Trevor Scherr

I oppose the proposed smelter. I own a fishing guide business and vacation rentals in the region. I have been fishing on Lake Pend Oreille and Pend Oreille River since I was a child. The current fishing is the best I've seen it in my life. I'm raising my 6-year-old son and 3-year-old daughter to learn, as I have learned from my father, about the art and beauty of fishing and the connection to the pristine nature in this area.
This business and fishing are my livelihood and future. My family and employees of my business depend on the lake and river staying in its pristine state. My growing business brings income and tourism to Idaho and Washington.
My family and I are so concerned about the proposed smelter, we have halted our construction plans to build 5 more vacation rentals on Pend Oreille River. We will not move forward on this or contribute any substantial financial contribution to this area until we are rest assured the smelter will not proceed.
1) The proposed smelter would alter the pH of the water in Pend Oreille County and Bonner County, in addition to causing acid rain (https://www.epa.gov/acidrain/effects-acid-rain.)
QUESTION: How does PacWest intend to prevent this?
i) Jayson Tymko, President of HiTest, has recently told reporters at the Bonner County Daily Bee, that "air quality here will be no worse with the smelter" and "One hundred percent of what the plant emits is safe." (Bonner County Daily Bee, Oct. 2018)
ii) Tymko, in his own letter to the WA DOE, dated June 5, 2018 and signed by him, says, "The facility is expected to emit regulated air pollutants, including criteria pollutants, hazardous air pollutants (HAPs), toxic air pollutants (TAPs), and greenhouse gases (GHGs) to the atmosphere. Annual emissions of at least one criteria pollutant is expected to exceed the prevention of significant deterioration (PSD) major source threshold (250 tons per year), which makes the project subject to review..." Letter can be found at http://pocedc.org/.hitest-silicon/
iii) To quote Tymko from the pre-construction press release dated Oct. 3, 2017, "Our management's approach to business is not to create false expectations."
QUESTION: How will Jayson Tymko, PacWest/HiTest be held responsible and accountable now and moving forward?
2) The proposed smelter will decimate the fish population and fish reproduction and change the water ways forever. A neutral pH is 7 and considered ideal. Lake Pend Oreille, due to limestone bedrock, has a more basic pH around 7.6 to 8, according to the Lake Pend Waterkeepers website
http://www.lakependoreillewaterkeeper.org/wqmp-data-and-resource-hub.html#.W9KdvainE2y.
i) According to the Publication, Fundamentals of Environmental Measurements, if the water's pH is outside of optimum ranges, organisms can become stressed or die. If the pH of water is too high or too low, the aquatic organisms living within it will die (Fondriest.com.)
ii) According to Lenntech.com, Acid deposition has many harmful ecological effects when the pH of most aquatic systems falls below 6 and especially below 5. Here are some effects of increased acidity on aquatic systems:
(a) As the pH approaches 5, non-desirable species of plankton and mosses may begin to invade, and populations of fish such as smallmouth bass disappear.
(b) The most serious chronic effect of increased acidity in surface waters appears to be interference with the fish' reproductive cycle. Calcium levels in the female fish may be lowered to the point where she cannot produce eggs or the eggs fail to pass from the ovaries or if fertilized, the eggs and/or larvae develop abnormally (EPA, 1980).
QUESTION: What will be done to ensure the smelter does not harm the fish population and their reproductive abilities? What metrics will be in place to track this? How often and for how long, will an independent party be gathering and reporting this data? Will it be public information? What will the consequence be for PacWest if the fish population is harmed?
3) Since the ecosystem has evolved in the past few thousand years with this somewhat basic pH, it may buffer acidic precipitation for a while.
QUESTION: PacWest should answer how long this buffer will last? What will be done once the buffer is gone?
4) The smelter will pollute Northern Idaho air and water and possibly create a microclimate 'warming' from increased greenhouse gases floating this way.
QUESTION: What will be done to study and mitigate this?
5) Acid rain would impact our snowpack, which is our snowmelt every year, going into our drinking water in Bonner County. Sandpoint's main drinking water source is at risk for contamination. Sandpoint's main water source is Little Sand Creek, which is more acidic, so that watershed is vulnerable to acid precipitation. How will PacWest assure that the City will continue to meet the standards, if the smelter's air pollution lowers the pH of the Creek source, which then will put more metals (whether naturally-occurring, OR released in the smelter plume) into the water shed (drinking water source)? Attached is a water quality study of that creek. Also see annual City Consumer Reports, which the EPA

