

Client: 1410 Wood Buffalo Environmental Association (WBEA)  
 Project: 20898 Community Odour Monitoring Project - Fort McMurray (AB)  
 Update: 22/10/2013



**Period: June 1st to August 31st, 2013**

**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 project was launched in February and training for the volunteers was conducted in May 2013. Odour observations started in June 2013 and will continue until the end of May 2014.

**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 are currently 35 participants registered as volunteer.

86 observations have been received since the committee was launched in June 2013. From these, 31 observations were received in July 2013 and 32 were received in August 2013. Asphalt/tar odours account for 22% of the odour observations received. Burnt/smoke and Fuel/Solvent were reported in 20% and 19% of the observations respectively. Burnt/smoke odours were reported mostly between July 3rd and 5th and on August 5th. These episodes may coincide with severe forest fires around the area. Other types of odour reported include: ammonia, fecal/septic, rotten egg, chemical, natural gas and other (hydrocarbon, earthy).

The first odour committee meeting was held on October 1st, 2013. An overview of the project was presented along with a summary of the observations received in June, July and August. A total of 8 volunteers attended the meeting.

**What's Next**

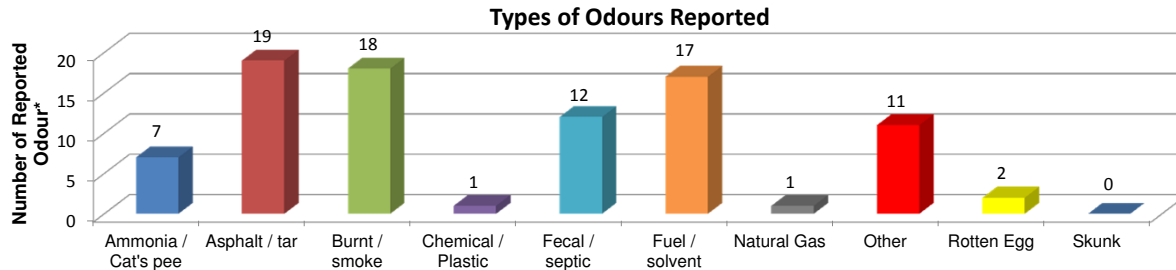
The first odour committee meeting was held on October 1st, 2013. Volunteers will continue to record their observations. The second quarterly meeting will be held in December 2013/January 2014.

**Community Odour Observer Committee - Results**

	June to August 2013				Total
Number of Participant at the end of each period	35				
Total Observation	86				86
Observation by card / phone / email	8				8
Observation by website / smartphone	78				78

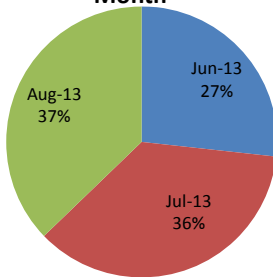


**Community Odour Observer Committee - Results (cont'd)**

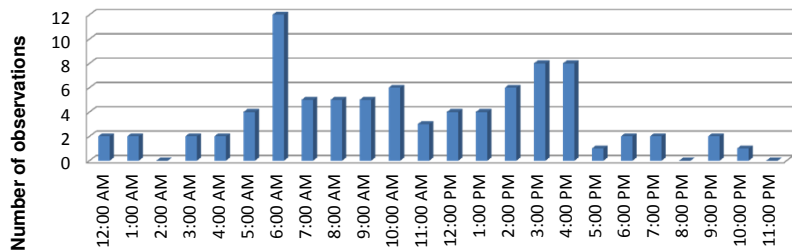


\* If an observation reported 2 or more type of odours, each odour is counted as an observation.

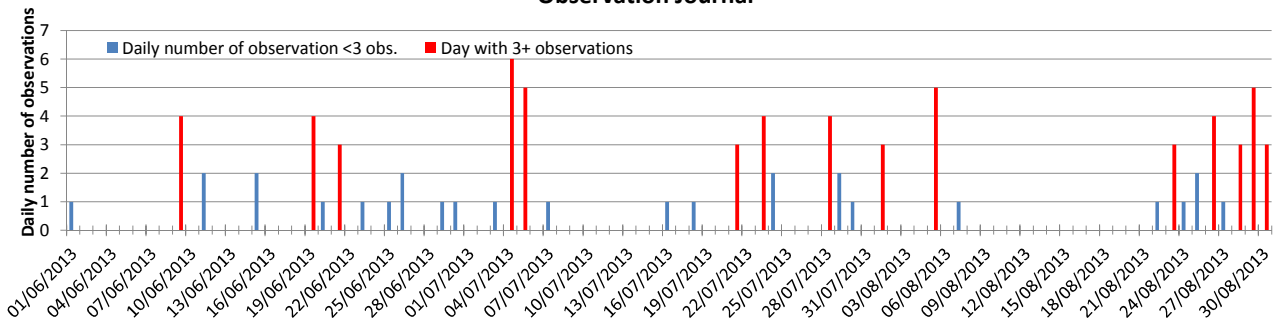
**Number of Observations per Month**



**Observation per Hour of the Day**



**Observation Journal**



A total of 86 observations have been received between June 1st and August 31st, 2013. 36% and 37% of the observations were reported in July and August respectively. Close to 91% of all observations were received through the website.

For each observation, the participant can report one or more type of odour perceived. 4 observations reported 2 or more type of odour perceived. Close to 22% of the odour perceived were attributed to asphalt/tar, 20% to burnt/smoke and 19% to fuel/solvent. Other types of odour reported include: ammonia, fecal/septic, rotten egg, chemical, natural gas and other (hydrocarbon, earthy).

Since odour observations are produce 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. 35% of all observations were reported around 6AM or around 3-4PM. Observations were reported for periods up to 880 minutes (> 14 hours). 84% of the 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. Odour episodes were recorded on 15 separate dates (3 in June, 5 in July and 7 in August). A total of 59 observations were received during those 15 days. Odours reported during those days were mostly asphalt/tar, fuel/solvent, burnt/smoke and ammonia. On July 4th and 5th and on August 5th, odour episodes were related mostly to odours of burnt/smoke.