

Client: 1410 Wood Buffalo Environmental Association (WBEA)
Project: 20898 Community Odour Monitoring Project - Fort McMurray (AB)
Update: 26/03/2015 Revised report
Period: December 1st, 2014 to February 28th, 2015

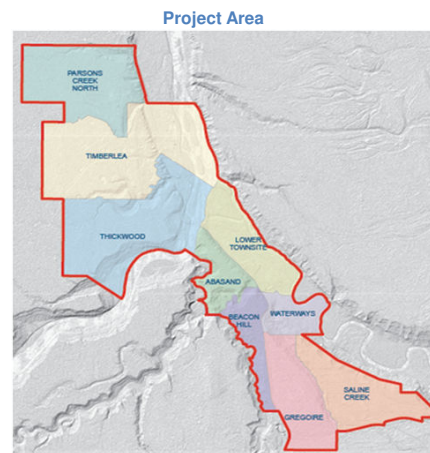


Summary

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 will end in May 2015.

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 3rd quarter of this second year of monitoring.

Between December 2014 and February 2015, 33 complete reports have been received. Eight (8) participants provided reports during that period. 33 odour observations were analysed. 30% of the odours perceived were attributed to fuel/solvent, 30% to natural gas, 15% fecal/septic and 12% to burnt/smoke. Other types of odour observed include asphalt/tar and skunk.

Between December 2014 and February 2015, 64% of the observations received were reported in the Timberlea area and 24% in the Thickwood area. One observation was also reported in Gregoire and three in Lower Townsite.

What's Next

The third quarterly meeting was held on March 25th, 2015. The annual meeting will be held in June 2015. Volunteers will continue to record their observations. The observation phase of this project in the Fort McMurray area will end on May 31st, 2015.

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
Number of Participant who Reported Odours	14	11	8		14
Number of Reports per Participant	From 1 to 23	From 1 to 11	From 1 to 8		From 1 to 23
Total Number of Complete Reports	133	48	33		214
Reports by card / phone / email	0	1	0		1
Reports by website / smartphone	133	47	33		213
Total Number of Complete Observations	139	51	33		223

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.

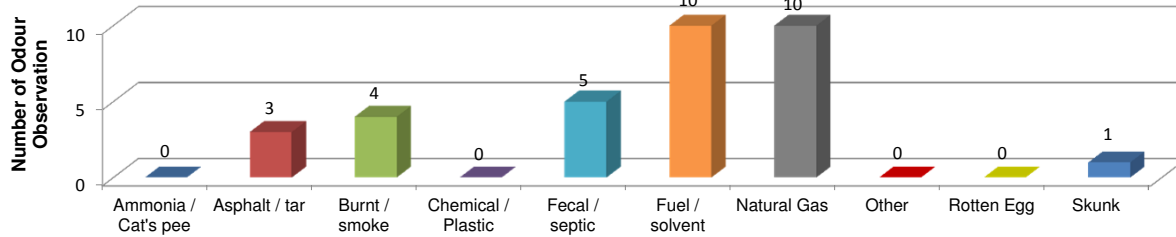
Observation: one type of odour with the conditions during which it was observed. If a report indicates 2 or more types of odours, each odour is counted as one observation.

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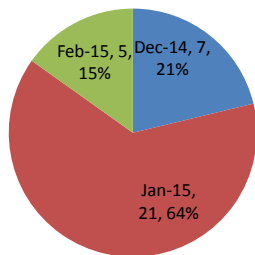


Community Odour Observer Committee - Results (cont'd)

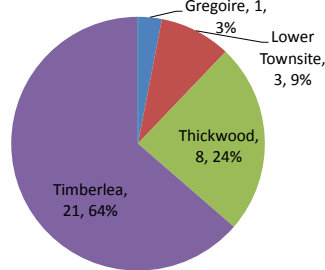
Types of Odour Observations for Dec. 2014 to Feb. 2015



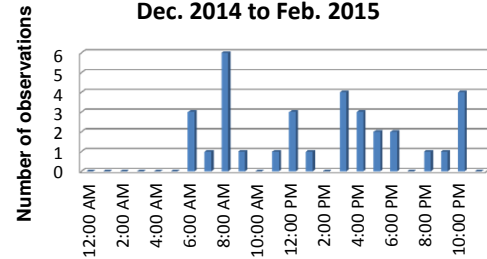
Number of Observations per Month : Dec. 2014 to Feb. 2015



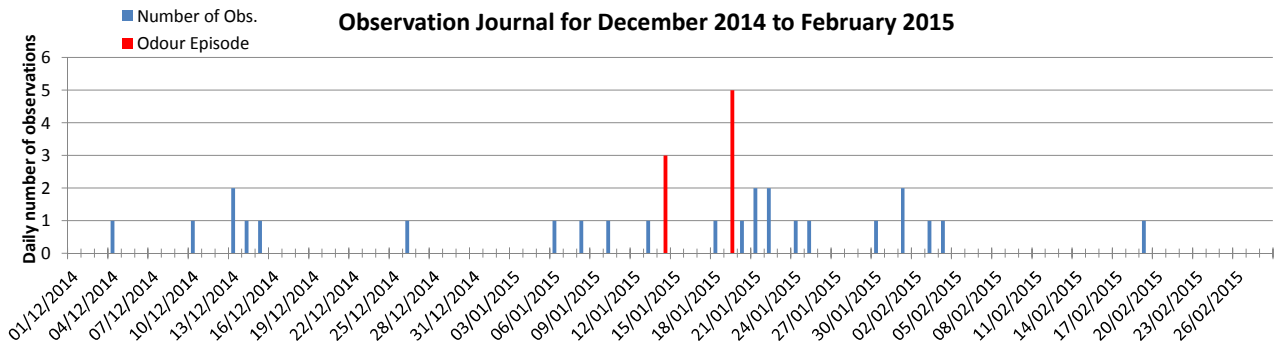
Number of Observations per Project Area for Dec. 2014 to Feb. 2015



Observation per Hour of the Day for Dec. 2014 to Feb. 2015



Observation Journal for December 2014 to February 2015



A total of 33 reports were received and analysed. Each report lists one observation. The total number of observations analysed is 33. 21% of those observations were reported in December 2014, 64% in January 2015 and 15% in February 2015. All observations were received through the website. Eight (8) participants submitted observations during that period.

30% of the odour perceived were attributed to fuel/solvent (10 observations), 30% to natural gas and 15% to fecal/septic and 12% to burnt/smoke. The remaining observation reported asphalt/tar and skunk.

Between December 2014 and February 2015, 64% (21 obs.) of the observations received were reported in the Timberlea area and 24% (8 obs.) in the Thickwood area. One observation was also reported in Gregoire and three were 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. 11 observations were reported between 6 AM and 9 AM, 5 observations were reported between 11 AM and 1 P and 11 observations were reported between 3 PM and 6 PM. The remaining observations (6) were reported in the evening between 8 PM and 10 PM. There were no observation between 11 PM and 5 AM. Duration reported were between 1 and 150 minutes (2.5 hours). 94% 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. Two (2) odour episodes were recorded during this quarter. A total of 8 observations were received during those episodes. Three (3) and five (5) observations were respectively received for January 14th and 19th, 2015. For January 14th, 2015, three (3) participants reported one observation each including two observations of fecal/septic in the Timberlea area and one fuel/solvent in the Thickwood area. For January 19th, 2015, 5 observations were received from 3 participants. Three of those five observations reported fuel/solvent odours and the other reported natural gas odours in the Timberlea area.