary to understand how water is categorized.

According to the International Risk Management Institute, the [Categories of Water](#) refer to the "range of contamination in water, considering its originating source and its quality after it contacts materials present on the site. Time and temperature can also affect the quality of water thereby changing its Category."

Category 1 water: Originates from a sanitary source and does not pose a risk from dermal, ingestion or inhalation exposure. The cleanliness of Category 1 water can deteriorate to Category 2 or 3 due to contact with building materials, soil, etc.

Category 2 water: Contains significant contamination and has the potential to cause discomfort or sickness if contacted or consumed by humans.

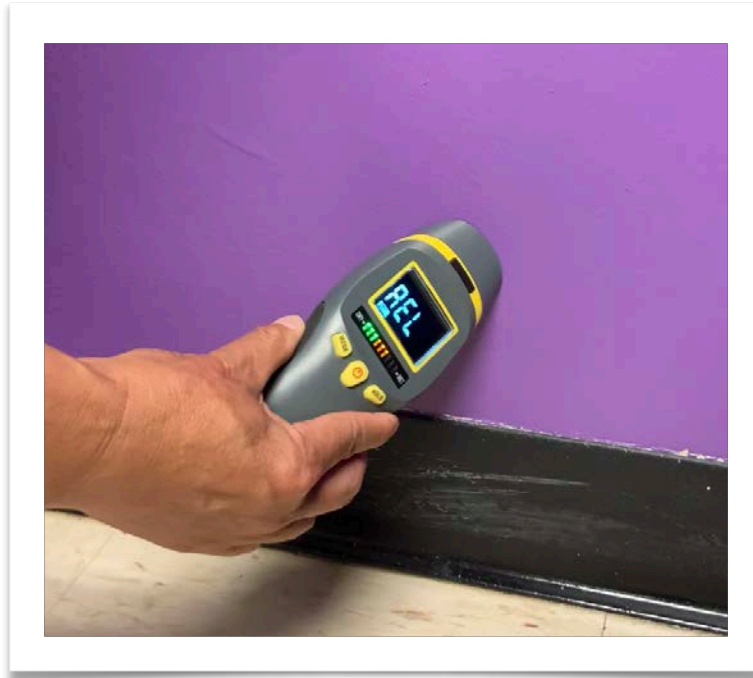
Category 3 water: Is grossly contaminated and can contain pathogenic, toxic, or other harmful agents. Examples can include but are not limited to sewage, toilet backflows that originate from beyond the toilet trap regardless of the visible content or color; all forms of flooding from seawater; ground surface water and rising water from rivers or streams; and other contaminated water entering or affecting the indoor environment such as wind driven rain from hurricanes, tropical storms or other weather related events. Such water may carry silt,

organic matter, pesticides, heavy metals, regulated materials, or toxic organic substances.

Much of the water that got into Isaac and the High School came from backed up municipal sewer systems. The rest was rain water which either pooled outside doors and windows then entered the building through gaps or seeped into the building through saturated ground outside or under the schools.

As rainwater came into contact sewage water all the water in Isaac and the High School deteriorated to Category 3 water.

In most spaces in the two buildings – classrooms, hallways and larger spaces like the Isaac music room and the High School library– the flood water was between 1/2” and 2” deep. On Thursday September 2 and Friday September 3, custodial staff pumped water out of the building, mopped up the rest and cleaned many of the floors. Their work to remove water and clean is in large part why the damage to the schools is worse than it looks. In many rooms water “wicked” up into sheetrock walls before it could be removed.



Sheetrock

WPS industrial hygienists uses sensors (pictured above) to determine how high moisture gets into walls. The sheetrock will have to be cut by ValCon demolition workers above where the moisture reached and ripped out – anywhere from 1 to 4 feet. Once the sheetrock is removed, any water behind the wall will be removed and the areas behind the walls left to dry. Once the exposed area is dry, new sheetrock can be installed by a building contractor.

Flooring

Some floors will have to be removed because the water got under them and popped tiles; newer floors with fresh glue may not require removal and replacement unless the tiles were lifted. ValCon staff will remove loosened vinyl floor tiles and warped wood floors and rip out carpeting., Contractors will prepare the bare floor surfaces and install new floors.

