

Re: In support LD 1073

Senator Tepler, Representative Doudera and Honorable members of the Environment and natural Resources Committee,

I am Bruce Taylor from the town of Sweden. I am a physician and a former member of the select board. I support LD 1073.

Of the 44,273 words in our Chapter 200 rule for metallic mining, protection of public health is mentioned over 50 times. In the rule there is no definition or criteria given. Recently before this committee, Rob Wood, Director of the Bureau of Land Development for the DEP, when asked to define public health and safety, he replied:

“it shows up a lot in our statutes and rules that we administer in the DEP but **I’m not sure we have a definition**. That is a case by case determination. But I don’t think we have a definition that would point to when a project is considered health and safety.” Mr. Wood was then asked, “So it sounds as if is up to interpretation?” Mr. Wood answered “**Yes**”.

Recently, the Portland Press Herald reported on the long history of toxic mercury emissions from the HoltraChem plant near Orrington. It took a years from issuing the consent decree, then to work through the legal and administrative process until finally today the start of remediation. During all that time mercury continued to spread into our environment. Look at the bankrupt Callahan Corporation mine superfund site in Brooksville that closed in 1972. Despite ongoing remediation, the area around Goose Pond is still closed to shell fish harvesting due to toxic levels of metals.

By the lack of a definition and criteria for the term “public health” and the concern that any effective mitigation of harm from pollution could not occur in a timely manner greatly increases the potential and severity of unnecessary harm. The aim of LD 1073 is to prevent human health risks from occurring in the first place and to monitor human health during the mine’s active operations and importantly, post closure.

### **Human Health Impact**

In the chapter 200 rule, the criteria for the Environmental Impact Statement (9. Application Requirement, Section G.) requires an inventory of biologic resources such as wildlife, plants and endangered and their health status. There is not one reference to the status of any human health factor. In fact, the only health factor assessed in the entire rule that I could find was the requirement to list the telephone numbers for local ambulances and hospitals in the contingency plan section.

LD 1073 requires an in-depth baseline human health assessment prior to onset of mining. This should identify vulnerable populations such as those with chronic disease such as asthma (who are sensitive to inflammation from fine particulate matter or metals), pregnant mothers and their developing fetus, elderly, especially those with chronic disease, and those whose cultural or subsistence practices are dependent upon air, water or soil that may be contaminated by emissions. Once mining operations commenced, periodic risk assessment by the US EPA Human Exposure Model (HEM) or similar models.

## **SITING**

The chapter 200 rule establishes protective setbacks for state property – parks, wildlife management areas, museums - between ¼ to one mile. Surprisingly, for citizens homes, schools, day care, locations considered sacred to Native Americans, etc., setbacks from toxic waste units or processing sites using chemicals or that release hazardous air pollutants are only 1000 feet.

“All activities, other than mine waste units and beneficiation facilities and the limit of excavation, must be set back a minimum of 300 feet from a property boundary”. “All activities” could include chemical storage, sulfuric acid production and storage, diesel power generation, cement mixing, water treatment facilities, chemical storage that could contain cyanide (which is not prohibited) etc. but the state gets up to 1 mile.

LD 1073 directs the state to correct the lack of protective setbacks for the citizens.

## **RIGHT TO KNOW NOTIFICATION**

Mining communities have a right to know the hazards and risks from mining that could affect them. This should be contemporaneously available in a transparent manner. This includes all water and air emissions monitoring data, including all NAAQS pollutants and hazardous air pollutants emitted. Results of any health assessment will be available. It allows for a discussion with the mining company on concerns they have on any monitoring or studies

## **INSURANCE REQUIREMENT**

Comprehensive general liability insurance is required for the public in affected mining communities that will cover harm from pollution of air, water or soil and from fires, floods and explosions from mining activities.

## **IMMINENT ENDANGERMENT**

Allows for action to be taken before an event occurs that could cause significant harm to the public regardless whether a violation has occurred.

