



## 2008 – FIRE DRILL REPORT

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### Pre-amble

### Fire Drills

As per **A-2.8.3.1.(1)** of the **Manitoba Fire Code**, “a fire safety plan is of little value if it is not reviewed periodically so that all supervisory staff remain familiar with their responsibilities. A fire drill, then, is at least a review of the fire safety plan by supervisory staff. The extent to which non-supervisory staff participates in a fire drill should be worked out in cooperation with the fire department. The decision as to whether all occupants should leave the building during a fire drill should be based on the nature of the occupancy. It may be necessary to hold additional fire drills outside normal working hours for the benefit of employees on afternoon or night shifts, who should be as familiar with fire drill procedures as those who work during the day. If full scale fire drills are not possible during non-regular working hours, arrangements should be made so that night-shift supervisory staff can participate in fire drills conducted during the daytime.”

To meet the requirements of the Manitoba Fire Code and to test the Fire Safety Plan for each building, Environmental Health and Safety Office with the assistance of Security Services and Physical Plant started conducting fire evacuation drills in all University of Manitoba Buildings with the exception of the Residences in 2007.

The results were published and in the spring of 2008, fire drills were conducted in buildings that performed poorly in the previous fire drills. A follow report was issued.

This report highlights the results of the fire evacuation drills conducted in the fall of 2008 comparing with the results achieved in the fall 2007 fire drills.

### Procedure for the Fire Evacuation Drills

EHSO, Security Services and Physical Plant held meetings to develop a schedule for conducting the fire evacuation drills and criteria for their role as Observers. After confirming the dates, the Vice-President of Administration sent a memo to all faculties and departments informing them of the upcoming fire evacuation drills. The faculties and departments were not given the exact date or time of the fire evacuation drills but to minimize disruption, they were asked to notify our office of any dates or times where the drills would be problematic.

Our office created a form to be used by staff identified as observers and held an in-service on the procedures and criteria they are to use. The criteria included: time for evacuation of a floor, staff/student response to the fire alarm, identification of fire wardens and whether rooms are checked and doors closed. The observers were asked not to comment to staff/student in the building unless it was necessary because there were no fire wardens or no response to the fire alarm. Any comments were to be documented as well.

Following a pre-determined schedule, EHSO, Security Services and Physical Plant Staff met at the first building on the schedule. Time was given for the observers (wearing a high visible vest and white hard hat) to get in place on each floor. The fire alarm was activated and the observers noted the reaction from staff and students in the building.

From the information gathered, EHSO created a rating system to assist with determining the effectiveness of the fire safety plan and identify areas requiring improvement. The rating system ranged from 0 (extremely poor performance) to a maximum of 30 (all requirements for a safe evacuation were met).

### Summary

- Fire drills were not conducted in the residences or in 8 University buildings either because they were unoccupied at the time (1), time sensitive research (2) was being conducted or in agreement with the Building Fire Wardens, the omitted buildings (5) were in transition from a Fire Warden program to a Building Emergency Response Plan.
- Table 1 shows the data gathered from fire evacuation drills in 51 buildings at both the Fort Garry Campus and Bannatyne Campus:

Table 1 – Building Scores as Percentage

Score Range	2007	2008	Improvement
Maximum Score of 30	0%	0%	--
Score between 25 and 29	5.6%	21.6%	+16%
Score between 20 and 24	18.5%	31.4%	+12.9%
Score between 15 and 19	35.2%	31.4%	-3.8%
Score between 10 and 14	22.2%	13.7%	-8.5%
Score under 10	18.5%	2% <sup>1</sup>	-16.5%

<sup>1</sup> Only one building received a score under 10

- 64.7% of the buildings evacuated in less than 3 minutes (the norm) compared to 38.9% in 2007,
  - 25.5% of the buildings took between 3 and 5 minutes for complete evacuation compared to 53.7% in 2007,
  - 9.8% of the buildings took more than 5 minutes to evacuate compared to 7.4% in 2007.
- From the Observers notes, buildings where Fire Wardens were readily visible performed well in the evacuation of the building. The reinforces that the Fire Warden Program and the Fire Safety Plan do work in buildings where wardens have been identified, roles understood and some education of staff has been conducted. It is clear that more planning and education is required in some buildings,
  - Many buildings lack or have inadequate Fire Warden to perform required duties in the event of a fire alarm,
  - Fire evacuation drill will become an annual event occurring sometime in late September or early October to coincide with Fire Prevention week and further minimize disruptions.

### Factors in Determining the Rating

The total rating was evaluated at 30 points based on the following:

Evacuation (total rating 10 – 5 for shortest from floor and 5 for total building evacuation):

- 5 points if evacuation occurred in less than 2 minutes
- 3 points if evacuation occurred in less than 3 minutes (norm)
- 1 point if evacuation occurred in less than 5 minutes
- -1 point if evacuation took over 5 minutes.

Staff/Student response (total rating 5 based on observers' notes):

- 5 points if response was very good
- 3 points if response was good
- 1 point if response was average
- -1 point if response was poor
- -3 points if staff/student refused to evacuate.

Fire Warden Response (total rating 10 – 5 for Fire Warden presence times two (x2) if they were properly identified):

- 5 points if Fire Wardens were noticed on all floors
- 4 points if Fire Wardens were noticed on 80% of the floors
- 3 points if Fire Wardens were noticed on 50% of the floors
- 1 point if Fire Wardens were noticed on 20% of the floors
- -1 point if no Fire Wardens were present or noticed.

Checking of Rooms as per Fire Plan (total rating 5):

- 5 points if rooms on all floors were checked
- 4 points if 50-80% of the rooms were checked
- 3 points if 20-50% of the rooms were checked
- 1 point if 10-20% of the rooms were checked
- -1 point if no rooms were checked.