Wood floors are installed on wooden subfloor or wooden sleepers and water cannot be removed from substrate. If not removed floors will buckle and wood will grow mold and bacteria from flooding.

Doors

Wooden doors absorbed water at their base and either have already or will expand so they will no longer close properly. As a stop gap until needed doors can be ordered, delivered and replaced, district carpenters will take damaged doors off their hinges and trim/plane them so they fit the door frames.

Electrical/Mechanical:Paper

Anything electrical that was on the floor was a total loss including computer/printer equipment, musical instruments, fitness equipment. The same for paper, boxes, files, and books. Even paper not directly impacted by flooding has absorbed moisture and odors from the Category 3 water and needs to be removed. In some rooms, especially at the High School there were rooms with mechanical equipment that were under several feet of water; that mechanical equipment is most likely a total loss.

Asbestos

Asbestos is an issue with rooms and hallways that have older asbestos tiles: two rooms at Isaac and numerous floors in hallways and rooms at the High School will entail significant work and cost.

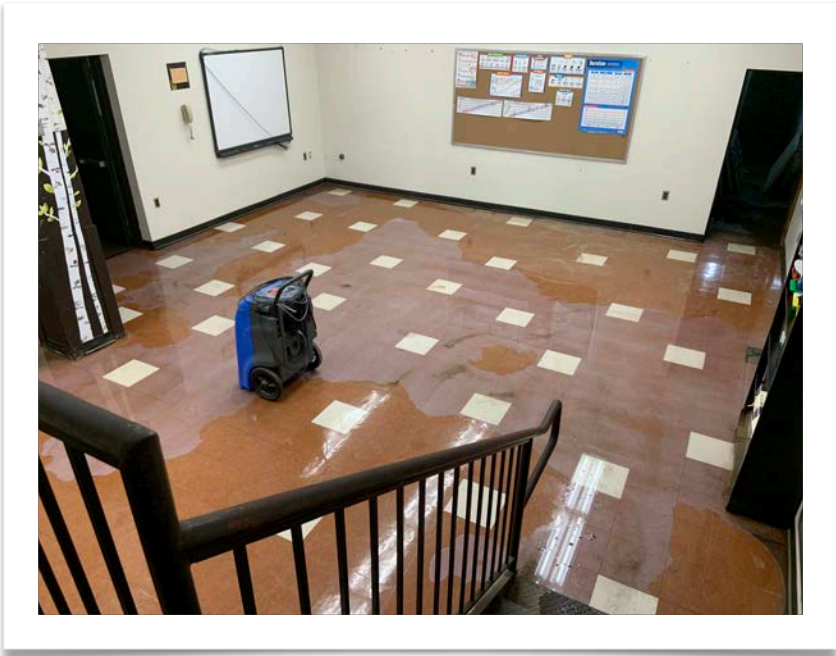
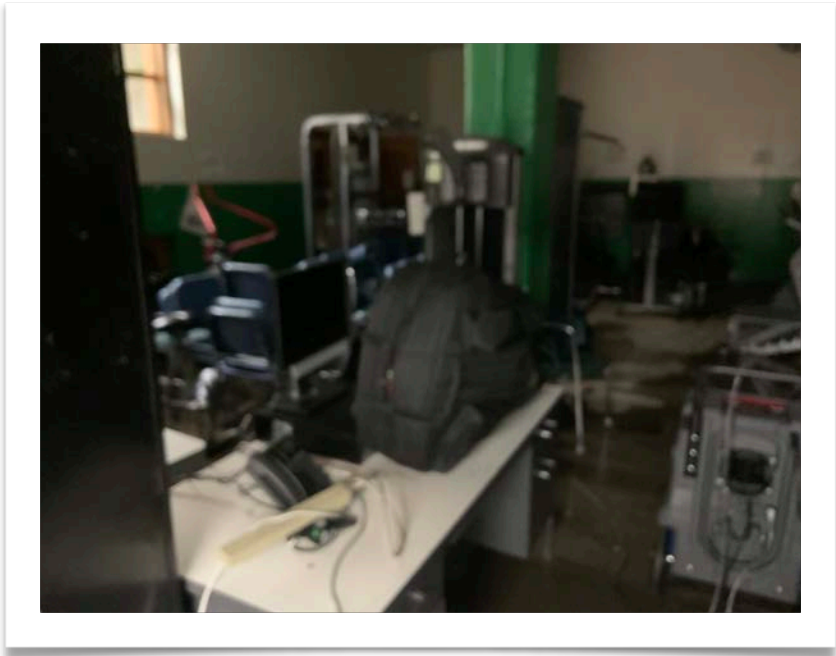
Isaac E. Young Middle School

