Scoping questions

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Pend Oreille County Development Regulations and PacWest Silicon, LLC.
Newport proposed silicon metal smelter scoping questions

Pend Oreille County Development Regulations, Adopted by the Board of County Commissioners and Amended December 22nd, 2015, Chapter XX.36 "Environmentally Sensitive Areas" states that "The purpose of this Chapter is to identify and protect environmentally sensitive areas, also known as critical areas, and to supplement the County's development requirements by providing additional land use controls without violating the constitutional rights of property owners.

Those environmentally sensitive areas, or critical areas consist of wetlands; geologically hazardous areas; fish and wildlife habitat conservation areas; frequently flooded areas; and critical aquifer recharge areas. (page 118-119)

"Property Owners or Project Sponsors shall, when designing proposed new development activities that may potentially affect environmentally sensitive areas, use the following six (6) measures, listed in priority order, to avoid, minimize, and/or mitigate adverse impacts:

1. **Avoiding the adverse impact altogether by not taking a certain action or parts of an action or moving the proposed action." *POC Regulations Development*, page 130.**

The proposed Newport silicon metal smelter location is proposed to be sited either on top of or within 300 feet of the ground water of the *Little Spokane River Aquifer*.

Background: Groundwater is an important resource for domestic, commercial, and agricultural usage in the Little Spokane River Basin, and groundwater discharge helps maintain streamflow in area streams. Consequently, as the population grows, and commercial and agricultural activity increase, so does the demand for ground water. However, the quantity of usable groundwater, and the potential effects of changes in climate or human activities on groundwater resources, as well as potential impacts to streamflow, are not well understood.
https://wa.water.usgs.gov/projects/littlespokane/

Groundwater movement in the Little Spokane River Basin mimics the surface-water drainage pattern of the basin, moving from the topographically high tributary-basin areas toward the topographically lower valley floors. Water-level altitudes range from more than 2,700 ft. to about 1,500 ft. near the basin's outlet. https://pubs.er.usgs.gov/publication/sir20135124

Scoping Questions:

a. What steps will PacWest take to avoid, minimize, and/or mitigate the adverse impact its proposed silicon metal smelter will have on the "critical" Little Spokane River Aquifer ground water and the wetlands that exist due to the aquifer?

Background: PacWest has stated that it "will use a groundwater permit exemption for the 10,000 gallons of water they estimate as daily use to operate a silicon smelter just south of Newport." "Smelter. Beacon. 10 Sept. 2018."

According to the ***WRIA 55 (Little Spokane River) Ground-Water Inventory and Mapping Project June 2009,*** it is a priority of the WRIA 55/57 WIT to investigate the impact of permit exempt wells on aquifers and stream flows within WRIA 55. With that being the case:

b. It is imperative that PacWest Silicon, LLC., prior to any permitting approval, provide the data for the following:

- Conduct seepage runs on the Little Spokane River to determine the location and magnitude of groundwater contributions and how the proposed silicon metal smelter water usage would impact those contributions;
- Implement groundwater level monitoring at all locations along the Little Spokane River.
- Evaluate domestic water demand patterns and how the proposed silicon metal smelter would impact those patterns;
- Identify and evaluation of existing water rights within the basin to meet the needs of areas identified as future water service areas; and evaluate how the proposed Newport silicon metal smelter water usage would impact those areas;
- Submit an evaluation of existing rural residential water demand and how the proposed Newport silicon metal smelter water usage would impact those demands
- Provide the Department of Ecology and the public with precise blueprints and plans for how much water will be used in all areas of the proposed Newport silicon metal smelter, plus how all water usage will be recycled or disposed of as waste water.
- Provide the plans and blueprints for where all potable and other water will be acquired.