requires the City to publish each year to show what parameters of water quality is tested the previous year and compare those to the federal water quality standards.
http://www.sandpointidaho.gov/your-government/departments/public-works-building/water/consumer-confidence
6) There is no aquifer underneath Bonner County and most wells are shallow in this area. (Idaho Dept of Water Resources, idwr.idaho.gov)
QUESTION: If the topical water (drinking water) gets polluted, what is our alternative for fresh water supply?
QUESTION: What will be done to create clean drinking water for Bonner County?
7) The unusually good water quality we have in this area draws new and continuing residents to this area, in addition to anglers. The proposed smelter will be in an area known for its pristine environment which drives many economic factors; fishing, hunting, tourism, skiing, etc.
QUESTION: Will the proposed smelter negatively impact the current economy? Myself, many business owners and residents of the area have stated they will move if the smelter is built. What kind of economic study will be done in this region pertaining to the middle and upper class relocating due to the smelter?
QUESTION: Will a fund be set aside for those residents not financially able to move in order to avoid the dangerous effects of the smelter? How much will be set aside for their long-term medical care and medical bills?
8) Acid rain will kill our forests. The natural beauty of the forests in this area, are why many of us live here. The acid rain would also eradicate the foliage around the rivers and lakes, which eagles, Hawks, Ospreys, etc. depend on for their survival.
QUESTION: What kind of Conversation Fund will PacWest set up to ensure the forests and inhabitants will not be negatively affected by the smelter?
9) QUESTION: How will the region's air inversions, due to the mountainous terrain be considered in the allowable pollution threshold?
10) QUESTION: Will the process to determine allowable rates of pollution consider the already present damage to air quality during fire season?
11) QUESTION: How will the youth, elderly, asthmatic and those with lung problems be affected by the additional air pollution? What will be done to study this topic and mitigate any future damage?
12) QUESTION: The proposed smelter site sits on the border of Washington and Idaho. Will Washington Department of Ecology work with Idaho Department of Environmental Quality for a combined EIS process?
I'm monumentally concerned about the overall effects the smelter will have on this area. If it goes through, I will move my family and business and my employees will be out of work. If the proposed smelter is built, this area will be completely decimated. There will be more lost jobs than gained, more lost tax dollars than earned, and a moral price that will never be able to be paid back. This topic is of supreme importance for many of us in this region. Thank you for your time and consideration.

Little Sand Creek Watershed and Sand Creek Water Quality Monitoring

Introduction:

The primary goal of the project was to collect water quality information from 3 locations in the Little Sand Creek Watershed with the intention of creating a baseline dataset. This baseline data will be helpful in determining how future increased trail use either impacts or does not impact water quality in the watershed.

The secondary goal was to collect stormwater from the "Chestnut Drainage" in Sandpoint. The Chestnut Drainage collects stormwater from a former wood treatment facility as well as the surrounding streets and drains to Sand Creek. The stormwater originating from this location is tested for the presence of semi-volatile organic carbons, which can adversely affect the health of the users of Sand Creek.

Methods – Little Sand Creek Watershed

Samples were collected from 3 locations in the Little Sand Creek Watershed between September and November (Table 1; Figures 1-3). The extremely dry conditions over the summer months resulted in low-flow conditions, preventing earlier collection. Fall rains helped to alleviate low flows, for the most part, allowing direct collection of samples into laboratory-provided sample bottles. Bottles were stored at 4 degrees Celsius and transported to Coeur D'Alene.

Laboratory analyses were conducted by SVL Analytical according to LPOW's established Quality Assurance Project Plan that was developed for our seasonal lake and river wide water quality monitoring program. Dissolved oxygen and pH testing were performed by LPOW's Executive Director.

Table 1. GPS Coordinates of Watershed Sample Locations

	Latitude	Longitude
Watershed #1	48.329012	(-)116.612606
Watershed #2	48.330560	(-)116.638366
Watershed #3	48.312431	(-)116.551545

Figure 1. Location of Watershed #1 collection site.

