



**WOOD BUFFALO
ENVIRONMENTAL ASSOCIATION**

Community Odour Monitoring Program (COMP) App

Background

The Wood Buffalo Environmental Association (WBEA) is a multi-stakeholder, consensus-based organization leading in state-of-the-art environmental monitoring to enable informed decision-making. The WBEA has monitored and reported air quality in north-eastern Alberta in the Regional Municipality of Wood Buffalo since 1997. The WBEA is the largest and most integrated of Alberta's airsheds and monitors a region which has the highest number of large industrial emitters. The WBEA collects air quality measurements within a network comprised of 28 industrial, attribution, community, background, and meteorological air monitoring stations.

The Odour Monitoring Program (OMP) is one of four key WBEA monitoring programs. As part of this program, the WBEA launched an app which seeks to gain a better understanding of how odour events in the region relate to ambient air quality. The Community Odour Monitoring Program (COMP) app allows community members to submit information about the ambient odours they experience—directly involving citizens in identifying and monitoring the odours that impact them. The information is submitted to a database, which is compared to the ambient air data collected at the WBEA's 28 ambient air monitoring (AAM) stations located throughout the region. The COMP app allows for public participation in gathering information about common and important air quality concerns.

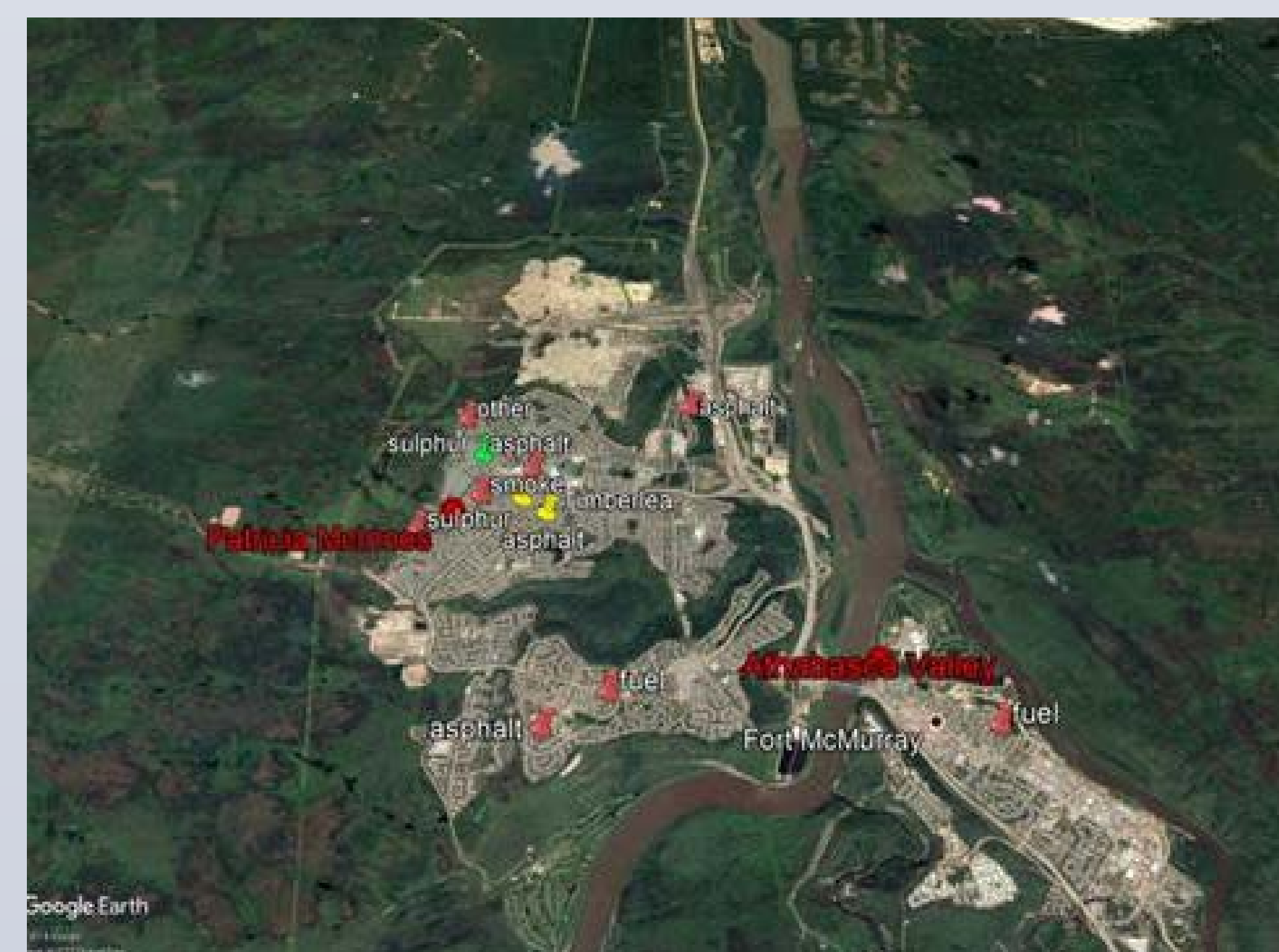
The COMP app is available for download in both iTunes and Google Play. For more information on all WBEA initiatives, visit www.wbea.org.