https://pubs.usgs.gov/sir/2013/5124/pdf/sir20135124.pdf

https://wa.water.usgs.gov/news/2013/news.sir2013.5124.htm

https://fortress.wa.gov/ecy/publications/documents/1111059.pdf

http://apps.leg.wa.gov/wac/default.aspx?cite=352-32-15001

http://apps.leg.wa.gov/WAC/default.aspx?cite=173-557-020

http://apps.leg.wa.gov/WAC/default.aspx?cite=173-555

https://link.springer.com/article/10.1007/BF03160803

2. "Minimizing adverse impacts by limiting the degree of magnitude of the action and it implementation by using appropriate technology and engineering, or by taking affirmative steps to avoid or reduce adverse impacts:" ***POC Regulations Development*****, page 131**

Background: "The facility is expected to release air pollutants (in) to the atmosphere, which will be regulated by federal and state standards. The pollutants fit into four categories, including criteria pollutants, hazardous air pollutants, toxic air pollutants, and greenhouse gases (GHGs).

The facility is expected to consume electricity, and to generate GHGs with a potential to emit up to 766,000 tons per year."

https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Industrial-facilities-permits/

Scoping Question:

a. How will PacWest Silicon, LLC. minimize or limit the adverse impacts of the regulated and fugitive air pollutants from its proposed Newport silicon metal smelter?

b. Specifically what is the "appropriate technology" to avoid or reduce the adverse effects of the regulated and fugitive emissions on the environment, health and mental well-being of the affected population.

c. Specifically, identify "appropriate engineering" to avoid or reduce the adverse effects of the regulated and fugitive emissions on the environment, health and mental well-being of the affected population.

d. Identify all actions and steps that PacWest Silicon, LLC. will take to mitigate all the potential short-term and long-term risks and harm to the environment, the occupational and non-

occupational health risks from the proposed Newport silicon metal smelter.

e. How can PacWest Silicon, LLC. justify its regulated and unregulated air pollution when in the *Washington State Growth Management Act*, the goal is to "protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water?"

f. How will the Newport proposed silicon metal smelter "protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water?

https://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/air/studyrpts/files/HKSupersiteReport.pdf

http://www3.cec.org/islandora/en/item/2195-best-available-technology-air-pollution-control-en.pdf

https://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health#plants

https://www.epa.gov/sites/production/files/2016-08/documents/federal_register-epa-hq-oar-2009-0171-dec.15-09.pdf

https://www.epa.gov/verified-diesel-tech

https://www.epa.gov/haps/reducing-emissions-hazardous-air-pollutants#stat

https://www.researchgate.net/publication/269333871_Air_Pollution_sources_pollutants_and_mitigation_measures

http://apps.who.int/iris/bitstream/handle/10665/69477/WHO_SDE_PHE_OEH_06.02_eng.pdf;jsessionid=9058D09CBF4B85AB6119E9EA68E78951?sequence=1

http://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.020

3. Rectifying the adverse impact by repairing, rehabilitating or restoring the affected area. *POC Regulations Development*, page 131

Background: The proposed project site is approximately 188 acres, located southeast of the city of Newport. The site was previously used for logging and has one unpaved, winding road. The road traverses the site and has been used as an access road. The site is surrounded by undeveloped or previously logged/forested land, except for the two existing farms/residences south of the site.

A proposed rail spur and loop to the west of the site would connect the facility with existing tracks, and would be used to hold the trains while cars containing raw materials are unloaded. https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Industrial-facilities-permits/PacWest-Silicon-project

Scoping Questions:

a. How does PacWest propose to rectify, rehabilitate, or restore the adverse impact the proposed Newport silicon metal smelter will have on the "undeveloped forested land," the wildlife habitat, the trees species and ground cover that will be lost to urban development?

b. How does PacWest propose to rectify, rehabilitate, or restore the adverse impact the proposed rail road spur and rail loop will have on the forestland, the wildlife habitat, the ground cover that will be lost to urban development?

c. How can PacWest Silicon, LLC. justified building a proposed silicon metal smelter in a rural area that is not zone for industrial purposes or where there are not "adequate public facilities and services? The WA Growth Management Act "encourages development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner."

