

Client: 1410 Wood Buffalo Environmental Association (WBEA)
Project: 20898 Community Odour Monitoring Project - Fort McMurray (AB)
Update: 10/06/2015
Period: March 1st, 2015 to May 31st, 2015



Summary

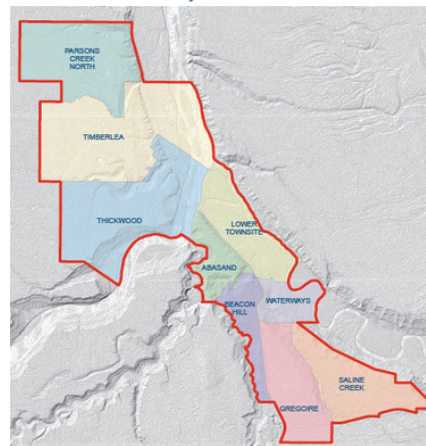
Context and Objectives

Odours have become a prominent issue in some communities in the Wood Buffalo region. As a result, WBEA's Human Exposure Monitoring Program (HEMP) monitors, detects and chemically characterizes odour compounds in ambient air. In addition to using specialized instrumentation to detect odours, HEMP is conducting a community-based odour monitoring project. For this initiative, WBEA has recruited volunteer participants from the community of Fort McMurray, Wood Buffalo's urban centre. Fort McMurray draws attention from around the world as the residential and commercial focal point of Canada's Oil sands industry. Residents come from all regions of Canada and around the world, and according to 2010 census, approximately 76,767 people live in Fort McMurray.

Monitoring human exposure to odours in the region is part of a long-term strategy of WBEA. Due to public concerns over odours, HEMP will continue to identify, assess and communicate how odours can be monitored and reported to community members. The main objective of WBEA's Fort McMurray Community Odour Monitoring Project is to involve the community in identifying and monitoring odours in the air in order to determine the impact on residents. The map on the right show the area covered by this project.

The project was launched in February 2013. A first year on monitoring was completed In May 2014. For the 2nd year of monitoring, the recruitment and training was conducted in May 2014 and the odour observations started in June 2014. This 2nd year of the program ended in May 2015.

Project Area



Community Odour Observer Committee - Results Summary

The odour committee is based on the participation of volunteers from the region that supplies specific information about the various odours they perceived during their day-to-day activities. They provide observation through a designated website or by mail. The committee meets on a quarterly basis to review the results of their observations. There were 37 participants registered as volunteer at the end of the 4th quarter of this second year of monitoring.

Between March and May 2015, 58 complete reports have been received. Twelve (12) participants provided reports during that period. 62 odour observations were analysed. 29% of the odours perceived were attributed to burnt/smoke, 24% to fuel/solvent, 11% to asphalt/tar and 11% fecal/septic. Other types of odour observed include skunk, rotten eggs, chemical/plastic, ammonia/cat's pee, natural gas and other.

Between March and May 2015, 55% of the observations received were reported in the Timberlea area and 44% in the Thickwood area. One observation was also reported in Lower Townsite.

What's Next

The annual meeting will be held on June 17th, 2015.

The observation phase of this project in the Fort McMurray area has ended on May 31st, 2015.

A new community odour monitoring project was launched in Anzac and surroundings. Training was conducted in May 2015 and the observation phase started June 1st 2015 and will run for one year.

Community Odour Observer Committee - Results

	June to August 2014	Sept. to Nov. 2014	Dec. 2014 to Feb. 2015	March to May 2015	Total - June 2014 to May 2015
Number of Participant at the end of each period	37	37	37	37	37
Number of Participant who Reported Odours	14	11	8	12	14
Number of Reports per Participant	From 1 to 23	From 1 to 11	From 1 to 8	From 1 to 14	From 1 to 23
Total Number of Complete Reports	133	48	33	58	272
Reports by card / phone / email	0	1	0	0	1
Reports by website / smartphone	133	47	33	58	271
Total Number of Complete Observations	139	51	33	62	285

Definitions:

Participant: registered volunteer for the community odour monitoring project for 2014-2015.

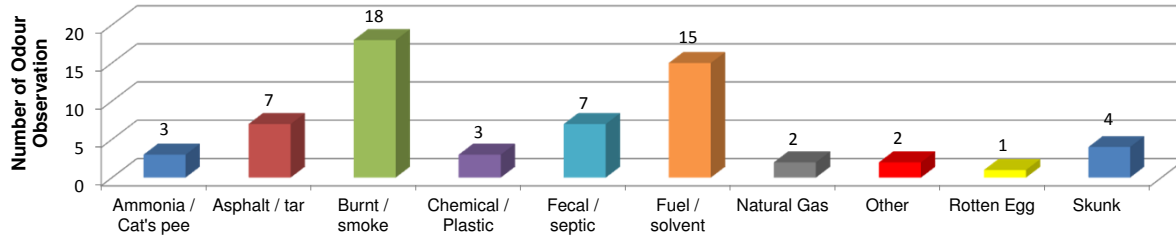
Report: a complete report is one submission of information from a participant. A report may list more than one type of odour perceived (or observation). A report must be complete to be analysed.