A municipal sewer line runs under Isaac and has caused problems in the past. Major repair work to address how Isaac's sewer line connected to the municipal sewer line was undertaken several years ago which entailed digging up the area of the baseball field in front of Isaac. Other areas impacted in addition to those listed, mostly with sheetrock damage, include the teachers lounge, the nurses office, rooms 125, 126, 127.

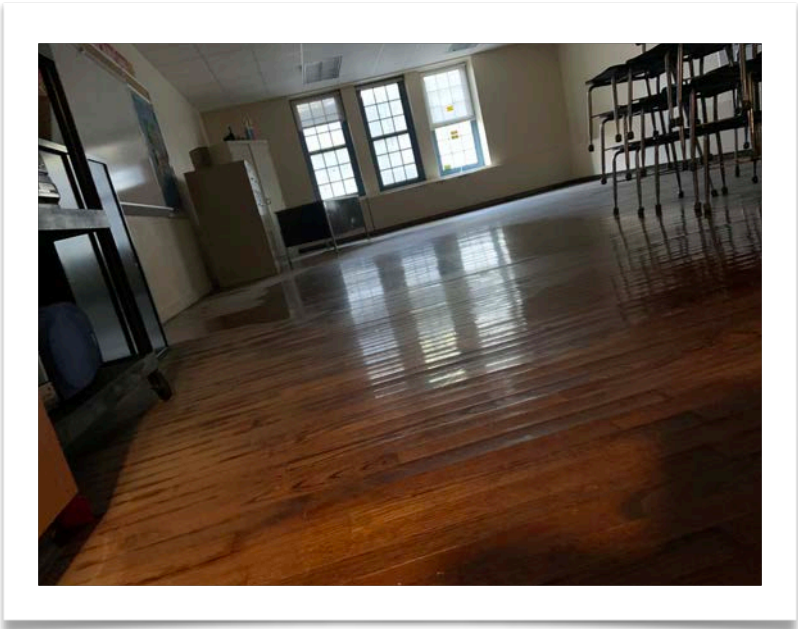


The cafeteria suffered serious damage and will be unusable for an extended period of time. The concrete slab underneath the floor is sinking. The flooring – installed two years ago – will need to be removed and a new concrete floor will need to be poured.

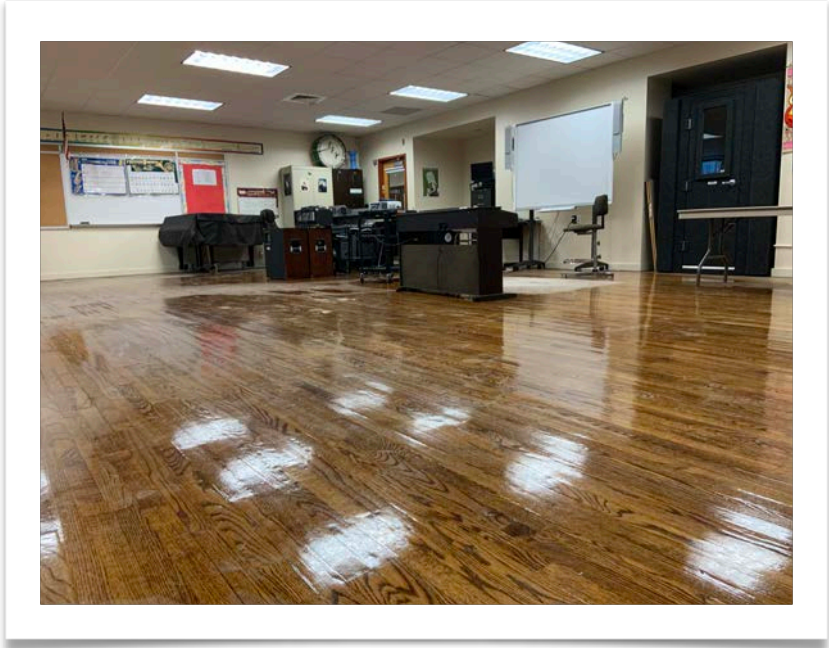
Fitness Room and Area outside Fitness Room



Ridges in Wood Floors



Ridges in Music Room Wood Floors



Waterline on Door- Back Ramp Area



New Rochelle High School



The High School has experienced multiple incidents of flooding over the past several years. The two primary causes have been: (1) back up of municipal sewer lines that run under the school; (2) the topping of the two lakes in Huguenot Park.