http://www.futurewise.org/growth-management-act

http://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.020

https://www.prb.org/urbanization-an-environmental-force-to-be-reckoned-with/

https://www.nationalgeographic.com/environment/habitats/urban-threats/?user.testname=none

https://www.farmlandinfo.org/sites/default/files/aer803_1.pdf

http://journals.sagepub.com/doi/abs/10.1177/0160017605275160

http://www.pnas.org/content/pnas/109/40/16083.full.pdf

4. Reducing or eliminating the adverse impact over time by preservation and maintenance operations during the life of the action. *POC Regulations Development,* page

131

Background: PacWest Silicon, LLC. has a second phase to the initial construction and operation of its proposed silicon metal smelter. In the second phase PacWest intends to add one more stack and two more furnaces for a total of two stacks and four furnaces. With the second phase there will be double the adverse impact due to the pollutants released in the air, water and soil.

Scoping Questions:

a. How does PacWest Silicon, LLC. plan on reducing or eliminating the adverse impact over time by preservation and maintenance when PacWest plans on increasing the level of pollutants by adding two more furnaces and 1 more stack?

b. What are PacWest Silicon's plans to upgrade its proposed silicon metal smelter as new technology is developed to decrease pollution emissions?

c. Will PacWest Silicon be able to upgrade its proposed silicon metal smelter as new and improved environmentally-friendly technology becomes available?

https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/Reducing-CO2-emissions-from-heavy-industry---Grantham-BP-7.pdf

https://link.springer.com/article/10.1007/s11837-016-2149-x

https://www.saimm.co.za/Conferences/FurnaceTapping/147-Jensen.pdf

https://www.elkem.com/globalassets/corporate/documents/elkem-sustainability-report-2014.pdf

https://tel.archives-ouvertes.fr/tel-01688298/document

5. Compensate for the impact by replacing, enhancing, or providing substitute resources or environments. *POC Regulations Development*, page 131.

Background: "The proposed facility would occupy approximately 70 percent of the property and consist of several sheet-metal clad buildings, the tallest would be 157 feet above grade.

The area is currently hilly, with the steepest slope around 15 percent. The company expects to grade the site to reduce the steepest slope to 2-3 percent. On-site structures are not expected to impact views from neighboring properties, which are blocked by either higher ground or trees, and no lighting or glare issues are anticipated.

PacWest Silicon, LLC. will completely and forever wipe out hundreds of acres of rural designated forestland and open space with its proposed silicon metal smelter and railroad spur and loop. It will wipeout forest habitat for a variety of animal and bird species and cover over at least 131 acres of land with concrete and steel buildings. The ground under the concrete covering will no longer be able to claim any surface water, snow, rain to replenish the ground water. The area is also a favorite spot for hunting and gathering firewood.

PacWest Silicon, LLC. also purposes to grade the area. "The area is currently hilly, with the steepest slope around 15 percent. The company expects to grade the site to reduce the steepest slope to 2-3 percent."

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

In carrying out these planned activities, PacWest Silicon, LCC. is in violation of the *GMA* (Growth Management Act) and the *Pend Oreille County Comprehensive Plan*.

http://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.011

http://pendoreilleco.org/wp-content/uploads/2015/08/Comp-Plan-Update-Adopted-06-09-2015.pdf

The legislature finds that this chapter is intended to recognize the importance of rural lands and rural character to Washington's economy, its people, and its environment, while respecting regional differences. Rural lands and rural-based economies enhance the economic desirability of the state, help to preserve traditional economic activities, and contribute to the state's overall quality of life. The legislature finds that to retain and enhance the job base in rural areas, rural counties must have flexibility to create opportunities for business development. Further, the legislature finds that rural counties must have the flexibility to retain existing businesses and allow them to expand. The legislature recognizes that not all business developments in rural counties require an urban level of services; and that many businesses in rural areas fit within the definition of rural character identified by the local planning unit.

