

Chair Sollmann, Vice-Chair Smith, members of the Senate Energy & Environment Committee, my name is Aaron Harris, a firefighter and nurse, living in Corvallis.

I write to you today in strong support of Senate Bill 726, and to discuss firefighter safety as it relates to landfills.

Oregon has experienced a number of small and medium landfill fires over the past several decades, several of which I have personally fought and commanded. So far we have been fortunate to not see a catastrophic fire erupt, like others around the country that can last for weeks, months, and even years.

I deployed to California last month for 3 weeks to support the LA fires and surrounding communities. While I did not experience a landfill fire during this time, a fire alert app widely used, called WatchDuty, highlighted the potential risk. Each landfill throughout the area was shown to have a hot-spot over it. It was a useful tool to alert us to the existing dangers, if a fire were to head towards one. It highlights the known dangers of landfill fires and it generated good discussion about these high risk locations.

According to a report written by the National Fire Data Center, US Fire Administration under FEMA, titled: "Landfill Fires: Their Magnitude, Characteristics, and Mitigation", there are many concerns and discussion points surrounding the ever present risk of landfill fires. These risks include the structural integrity of the landfill itself, air and water pollution concerns for the surrounding community, but the most timely concern is for the safety of the firefighters and personnel engaged in fighting landfill fires.

As stated in the FEMA report, "Landfills are the largest source of methane emissions in the United States... Methane is highly flammable and plays a large role in the ignition of landfill fires." (page 2)

FEMA further states,

PREVENTION. Fire prevention actions can reduce property damage and the risk of injury and death, as well as decrease health and environmental hazards associated with landfill fires. As a rule, the cost of prevention is less expensive than the cost of fighting and cleaning up a fire. In many cases, particularly at larger landfills, fire prevention activities are mandated by law. **The principal methods for landfill fire prevention include effective landfill management and appropriate methane gas detection and collection.** (page 2) (emphasis mine).

METHANE GAS DETECTION AND COLLECTION. Landfill gas emissions can be a hazard to the environment and to the health of residents surrounding landfill sites. Methane gas, a flammable gas, can present a fire hazard. Federal regulations require all MSW landfill operators to monitor the emission of methane on a quarterly basis. If methane levels in or around the landfill become explosive, the landfill operator must take immediate steps to mitigate the danger. The

operator must also implement a remediation program to prevent future explosive buildups.”(FEMA, page 20).

Once a landfill fire has started, the report discusses these specific concerns, “Depending on the type of landfill and its contents, the smoke from a landfill fire may contain dangerous chemical compounds, which can cause respiratory disorders and other medical conditions. Even if the smoke is benign, it can still aggravate existing respiratory conditions and reduce visibility around the landfill. In addition, contrary to conventional thinking, the use of large amounts of water to suppress a landfill fire can actually make the fire worse by increasing the rate of aerobic decomposition, which increases the heat available inside the landfill. Further, runoff from suppression efforts can overwhelm a landfill’s leachate collection system and contaminate ground or surface water sources.” (page 4)

More comprehensive monitoring of landfill methane emissions is one of our greatest modern tools to reducing methane leaks and therefore reducing the risk of landfill fires. If landfill operators in Oregon were already conducting and reporting thorough and extensive monitoring to reduce these risks to their operation, community, and local firefighters, additional legislation would not be required. To date, this has not occurred and therefore I urge you to please pass and implement strong requirements for landfills within the State of Oregon to utilize these modern monitoring technologies to protect firefighters who live near these landfills. Reduced methane emissions will protect firefighter health in everyday life, reduce their risk of ever fighting a landfill fire, and reduce the scope and danger of any landfill fires they may be called upon to fight.

Thank you for your consideration on this critical health and safety matter.

Sincerely,

Aaron C. Harris

FEMA (May 2002). *Landfill Fires: Their Magnitude, Characteristics, and Mitigation*. FEMA, US Fire Administration, National Fire Data Center. https://www.govinfo.gov/app/details/GOVPUB-HS5_100-PURL-LPS80595