### Conclusion

Annual fire evacuation drills at the University will become a regular event and occur each Fall. EHSO has developed a program to address areas/buildings requiring more fire drills to meet the intent of the Manitoba Fire Code (such as laboratories).

The information gathered for the fire evacuation drills will assist with the development of or transition to the Building Emergency Response Plan that will include the Fire Safety Plan.

EHSO will meet with Faculties and Departments in buildings with low scores to further promote the Fire Warden and/or Building Emergency Response Program.

EHSO plans to modify the way fire drills at the Bannatyne Campus are conducted not only to minimize disruption in patient care building but to avoid confusion among staff in buildings where the fire alarm systems are interconnected.

EHSO would be pleased to discuss with Building Chief Fire Wardens the rating their building achieved (see Appendix “A”) and discuss ways to improve both the Fire Safety Plan and response to fire alarms in the building.

Respectfully Submitted,

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## APPENDIX A

### Individual Building Score – (Maximum points – 30)

	Shortest Evacuation Time	Shortest Time Score	Longest Evacuation Time	Longest Time Score	Staff/Student Response Score	Fire Wardens Identifiable Score	Room Checks Score	Total 2008	2007 Score
CAST Building								--	--
Dairy Sciences								--	--
Drake Centre								--	7
Frank Kennedy Centre								--	13
Pharmacy (Now New Apotex Centre)								--	25
Physical Plant								--	13
Powerhouse								--	--
Stores Building								--	15
Administration Building	1.16	5	2	5	5	10	3	28	28
Ellis Building	1	5	3	3	5	10	5	28	20
Parker	1	5	2	5	5	8	5	28	23
Education Building	1	5	3	3	5	10	4	27	23
Human Ecology	<1	5	2	5	5	6	5	26	22
University College	1	5	5	1	5	10	5	26	23
Agriculture Building	2	5	3.75	3	5	8	4	25	20
Animal Sciences Entomology Building	1	5	3	3	5	8	4	25	19
Duff Roblin	1	5	2.5	3	5	8	4	25	17
Rober B Schultz Lecture Theatre	1	5	2	5	5	6	4	25	--
Wallace Building	1	5	3	3	5	8	4	25	15
William Norrie Centre	1.5	5	1.5	5	5	5	5	25	--
Architecture II	1.5	5	2	5	5	6	3	24	19
Basic Sciences	<1	5	1.5	5	5	6	3	24	21
Elizabeth Dafoe Library	<2	5	5	1	5	8	5	24	19
Music	1	5	2	5	5	6	3	24	18
St John's College	0.75	5	5	1	5	8	5	24	9
Fletcher Argue Building	1.5	5	4	1	5	8	4	23	13
Services Building	0.5	5	1.5	5	5	5	3	23	13
Pembina Hall	2.5	3	2.5	3	3	10	3	22	19
Robson Hall	1	5	2.5	3	5	6	3	22	21
University Centre	1	5	3.75	1	5	6	5	22	18
Aboriginal Centre	1	5	1.75	5	5	2	4	21	--
Fitzgerald Building	0.5	5	2.25	3	5	6	2	21	16
Helen Glass Centre for Nursing	1.5	5	3.5	1	3	8	4	21	16
Medical Rehabilitation	1.25	5	1.25	5	5	3	3	21	19
St Paul's College	2	5	3.5	1	5	6	4	21	14
Ceramics	<1	5	2	5	5	2	3	20	22
Allen Physics Building	0.5	5	<6	-3	5	8	4	19	11
BMSB	1.75	5	6.5	-3	5	8	4	19	20
Machray Hall	1	5	4.5	1	3	6	4	19	18
Russell Building	1	5	5	1	1	8	4	19	25
Buller Building	1.75	5	3.66	1	5	3	4	18	19
Chown Building	<1	5	1.5	5	5	3	0	18	9
Medical Services	<1	5	1	5	5	3	0	18	11
Agriculture Engineering	<1	5	2	5	5	0	0	15	5
Agriculture Lecture Block	1	5	1	5	5	0	0	15	2
Armes Lecture Block	2	5	3	3	5	1	1	15	9
Art Barn	<1	5	1.33	5	5	0	0	15	11
Brodie / JBRC	2.5	3	4.5	1	1	6	4	15	12
Crop Technology Centre	<1	5	1.75	5	5	0	0	15	18

	Shortest Evacuation Time	Shortest Time Score	Longest Evacuation Time	Longest Time Score	Staff/Student Response Score	Fire Wardens Identifiable Score	Room Checks Score	Total 2008	2007 Score
Grain Storage Building	<1	5	<1	5	5	0	0	15	6
Music Annex	<1	5	1	5	5	0	0	15	13
Plant Science Building	1.5	5	2	5	5	0	0	15	17
Dentistry	1.3	5	7	-3	5	6	1	14 <sup>1</sup>	17
Isbister Building	1.5	5	4	1	3	1	3	13	19
RCFFN	1.5	5	4	1	5	1	1	13	10
Max Bell	1	5	6	-3	3	2	5	12	13
Investor's Group Athletic Facility	1	5	3	3	-1	1	3	11	19
EITC	<1	5	4.5	1	1	2	1	10	6
Tier	2	5	6	-3	5	2	1	10	9
Pathology	3	3	3	3	-1	3	0	8	7

<sup>1</sup> EHSO acknowledges the difficulties staff in Dentistry has regarding patient evacuation. The lower score in 2008 was not based of patient evacuation but rather failure to check all rooms. It was observed one person came out of a room 7 minutes after the alarm sounded.