The two man-made lakes between the High School and North Avenue serve as retention ponds for water flowing from the Quaker Ridge watershed to Long Island Sound. The water exits the pond through a culvert by Eastchester Road which empties into Long Island Sound. Water from the High School, built in part on top of the filled in lakebed, empties into the lakes. When water cannot flow through the culvert the lakes are overtopped and the High School drains into the lakes back up forcing water into the high school.

Any long term solution to flooding at the High School would need to consider re-routing the municipal sewer lines under the building and filling in the lakes at

Huguenot Park or otherwise addressing the issues with the culvert at Eastchester Road.

Classroom 106



Water pooled outside the window facing the Teachers Parking Lot leaving a muck of a waterline.



A brand new door has a visible waterline. The door will need to be replaced.



An example of new floor that will be evaluated to see if floodwaters lifted tiles.

Library



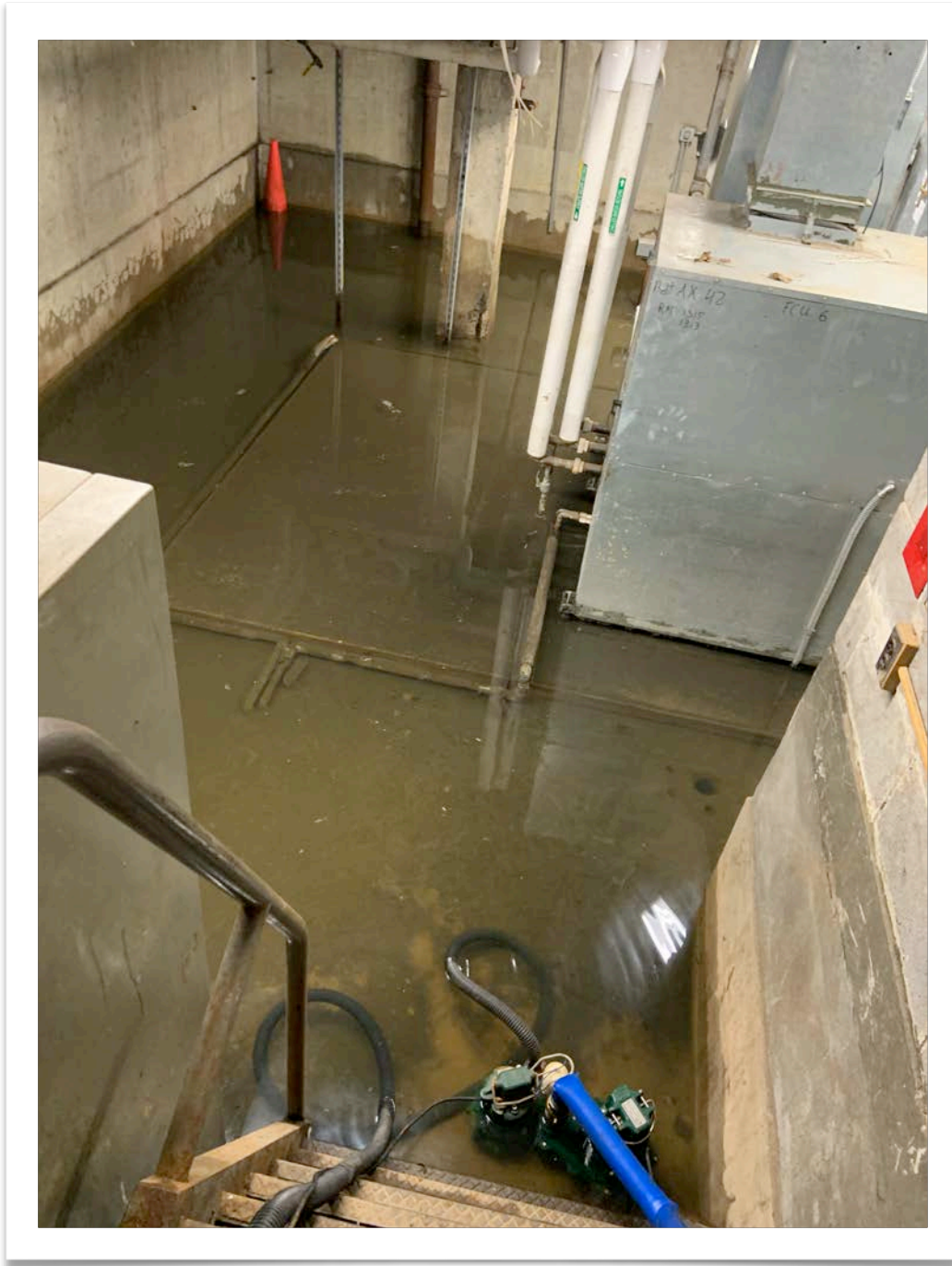
Carpeting and furniture in the library is a total loss. While not apparent from the photo, the carpet is saturated with water, the air is humid and the odor is bad. Books in the library did not get wet and may be salvageable.