Observation: one type of odour with the conditions during which it was observed. If a report indicates 2 or more types of odours, each odour is counted as one observation.

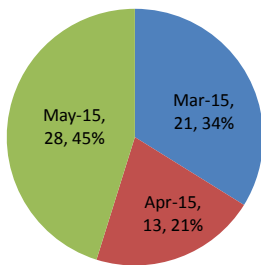


Community Odour Observer Committee - Results (cont'd)

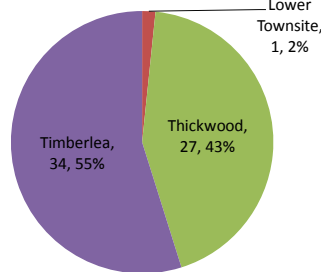
Types of Odour Observations for March to May 2015



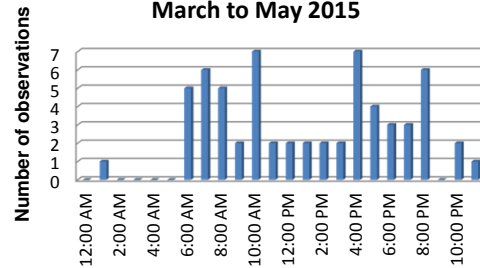
Number of Observations per Month for March to May 2015



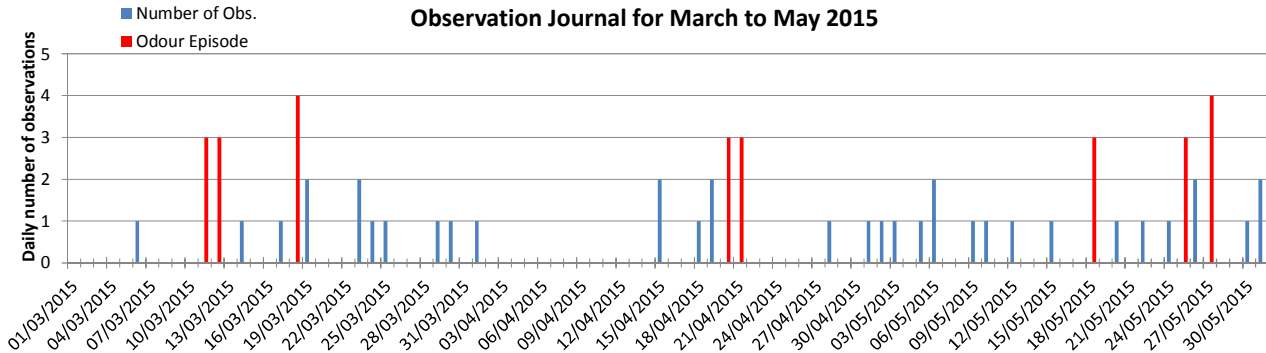
Number of Observations per Project Area for March to May 2015



Observation per Hour of the Day for March to May 2015



Observation Journal for March to May 2015



A total of 58 reports were received and analysed. Three (3) reports listed two or three observations. The total number of observations analysed is 62. 34% of those observations were reported in March 2015, 21% in April 2015 and 45% in May 2015. All observations were received through the website or smartphone. Twelve (12) participants submitted observations during that period.

29% of the odour perceived were attributed to burnt/smoke (18 observations), 24% to fuel/solvent, 11% to asphalt / tar, 11% to fecal/septic and 6% to skunk. The remaining observation reported: Ammonia/Cat's pee (3), Chemical/Plastic (3), Natural Gas (2), Rotten egg (1) and Other (2).

Between March and May 2015, 55% (34 obs.) of the observations received were reported in the Timberlea area and 44% (27 obs.) in the Thickwood area. One observation was also reported in the Lower Townsite.

Since odour observations are provided by volunteers during their day to day activities, observations are more likely to coincide with daytime and evening than nighttime and also reflect the time for which the volunteer remains at the location of the odour perceived. 25 observations were reported between 6 AM and 10 AM, 10 observations were reported between 11 AM and 3 PM and 23 observations were reported between 4 PM and 8 PM. The remaining observations (4) were reported in the evening between 10 PM and 1 AM. There were no observation between 2 AM and 5 AM. Duration reported were between 1 and 825 minutes (13.75 hours). 79% of observations reported duration of 30 minutes or less.

Odour episodes are considered to occur when 3 observations or more are received for the same day. The observation journal shows the number of observation received daily and the odour episodes are shown in red. Eight (8) odour episodes were recorded during this quarter. A total of 26 observations were received during those episodes. Three or four observations were received for each of the following dates: March 11th, March 12th, March 18th, April 20th and 21st, May 18th, May 25th and May 27th. On March 18th, three (3) participants reported a total of 4 observations including 3 observations of asphalt/tar and one fuel/solvent. For May 27th, 2015, 4 observations were received from 4 participants. Three of those four observations reported burnt/smoke and one reported fuel/solvent odours both in Timberlea and Thickwood area.