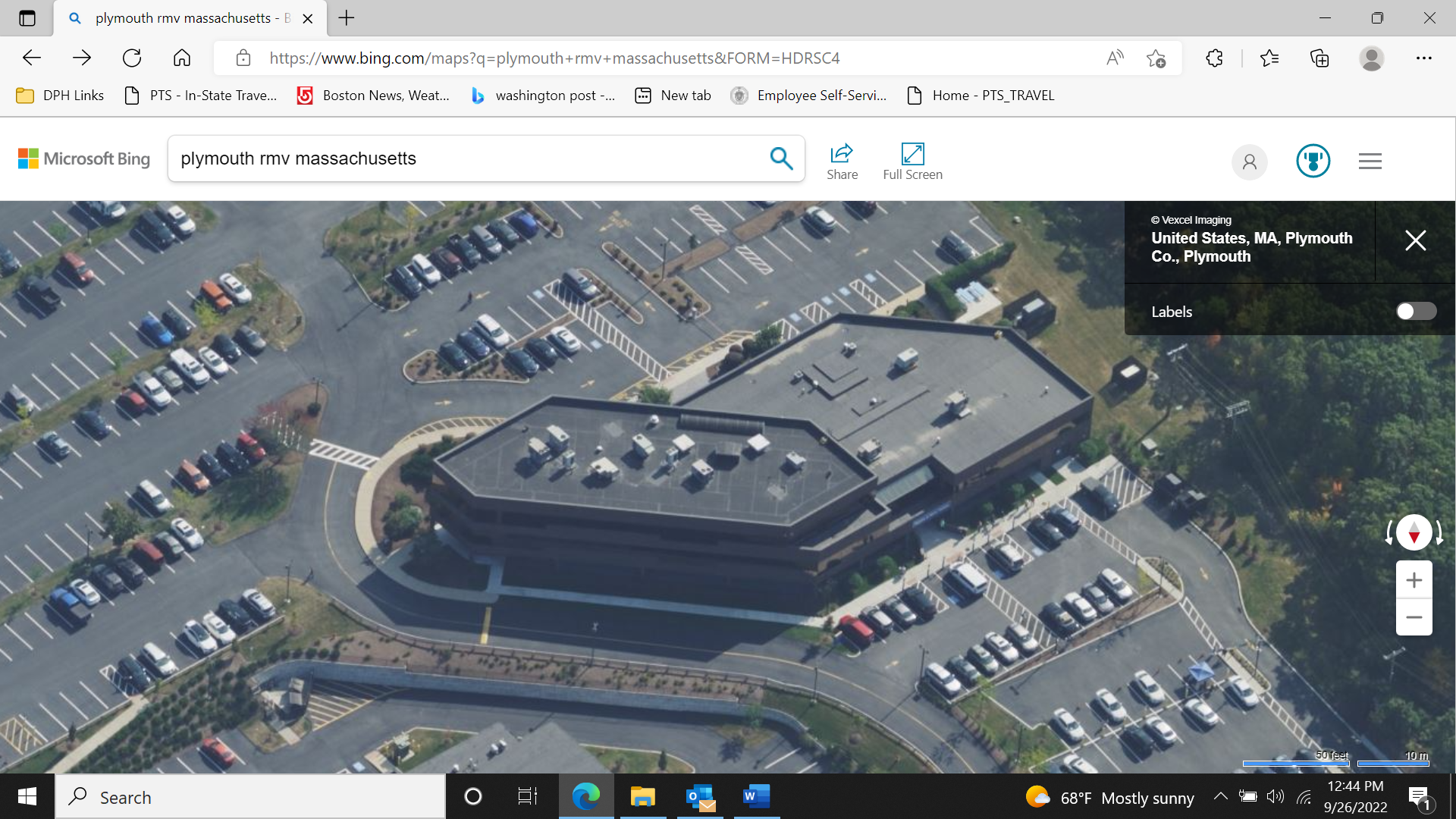
**WATER DAMAGE/MOLD INVESTIGATION**

**Registry of Motor Vehicles**

**40 Industrial Park Rd.**

**Plymouth, Massachusetts**



Prepared by:

Massachusetts Department of Public Health

Bureau of Environmental Health

Indoor Air Quality Program

September 2022

# BACKGROUND

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| --- | --- |
| Building: | Registry of Motor Vehicles (RMV) |
| Address: | 40 Industrial Park Rd., Plymouth, MA 02360 |
| Assessment Requested by: | Robert Northrup, Massachusetts Department of Transportation (MassDOT) |
| Reason for Request: | Mold/water damage concerns after flooding pipe incident |
| Date of Assessment: | September 14, 2022 |
| Massachusetts Department of Public Health/Bureau of Environmental Health (MDPH/BEH) Staff Conducting Assessment: | Michael Feeney, Director, Indoor Air  Quality (IAQ) Program |
| Building Description: | The RMV occupies the first floor of a  multi-story building. |
| Windows: | Not openable |

The BEH/IAQ Program was asked to examine the Plymouth RMV office for the presence of water damage/mold growth, with a focus on areas that were damaged by sink overflow on the floor above the RMV spaces. The leak damaged gypsum wallboard (GW) ceilings/walls, insulation, and carpeting.