Library Courtyard



In the past, there has been significant flooding from the courtyard into the library but not during Tropical Depression Ida. The walkway in the background had about 6 inches of water.

Mechanical Room (1)



This room, below the first floor level, was still taking in water, seeping in from the saturated ground. A pump was operating at the foot of the stairs.

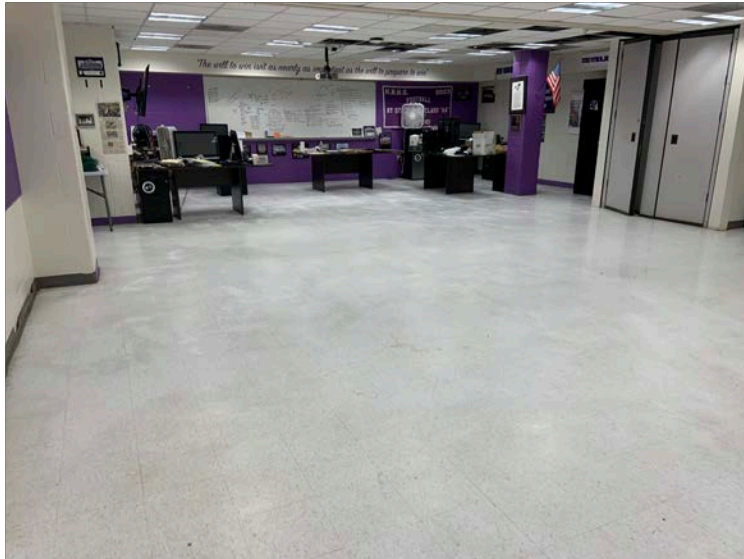
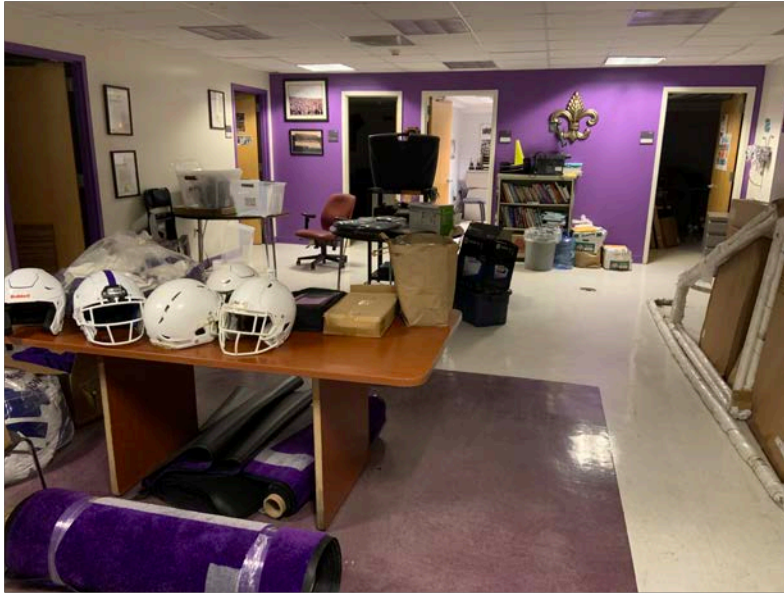
Kitchen