Figure 2. Location of Watershed #2 collection site.

Figure 3. Location of Watershed #3 collection site.

Results – Little Sand Creek Watershed

The water temperature of the samples decreased over time as the air temperature dropped (Figure 4). Watershed #2, which was collected at the highest elevation, was the coldest, while Watershed #3, which was collected in the valley, was the warmest across all sampling dates.

All samples had high concentrations of dissolved oxygen (DO), which generally increased with time. Since DO dissolves better in colder water, this was an expected result (Figure 4). Alternatively, pH measurements across all sites were surprising. With the exception of one measurement from Watershed #3, all pH readings were 6.5 or below (Figure 4).

On the pH scale, 7 is neutral, so the vast majority of Watershed samples were on the acidic side. This is in stark contrast to the pH of lake samples which demonstrate elevated pH above 7. Lake samples are basic due to the presence of limestone. The pH of the Watershed samples reflects a more granitic geology.

Concentrations of total organic carbon (TOC) generally decreased over time, which is consistent with the degradation of organic matter that occurs at the end of the growing season (Figure 4).

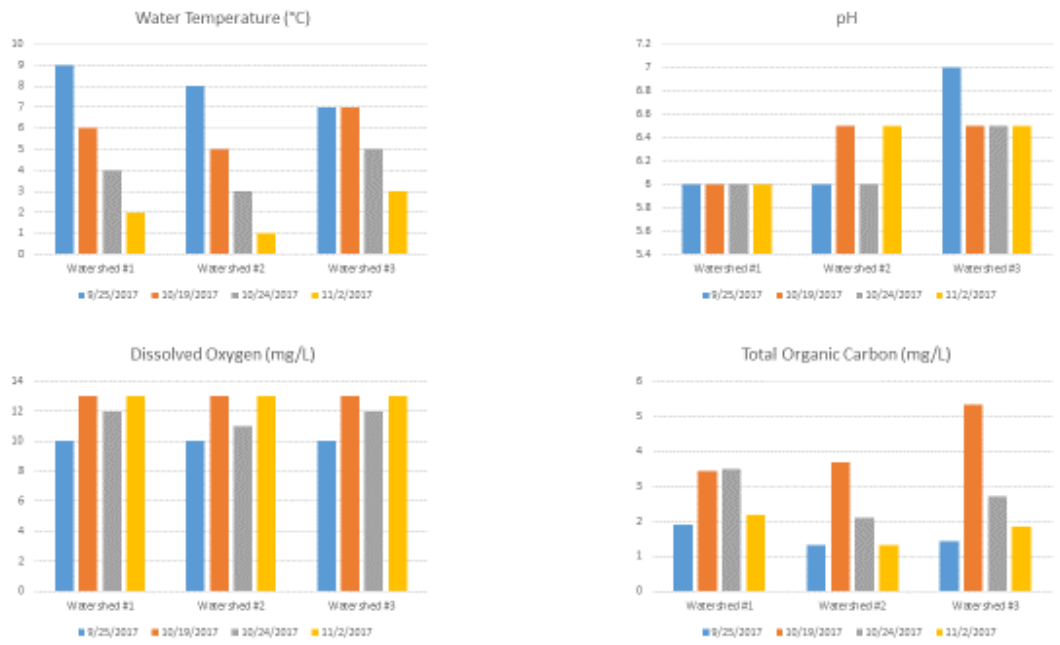

Figure 4. Physical Measurements and Total Organic Carbon concentrations for Watershed samples.

Total phosphorous (TP) concentrations, which includes both inorganic and organic forms of phosphorous, were all below the nearshore total maximum daily load (TMDL) for Lake Pend Oreille (0.012mg/L) (Figure 5). While this TMDL only applies to the nearshore areas of the lake, and is designed to limit phosphorous pollution, we use it as a reference for all of our water quality measurements.

While low TP concentrations were expected for the Watershed samples, we did anticipate that Watershed #3 would have the highest concentration of the 3 locations due to its valley location and proximity to development.