## **CLIMATE ADAPTATION MEASURES**

There must be specific plans for events such as flooding, wildfire, and drought. Also required are climate adaptation plans covering mining operations and post closure waste storage.

## **AIR QUALITY MONITORING**

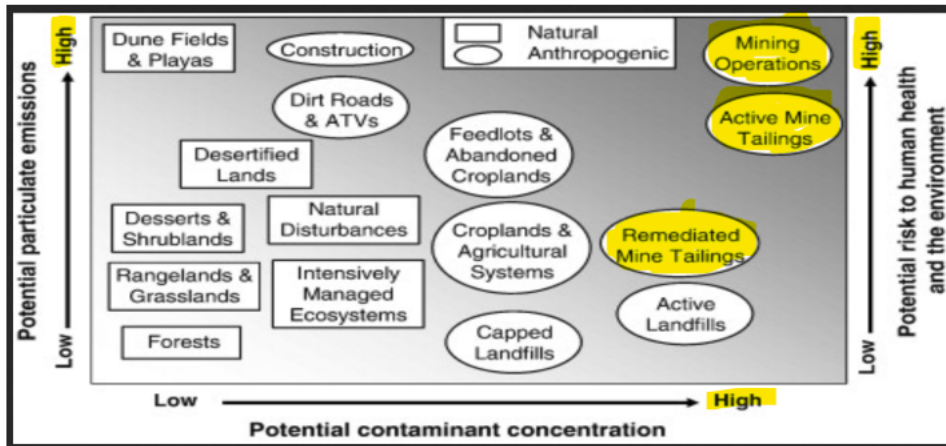
Due to the close proximity of private property especially for beneficiation, there shall be fence-line monitoring. The Human Exposure Model (see Human Health Impact above) is typically employed for areas of no more than 30 miles radial distance. Besides metals and their derivatives, pollution from petroleum-based products will be monitored. For smelting and refining modeling will need to be modeled also.

Metallic mining is vital for our economy and our national security. However, human health should not be placed at risk in that important endeavor.

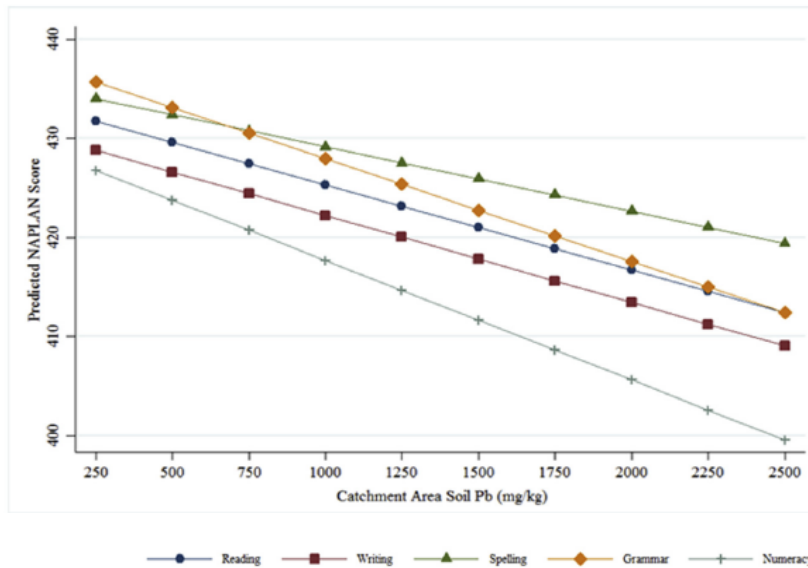
Thank you for your consideration.

Bruce Taylor MD, FAAP

“Although there are numerous natural and anthropogenic sources of atmospheric particulates, *mining operations pose the greatest potential risk to human health and the environment*” Sc. Total Envir., 433 (2012) pp. 58 - 73



C. Dong et al. / Environmental Pollution 207 (2015) 345–356



The higher the lead soil concentrations the lower the standardized test scores in an Australian mining community.