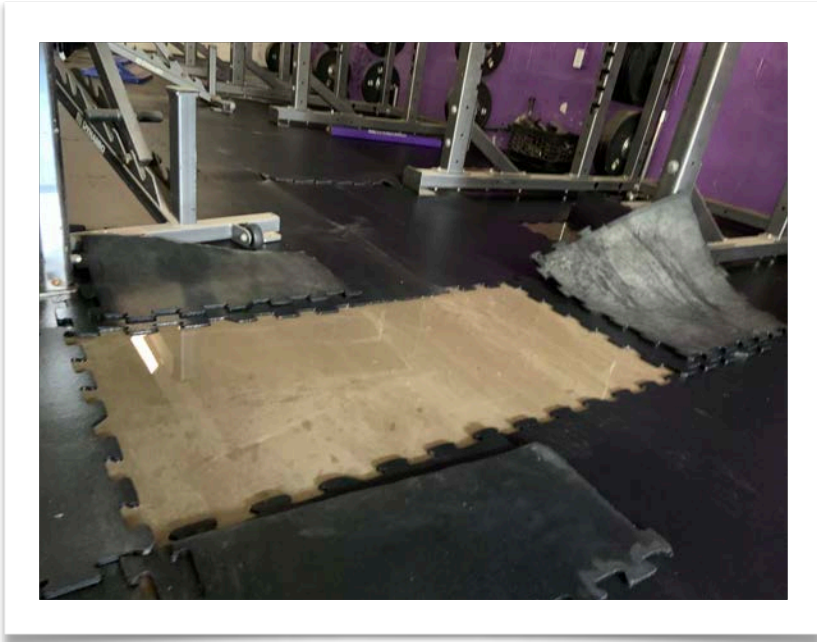
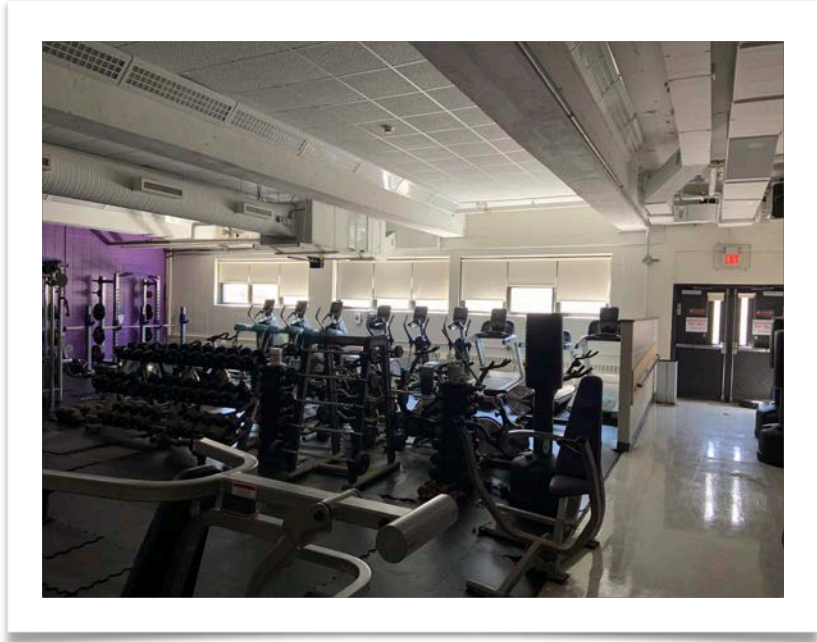


