



**LAKE PEND OREILLE  
WATERKEEPER®**

*Our Lake for Life*

## **SCOPTING COMMENTS FOR PACWEST SILICON SMELTER**

Date: Oct. 26<sup>th</sup> 2018

To: Washington State Department of Ecology  
C/O Meg Bommarito, Regional Planner  
From: Lake Pend Oreille Waterkeeper, City of Sandpoint, Idaho

Dear Ms. Bommarito,

Please accept the following scoping comments submitted on behalf of Lake Pend Oreille Waterkeeper regarding the proposed PacWest Silicon Smelter. We appreciate your careful consideration of these comments when developing the draft Environmental Impact Statement (EIS) for the project.

Lake Pend Oreille Waterkeeper (LPOW) is a non-profit organization that serves the City of Sandpoint and surrounding communities. We work to protect water quality in the Clark Fork/Pend Oreille (CFPO) watershed. Our jurisdiction begins at Albeni Falls Dam, less than 5 miles from the proposed smelter location and extends west to the Cabinet Gorge Dam. Our communities depend on the CFPO watershed for drinking water and recreational uses. As historic wind patterns illustrate, pollutant-laden airborne emissions from the proposed smelter would broadcast over Lake Pend Oreille and its associated waterways and have potential to impair freshwater resources. For this reason, it is imperative that Washington State Department of Ecology (DOE) adopt a broad scope that includes the CFPO watershed when preparing the draft EIS for the proposed project. DOE has already set this precedent when reviewing other projects<sup>12</sup> that had the potential to seriously impact the health of aquatic ecosystems and quality of life of residents that lived outside of the immediate project area. We respectfully request that DOE perform the same due diligence in this case.

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<sup>1</sup> <https://fortress.wa.gov/ecy/publications/documents/1706013.pdf>

<sup>2</sup> <http://www.co.whatcom.wa.us/DocumentCenter/View/3157/Environmental-Impact-Statement-Overview-PDF?bidId=>

### **Project Description:**

The overall project description provided by the DOE<sup>3</sup> is too vague and lacks clarity specifically in the areas of transportation and air emissions. Please refer to the following areas of impact for a more detailed explanation of the components of the project description that are lacking.

### **Water and Air Quality:**

The project description does not articulate the specific types of pollutants that will be released into the air as byproducts of the silicon smelting process. These primarily include carbon dioxide, sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and particulate matter among others. SO<sub>2</sub> and NO<sub>x</sub> airborne pollutants can travel long distances. These compounds react with water and oxygen in the air to form sulfuric and nitric acids that fall to the ground as “acid rain” in the form of rain or snow, and even fog and hail. These acidic particles and gases can also attach to surfaces in the absence of moisture via dry deposition.

Acid rain and the addition of acidic particles to Lake Pend Oreille and other water bodies in the greater Sandpoint area can have serious impacts on ecosystem health. As pH decreases over time, aquatic plants and wildlife will have different abilities to cope, with some species exhibiting higher sensitivity than others. Of notable susceptibility to the effects of acid rain are local waterways with low background pH levels. For example, the Little Sand Creek drainage in Bonner Co., ID (monitored by LPOW in 2017) contains several tributaries with pH levels below 6.5. These levels reflect water chemistry that is characteristic of granitic substrate (i.e. low conductivity, alkalinity). Consequently, these waters have a considerably lower capacity to buffer the influx of acid rain than do non-granitic streams, especially during periods of low stream flow.

Freshwater ecosystems thrive within a limited pH range (pH of 6-8) and can become impaired when pH drops below 6. As two of the Little Sand Creek tributaries that LPOW monitored have pH values at or near 6.0, acid rain deposition could significantly impair the quality of these streams which provide habitat to a variety of fish species. It's likely that other tributaries to Little Sand Creek also exhibit low pH levels.

In addition to the ecological consequences of acid rain deposition on these waters, public health is also at risk. Little Sand Creek serves as a major source of drinking water to the greater Sandpoint area. Furthermore, Little Sand Creek drains into Sand Creek and eventually into Lake Pend Oreille, another significant source of drinking water for thousands of residents. The Environmental Protection Agency recommends drinking water pH remain within 6.5 to 8.5. When highly-corrosive, acidic waters interact with non-copper metal pipes, the metal can corrode and leachate can occur. Consequences to human health from consuming metal-contaminated water are well documented<sup>4</sup>. **An analysis of anticipated changes in pH to freshwaters resulting from smelter emissions and acid rain deposition must be included in the draft EIS.**

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<sup>3</sup><https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Industrial-facilities-permits/PacWest-Silicon-project>

<sup>4</sup> Geneva. World Health Organization. *Guidelines for Drinking-water Quality*. Vol. 1:3<sup>rd</sup> ed., 2004.

