



The Missouri Department of Health and Senior Services (DHSS) and the Agency for Toxic Substances and Disease Registry (ATSDR) have released a public health consultation that evaluates potential public health impacts of breathing chemical and odor emissions from Bridgeton Landfill. This fact sheet highlights the findings of the health consultation in regards to odors.

## **DHSS Public Health Consultation Findings about Odors near the Bridgeton Landfill**

- **Offensive odors may cause headache, nausea, or fatigue.**
- **Offensive odors may aggravate asthma or other chronic respiratory diseases.**
- **Repeated exposure to offensive odors may increase stress and/or impair mood.**
- **The frequency of detection of offensive odors near the landfill substantially decreased after completion of corrective actions at the landfill in 2013-2014. Currently, odors may occasionally be considered offensive, especially during periods of construction or other invasive work at the landfill or in instances of landfill equipment malfunction.**

Bridgeton area residents have frequently complained about odors coming from the landfill. An odor is caused by a chemical in the air that is detected by the sense of smell.

Sulfur-based compounds can be smelled at very low levels and are likely responsible for much of the odor coming from the landfill. Other chemicals like volatile organic compounds could also be contributing to odors from the landfill. Sulfur-based compounds and volatile organic compounds are produced by the decomposition of materials in the landfill.

Odor levels near the landfill have been variable. Fortunately, the frequency of detection of landfill odors has decreased since implementation of control measures at the landfill. In addition, there has been a downward trend in the frequency of detection of sulfur-based compounds in the air near the landfill.

### **Common Symptoms**

Not everyone reacts to offensive odors in the same way. However, common physical symptoms that may be triggered include:

- headache,
- nausea, and
- respiratory issues such as chest tightness and breathing discomfort in sensitive individuals (for instance, those with lung or heart issues).



Missouri Department of Natural Resources used an AreaRAE® multi-sensor system to test air for various chemicals including sulfur-based compounds.

Often, people can smell chemicals well before they have reached a level that might cause a toxic effect. However, offensive odors can be a nuisance and may be the direct cause of some health symptoms even at concentrations below levels that would harm health. Repeated exposures to these odors may add significantly to an individual's stress levels and affect quality of life.

Chronic stress and the negative emotions that are generated from increased stress can affect people's health in a variety of ways. Stress-induced health issues can include increased susceptibility to infection, increased severity of infectious diseases, or increased inflammatory responses that may be associated with common diseases. Indirect effects of stress (such as poor sleep, poor eating habits, less exercise, increased smoking, and alcohol consumption) put people at greater risk of health problems.

### Multiple Sources of Odor

Bridgeton Landfill is located in an urban environment, where people breathe air containing chemical and odor emissions from many potential sources. Other sources of odors in the air may become more noticeable as emissions from the landfill have decreased.

### Actions Individuals Can Take to Reduce Exposure to Odors and Protect Health

- **During periods of objectionable odor, stay indoors as much as possible. This is especially important for sensitive individuals: children, elderly adults, and people with chronic respiratory conditions.**
- **Exercise indoors during periods of objectionable odor.**
- **Seek immediate medical advice for serious respiratory symptoms such as difficulty breathing.**
- **Health symptoms associated with offensive odors usually subside once odors go away and do not require medical attention. Seek medical advice for persistent symptoms.**
- **Take health-protective measures to combat the effects of stress, as much as possible. This includes following recommended nutrition guidelines, not smoking, and getting regular exercise. Individuals at risk of chronic stress are advised to seek advice on developing a comprehensive stress management plan.**



Bridgeton Landfill, August 2013  
Photo: Missouri Department of Natural Resources

### To Submit Comments or For More Information:

The public comment period goes through **November 20, 2018**. The public comment version of the Bridgeton Landfill Health Consultation is located at <http://health.mo.gov/bridgeton>.

#### Written comments

- **Online:** Email to [BridgetonComments@health.mo.gov](mailto:BridgetonComments@health.mo.gov)
- **Postal Mail:** Lorena Locke, Bureau of Environmental Epidemiology, Missouri Department of Health and Senior Services, P.O. Box 570, Jefferson City, MO 65102 **Mailed comments must be postmarked by November 20, 2018.**

To submit an odor concern, see the Missouri Department of Natural Resources (DNR) website at <http://dnr.mo.gov/bridgeton/>.