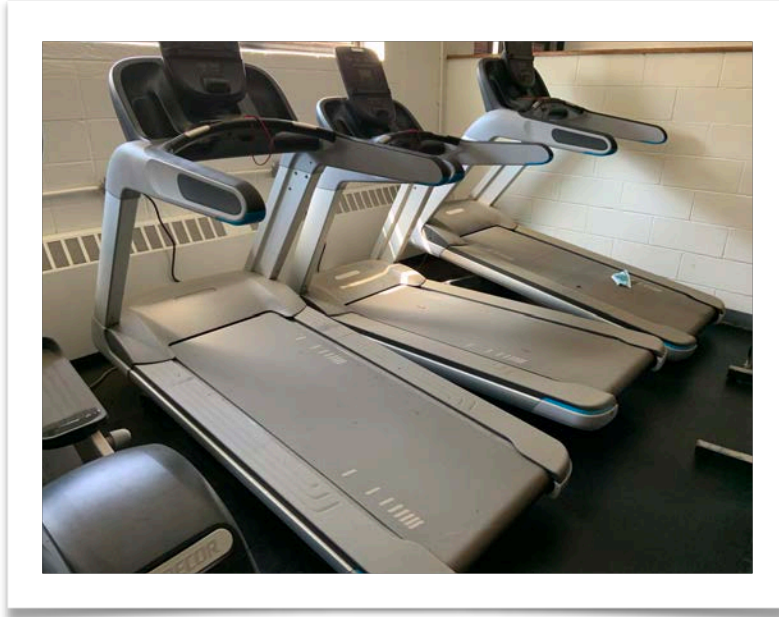
The kitchen had about an inch of water. The area has to be cleaned and sanitized then approved for use by the Westchester County Health Department before it can re-open. All cooked meals in the district are prepared in this kitchen then delivered to each school so this kitchen impacts more than just the High School.

The Athletic Department

The Athletic Department offices, classroom, and weight room all suffered significant damage with 1-2 inches of water. Fitness equipment like treadmills are a total loss.

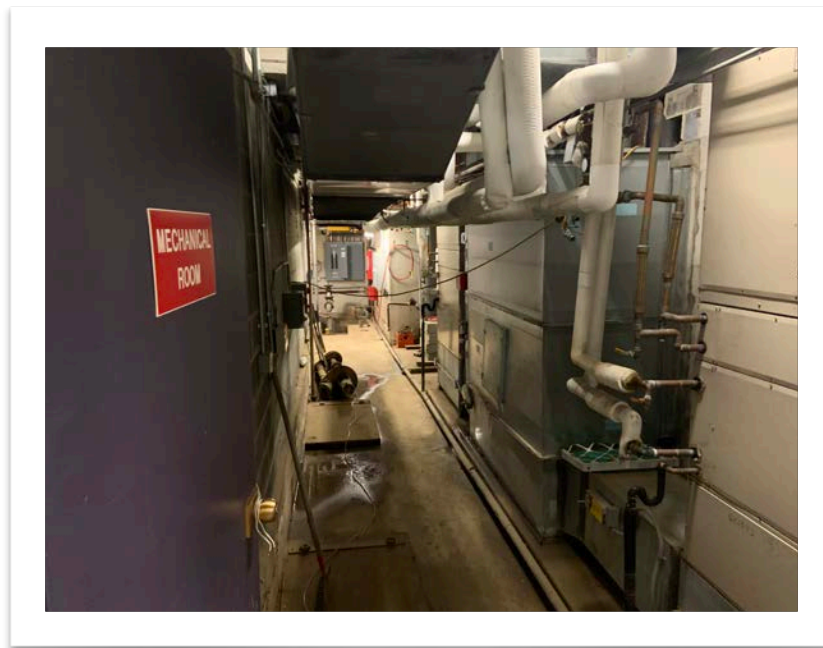


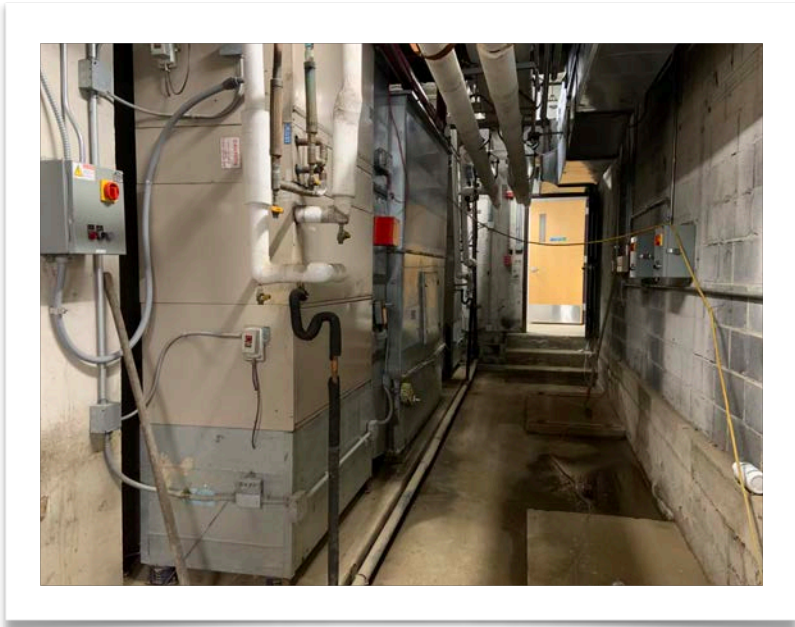




Mechanical Room (2)