Implementation

Previous efforts to engage citizens in odour monitoring included training interested community volunteers to detect and characterize odours and reporting them via paper, email, or telephone submissions, which resulted in a small dataset. The WBEA OMP Committee determined a need for an alternative way to engage community members which would be accessible to a larger number of people throughout the region. The OMP committee identified a smartphone application (app) as a potentially effective method to expand citizen action.

The WBEA developed the app and gathered feedback from its Member organizations. Once launched, information about the app was shared within the RMWB through postcards, posters, newspaper, radio, and at community tradeshows. To make the app more accessible and visible, tablets with the app were installed at key locations in each community in the RMWB.

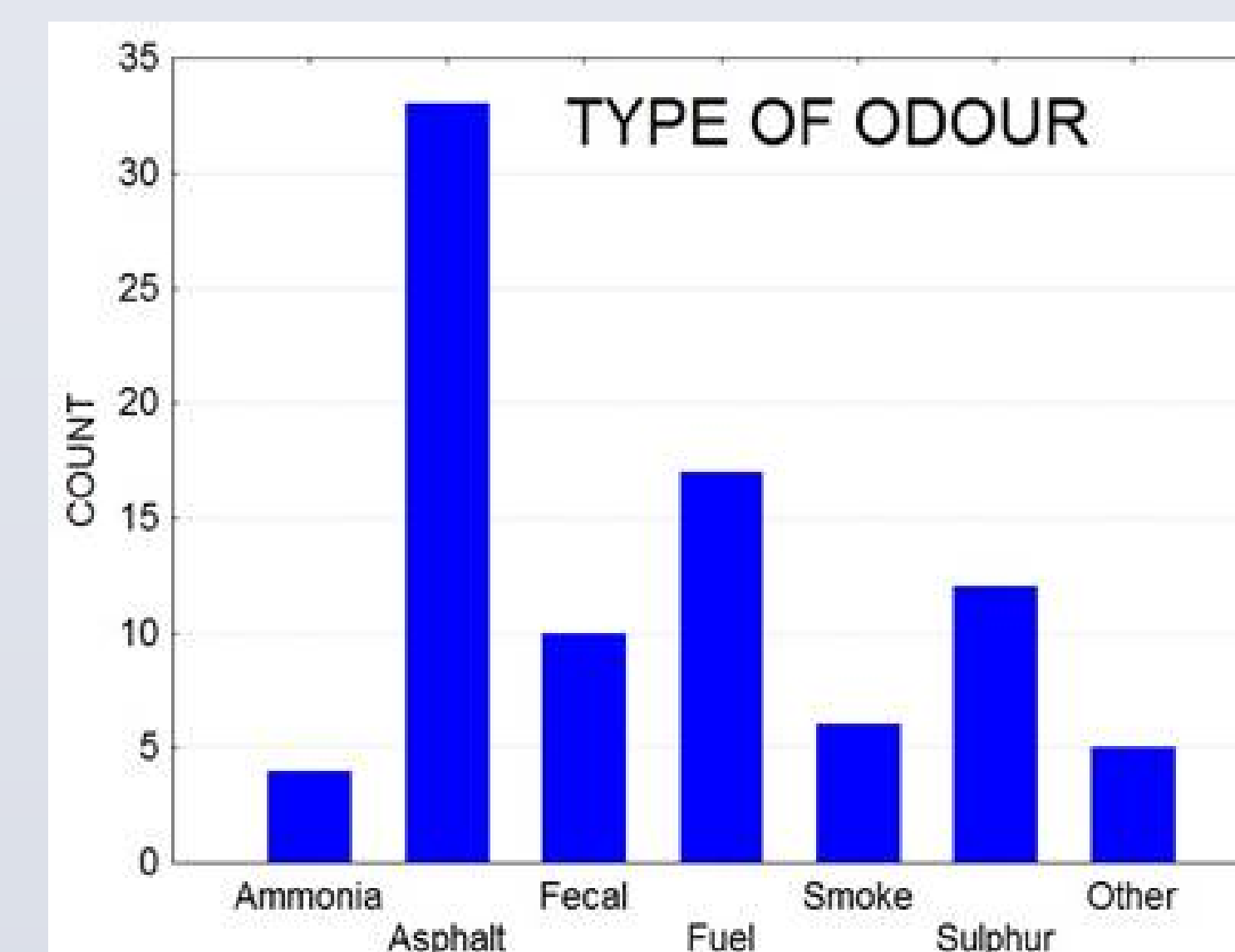
The figure below shows the locations of the odour observations submitted through the App on January 20, 2018, a date when multiple observations were reported