Finally, the legislature finds that in defining its rural element under RCW ***36.70A.070****(5), a*

county should foster land use patterns and develop a local vision of rural character that will: Help preserve rural-based economies and traditional rural lifestyles; encourage the economic prosperity of rural residents; foster opportunities for small-scale, rural-based employment and self-employment; permit the operation of rural-based agricultural, commercial, recreational, and tourist businesses that are consistent with existing and planned land use patterns; be compatible with the use of the land by wildlife and for fish and wildlife habitat; foster the private stewardship of the land and preservation of open space; and enhance the rural sense of community and quality of life.

http://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.011

http://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.070

As our population increases, we want to ensure that new development is compatible with the surrounding uses, sensitive to the surrounding natural areas, and retains the rural character of the community. The people of the County want to see their land use governed by local regulations that will protect their property rights, and ensure that they may continue to use their land for timber production, ranching, farming, and mining. We recognize that these rights exist provided that they do not jeopardize the health and safety of the residents of Pend Oreille County and with these rights come the responsibilities of citizenship, stewardship, and being a good neighbor. The people in our community strive to be good stewards of our own lands, to be active members of our community, and share responsibility for the community's well-being.

http://pendoreilleco.org/wp-content/uploads/2015/08/Comp-Plan-Update-Adopted-06-09-2015.pdf

Scoping Questions:

a. How will PacWest "compensate" the County, the people, the wildlife, the water resources, the hunters and recreationalist for the permanent loss and of the usage of those properties? The potential loss of the Little Spokane River Aquafer and the wetlands that the aquafer supports?

b. What is PacWest's plan for providing a "substitute" for the land and natural resources lost through the construction and operations of its proposed silicon metal smelter?

c. What amount of soil will be removed in order to level out the slope to a 2/3% grade?

d. Where will the excavated materials be disposed?

e. Where are the excavation action plans for removing this large amount of earth.

f. How will PacWest determine whether there are any rare or endangered plant species in the area do to be excavated?

g. What type of scientific studies have been done on the flora and fauna in the area of the proposed silicon metal smelter?

https://link.springer.com/article/10.1007/BF02393913

https://www.epa.gov/sites/production/files/2015-08/documents/compensatory_mitigation_factsheet.pdf

https://www.eli.org/sites/default/files/eli-pubs/d16_03.pdf

https://www.eli.org/compensatory-mitigation/background-compensatory-mitigation#cwa

https://www.iwr.usace.army.mil/Portals/70/docs/iwrreports/92wmb1.pdf

https://www.epa.gov/sites/production/files/2015-03/documents/40_cfr_part_230.pdf

https://www.fs.fed.us/wildflowers/Rare_Plants/profiles/pacificnorthwest.shtml

https://www.dnr.wa.gov/NHPlists

https://botanicgardens.uw.edu/science-conservation/rarecare/info/rareplants/

The mitigation sequencing steps are:

1. **Avoid:** This step is in accordance with the alternatives analysis established by the §404(b)(1) guidelines, which allows permits for only the least environmentally damaging practicable alternatives. It restates, "no discharge shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact to the aquatic ecosystem."17
2. **Minimize:** If impacts cannot be avoided, steps must be taken to minimize the adverse impacts through project modifications and permit conditions.18
3. **Compensate:** The final step in sequencing, the Corps is required to determine "appropriate and practicable compensatory mitigation for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been required."19

https://www.eli.org/compensatory-mitigation/background-compensatory-mitigation#no_net_loss

https://www.eli.org/compensatory-mitigation

https://www.eli.org/land-biodiversity/wetland-and-stream-mitigation-handbook-land-trusts

https://www.epa.gov/sites/production/files/2015-08/documents/stakeholder_forum_2006.pdf

6. Monitor the required compensation and take remedial or corrective measures when necessary.

Scoping Questions:

a. Who is the person or persons directly responsible for the compensatory mitigation?

b. What precisely is the job description for this compensatory mitigation oversight?

c. What corrective measures will be taken if or when necessary?

d. What is the chain of commands for the follow through?

e. What are the penalties for not complying with the compensatory mitigation agreements?

f. Who is ultimately the responsible party for seeing to it that the compensatory mitigation is working for the betterment of the natural environment and community members?

g. Will PacWest work in partnership with any agencies in the mitigation?

h. What agencies will be involved other than PacWest and Pend Oreille County or the Department of Ecology?