This room filled with backed up sewer water which filled the room up to the top step and submerging the ventilation equipment and ductwork under water. The initial assessment is the ductwork can not be cleaned.



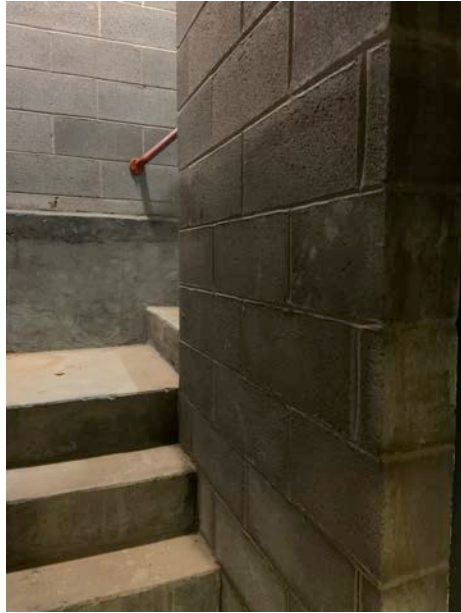




Swimming Pool

The damage to the swimming pool is catastrophic. The area under the pool filled with over 8 feet of water. Everything under the pool – ventilation systems, electrical systems, chlorination systems and more – is a total loss and will need to be replaced. The expectation is the swimming pool will be unavailable for the entire school year.









McKenna Field

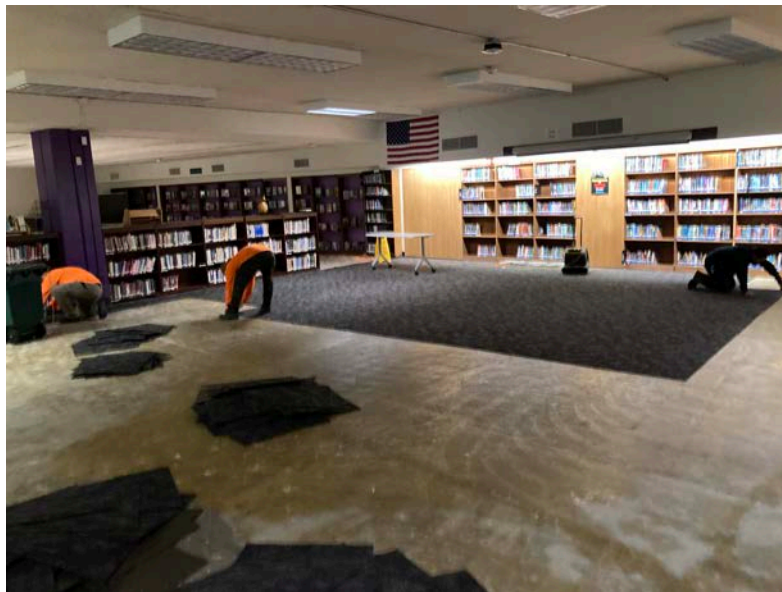


The field suffered some minor wrinkles in field. Still playable. Districts turf installer has been contacted to evaluate. No issues with new front fields.

UPDATE SUNDAY 9/6:



Work had begun at Isaac to remove sheetrock and are using air scrubbers and dryers in every first floor room. 30 workers were at Isaac on Sunday. 30 workers are expected to be split between both schools on Labor Day Monday September 6.



Work has begun to remove carpeting in the High School library.

Asbestos surveys have been completed by a certified industrial hygienist. Necessary abatement at Isaac will be done on Thursday September 9 with reinstallation crews working right behind them. After the abatement work at Isaac is completed there will be more abatement work at the High School and then follow up reinstallation.