The project description fails to include specific projected volumes of ground water and/or surface water to be used for industrial and indoor domestic use. It also fails to indicate where project-related water needs will be sourced from, where a ground water well will be drilled, or if these sources of water have the capacity to accommodate the project needs without impairing the quality and quantity of water resources available to local residents and the environment. **We respectfully request that specific locations of all groundwater wells, surface water intake infrastructure, and volumes of ground water and surface water to be used are included in the project description and in the draft EIS. We also request that an analysis is included in the draft EIS to determine whether water sources have the capacity to accommodate the proposed project without impairing existing quality or availability to the public and the aquatic environment.**

The PSD Modeling Protocol<sup>5</sup> provided by PacWest in October 2017 (then called HiTest Sands), states that operation of the smelter will emit approximately 320,000 metric tons (mt) per year of carbon dioxide, 760 mt per year of sulfur dioxide and 700 mt per year of nitrogen oxides. These compounds are in addition to small (2.5) and large (10) size particulate matter in amounts that are also expected to exceed the Prevention of Significant Deterioration (PSD) threshold. **A comprehensive and accurate accounting of byproduct concentrations must be included in the project description and any analyses/findings included in the draft EIS.**

Furthermore, the modeling methods proposed by PacWest to DOE to assess air quality impacts (which could lead to acid rain deposition) of the proposed smelter do not utilize site-specific meteorological monitoring data and are therefore inappropriate. **We respectfully request that on site meteorological data is collected for one year to most accurately model pollutant dispersal as these pollutants have the potential to significantly degrade air and water quality in the greater Sandpoint area.**

The draft EIS should include a detailed analysis and findings of the following:

- **The extent to which acid rain deposition could impair water quality in Lake Pend Oreille and other waterways within the greater Sandpoint area.**
- **How prolonged acid rain exposure resulting from the operation of the silicon smelter will impact the health of aquatic flora and fauna and terrestrial wildlife in the greater Sandpoint area.**
- **How decreased pH in Little Sand Creek will impact water treatment plant mechanical infrastructure and the integrity of water delivery systems to the public.**
- **How deterioration of Lake Pend Oreille and other waterways within the greater Sandpoint area will impact the economy of Sandpoint.**
- **How risks to public and ecosystem health from impaired waterways and the local economy will be monitored and mitigated for.**
- **How airborne pollutants will impact the overall health of residents and visitors of Sandpoint.**

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<sup>5</sup> [https://9b37abdd1c3135d9659b-298f012ea728efea7c302ad9a6f7bba0.ssl.cf2.rackcdn.com/knrd/HiTest\\_Sand\\_Newport\\_PSD\\_Modeling\\_Protocol.pdf](https://9b37abdd1c3135d9659b-298f012ea728efea7c302ad9a6f7bba0.ssl.cf2.rackcdn.com/knrd/HiTest_Sand_Newport_PSD_Modeling_Protocol.pdf)

- **How risks to public health from compromised air quality will be monitored and mitigated for.**
- **How compromised air quality will impact the local economy.**
- **How airborne pollutants will impact visibility in Sandpoint over the course of the year in accordance with other factors such as wood burning stove and wildfire smoke.**
- **How risks from compromised air quality will be mitigated for.**

### **Transportation:**

The project description does not include information about the number of trucks and trains that will be necessary to transport 170,000 tons of quartz rock (by train), 150,000 tons of blue gem coal (by train), and 130,000 tons of wood chips (by truck) each year to the proposed project site in Newport, WA.

The routes that these trucks and trains will travel is also not articulated in the project description. Transportation routes and truck/train volumes through Sandpoint must be examined in detail in the draft EIS. Specific questions include:

- **What routes will rail and truck traffic travel to transport materials to and from the proposed smelter?**
- **How many rail cars containing coal and charcoal, quartz rock, silica and associated materials will be transported annually along these routes?**
- **Will rail cars carrying raw materials be covered during transport? If not, why?**
- **How will the escape of raw materials from rail cars be monitored and mitigated?**
- **What are the maintenance costs associated with increased truck traffic through Sandpoint related to silicon smelter operations?**
- **What are the impacts to emergency response (police, fire/EMS) from increased truck and train traffic related to the operation of the silicon smelter? How will associated risks be mitigated for?**

### **Alternatives:**

We respectfully request that DOE consider the “No Action” alternative for the proposed project, and also consider an alternative that places the location of the proposed project outside of the area of influence for the CFPO watershed. Under these scenarios, DOE should compare the environmental and human health, and socioeconomic impacts (to the greater Sandpoint area) of the PacWest silicon smelter as currently proposed versus if the proposal were not to occur at all, or if it were to occur in a different location.

**Summary:**

Thank you for your careful consideration of these scoping comments. Clean air and water are essential components of the health, culture, and vitality of our local environment and community. Lake Pend Oreille Waterkeeper works to protect water quality in the CFPO watershed so our magnificent waterways remain swimmable, fishable and drinkable for future generations. We strongly recommend that DOE support the continued unimpeded quality and function of CFPO watershed ecosystems that serve the greater Sandpoint area by thoroughly considering the concerns and comments detailed here. We look forward to reviewing a draft EIS that includes important information specifically addressing how the proposed PacWest silicon smelter will impact the CFPO watershed, its ecosystems, and the health of residents and visitors of Sandpoint.

Sincerely,

Chantilly Higbee  
Lake Pend Oreille Waterkeeper  
Waterkeeper