**METHODS**

Please refer to the IAQ Manual for methods, sampling procedures, and interpretation of results (MDPH, 2015).

**RESULTS and DISCUSSION**

The following is a summary of testing results.

* ***Moisture Measurements*** of walls/floors were all dry (i.e., within normal parameters) at the time of assessment.
* ***Relative Humidity Measurements*** indoors ranged from 33% to 37%, which was significantly lower than outdoors (55%), indicating drying of materials is occurring.

A flood restoration/carpet cleaning firm was present during this visit. Flood restoration activities included:

* Use of fans and dehumidifiers to accelerate drying of carpeting and gypsum wallboard (GW).
* Removal of areas of GW and insulation.
* Removal of coving from impacted walls.
* Movement of objects from the floor such as cabinets and floor mats and,
* Measurement of moisture content of GW and carpeting to identify areas needing additional treatment.

At the time of the MDPH/IAQ visit, remediation activities (removal and drying of water-damaged building materials) were fully active. Water-damaged materials were planned to be either removed or dried. IAQ did not observe visible mold/associated odors during this visit. In addition, relative humidity measurements indoors ranged from 33 to 37%, which was significantly lower than outdoors (55%), which shows that there were no lingering moisture issues within the building.

In general, the US Environmental Protection Agency (US EPA) and the American Conference of Governmental Industrial Hygienists (ACGIH) recommend that porous materials (e.g., wallboard, carpeting) be dried with fans and heating within 24 to 48 hours of becoming wet (US EPA, 2008; ACGIH, 1989). If porous materials are not dried within this time frame, mold growth may occur.

# CONCLUSIONS and RECOMMENDATIONS

Based on the observations made during the visit, it appears that all affected water-damaged materials were thoroughly dried or removed with no further flooding remediation activities recommended. The following additional recommendations are made:

1. Continue with restoration/reconstruction plans to replace all building materials (ceilings, walls, floors, pipes, electrical, etc.) damaged by the flooding incident.
2. Prior to reoccupancy:

* Operate/flush out the HVAC system for 24 hours and change filters. The MDPH recommends pleated filters with a Minimum Efficiency Reporting Value (MERV) of 8, which are adequate in filtering out pollen and mold spores (ASHRAE, 2012).
* Once remediation activities are completed, clean all items and surfaces with a high efficiency particulate arrestance (HEPA) filter equipped vacuum cleaner combined with wet wiping and have carpets professionally cleaned.

1. For more information on mold refer to the US EPA’s “Mold Remediation in Schools and Commercial Buildings”. Available at: <http://www.epa.gov/mold/mold-remediation-schools-and-commercial-buildings-guide>.
2. Refer to resource manuals and other related IAQ documents for further building-wide evaluations and advice on maintaining public buildings. Copies of these materials are located on the MDPH’s website: <http://mass.gov/dph/iaq>.
3. If desired, contact the IAQ Program for a pre-reoccupancy assessment following the completion of remediation and reconstruction work.

# REFERENCES

ACGIH. 1989. Guidelines for the Assessment of Bioaerosols in the Indoor Environment. American Conference of Governmental Industrial Hygienists, Cincinnati, OH.

ASHRAE. 2012. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standard 52.2-2012 -- Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size (ANSI Approved).

BFD. 2020. Plymouth Fire Department Incident Report. Incident #: 20-1314-IN Exp. 0. Call #: 20-7397. Mass RMV, 490 Forest Ave. Plymouth, MA. Dated 01/24/2020.

MDPH. 2015. Massachusetts Department of Public Health. “Indoor Air Quality Manual: Chapters I-III”. Available at: <https://www.mass.gov/lists/indoor-air-quality-manual-and-appendices>

US EPA. 2008. Mold Remediation in Schools and Commercial Buildings. US Environmental Protection Agency, Office of Air and Radiation, Indoor Environments Division, Washington, D.C. EPA 402-K-01-001. <http://www.epa.gov/mold/mold-remediation-schools-and-commercial-buildings-guide>.