Similarly, we didn't expect any of the samples to contain measurable levels of ortho phosphrous (OP). All but 4 of the samples registered above the reporting limit for OP, which is 0.002mg/L (Figure 5). OP is rapidly assimilated by plants and phytoplankton (algae) and is usually undetectable in lake and river samples. Detectable levels of OP in the Watershed samples may be related to the fact that photosynthetic activity during the sampling period was rapidly decreasing.

All samples, with the exception of one, were below the level of detection for the two types of nitrogen measurements performed (Figure 5). The reporting limit for nitrate+nitrite (inorganic nitrogen) is 0.05 mg/L while the reporting limit for total kjeldahl nitrogen (organic nitrogen plus ammonia) is 0.5 mg/L. This is similar to observations we have made at most areas of the lake

and river that LPOW monitors on a seasonal basis. Low concentrations of nitrogen may reflect limited inputs from the surrounding land and/or microbial removal processes.

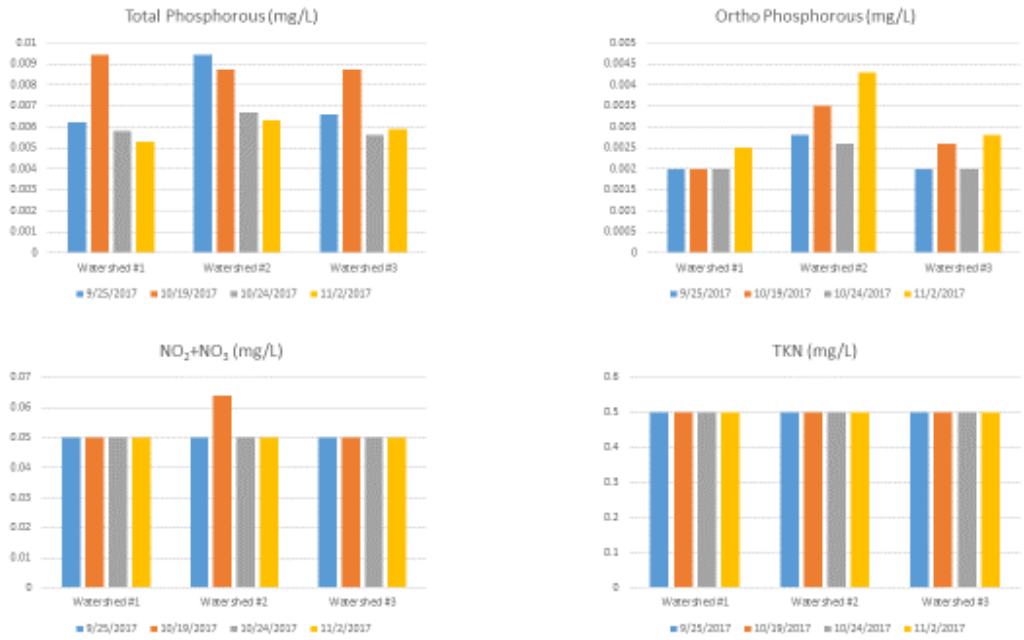

Figure 5. Nutrient concentrations for Watershed samples.

The highest bacterial concentrations were observed for Watershed #1 in early October (Figure 6). While *E. Coli* is a direct indicator of fecal pollution by either animals or humans, total coliforms also include bacteria that are naturally occurring in soil. The concentration of total coliforms was generally higher for Watershed #3, which would be consistent with higher sedimentation from more intense land use.