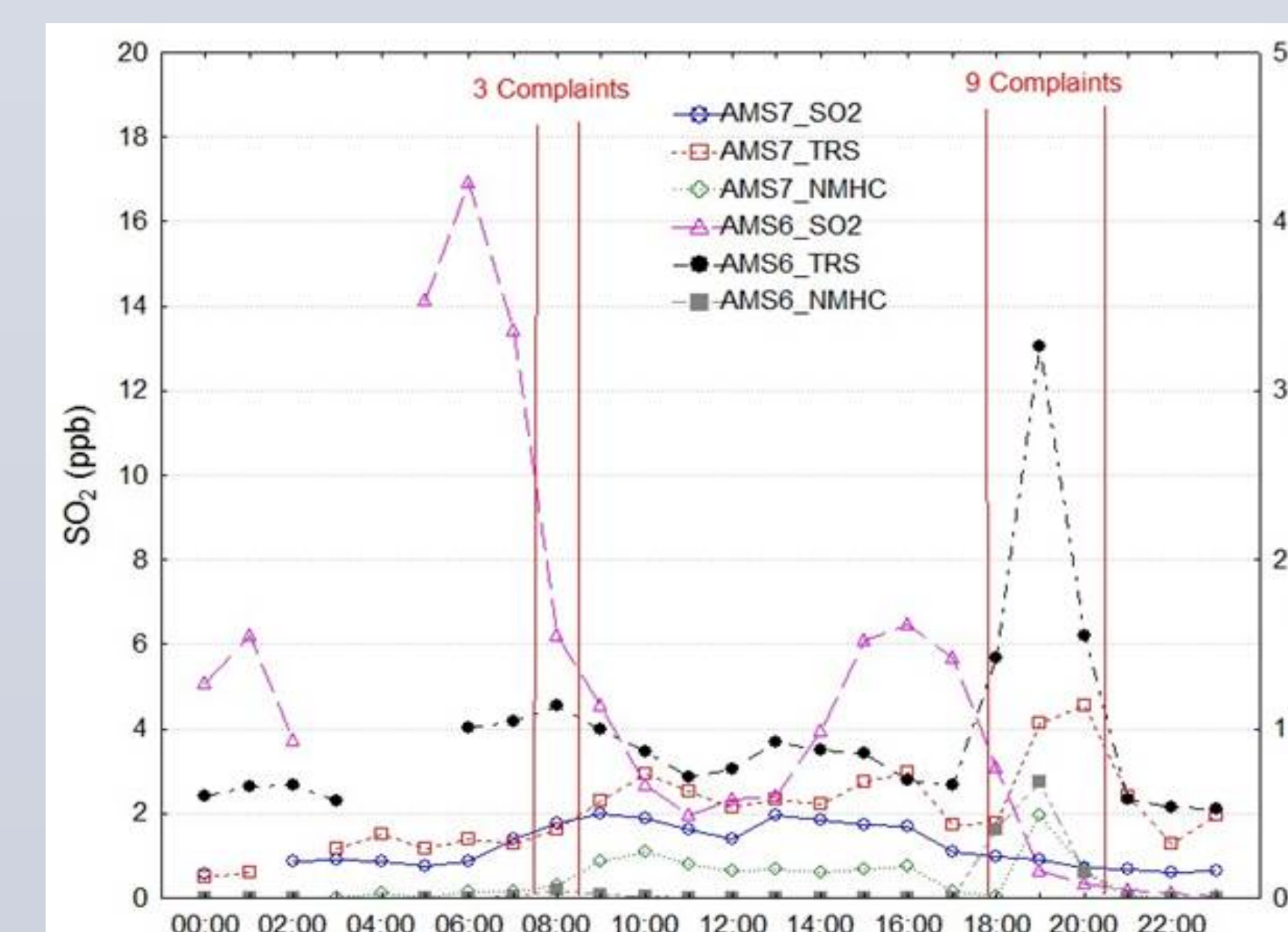
User Experience & Data Collection

Users can identify type of odour, intensity, time of day, duration, location, as well as provide a formal complaint reference number (from the provincial regulator) to assist with correlating data. The COMP app is research focused, and does not replace the official reporting of odours to the appropriate provincial regulator. The information collected is confidential, and is not used for assessing compliance.

Since the app's launch in September 2017, over 250 observations have been reported through the app. The WBEA has begun to compare these observations with data collected by its AAM stations. Examples of types of odours reported within a reporting period can be seen in the figure below.



The next figure shows a relationship between AAM and COMP app data. Specifically, on January 20, 2018, one community station in Fort McMurray had an increase in total reduced sulphur (TRS) which coincided with nine (9) reported odour observations.

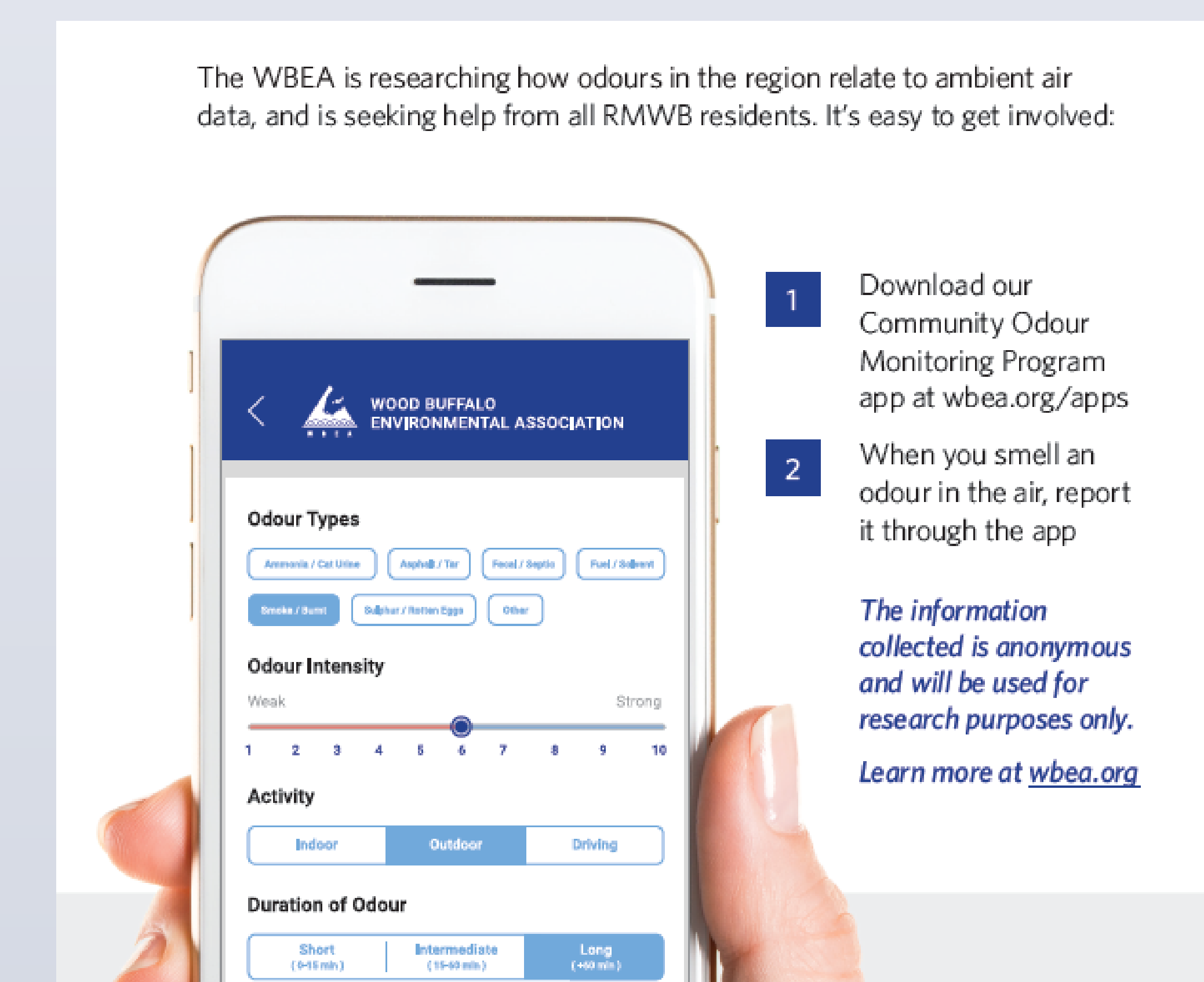


Looking Forward

The next step is for the WBEA to thoroughly compare the collected COMP app odour observations to the AAM data, and determine whether correlations exist between the ambient air parameters, and the odours experienced by the public.

The WBEA wants to maintain momentum of the program by providing results and reporting to stakeholders and community members in a meaningful way; increase awareness of the app to encourage its use; and determine optimal ways of providing data to citizens in the RMWB.

The WBEA recognizes the potential for and will identify opportunities to share successes and learnings with other airsheds.



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