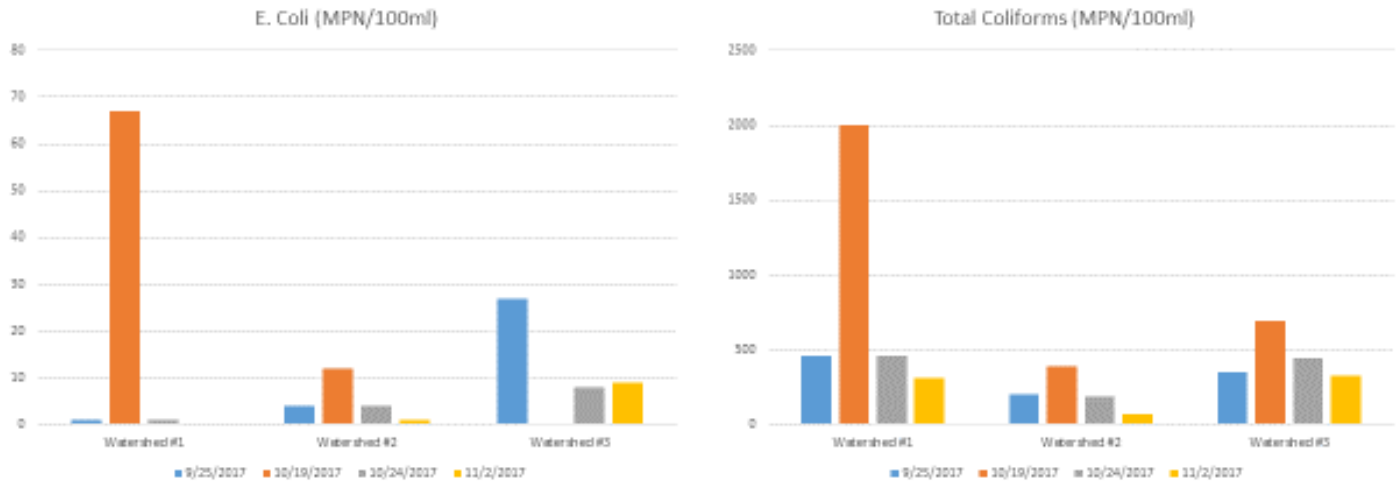

Figure 6. Bacteria concentrations for Watershed samples.

Conclusions – Little Sand Creek Watershed

The data collected from the 3 Little Sand Creek Watershed locations indicate that water quality appears to be adequately protected as demonstrated by the high levels of dissolved oxygen coupled with low levels of nutrients and bacteria.

If recreational use in the Watershed intensifies, we would expect to see changes to these water quality parameters. For example, nutrient concentrations and bacterial loading would likely increase due to erosion. Additionally, total organic carbon concentrations would likely increase due to increased biological activity (in response to more nutrients) and we would likely witness decreased dissolved oxygen from microbial breakdown of vegetative matter.

If the proposed HiTest silica smelter is approved, we may also detect decreases in pH in response to acid rain resulting from air emissions from HiTest's operations. We would likely witness a more rapid change in pH in the mountain streams compared to the lake due to the lake's high buffering capacity.

Additional sample collection and analysis in the future will help to flush out this initial baseline of information, allowing us to more easily determine if changes to the recreational use of the Little Sand Creek Watershed impact water quality.

Methods - Sand Creek:

The flow at the outfall of the Chestnut Drainage, which empties into Sand Creek, was evaluated for adequate stormwater collection on the same dates as collection of the Watershed samples. The stormwater flow was inadequate for collection in September, but samples were collected in October and November.

Stormwater samples were collected into a 1 liter amber glass bottle, stored at 4 degrees Celsius and transported to SVL Analytical Laboratory for analysis of semi-volatile organic carbon (SVOC) concentrations.

Results - Sand Creek:

Our previous sampling efforts in the springtime at this location revealed the presence of pentachlorophenol (PCP) in the stormwater. However, our efforts this fall did not result in the detection of PCP in any of the samples.

Interestingly, two other forms of SVOCs were detected in the stormwater collected in November. These included 4-Nitrophenol (4.84 µg/L) and bis(2-Ethylhexyl)phthalate (DEHP) (5.40 µg/L). 4-Nitrophenol has several uses including use as a pH indicator, and as a raw material for fungicides and insecticides, certain types of drugs and as a dye for leather. DEHP is present in hydraulic fluid and is as a plasticizer used in PVC.

Conclusion – Sand Creek

We believe the negative PCP results are the outcome of an extremely dry summer and subsequent lowering of the groundwater table. PCP and the other chemicals of concern located on the Joslyn property are present in the soils and leach into the groundwater. In the spring, the groundwater table rises and mixes easily with surface water, resulting in detection of PCP in the stormwater collected, in part, from this site.

Additional testing would be needed to determine if certain types of SVOCs are frequently detected in the stormwater at this location as well as their possible place of origin. Specifically, testing in the spring will help to confirm our hypothesis that PCP is more easily mobilized from the Joslyn Property when groundwater mixes with surface water run-off.