

May 24, 2021

To: Klamath County Community Development/Erik Nobel Planning Director

RE: Providing our objections to the Klamath County Zoning Amendment to accommodate the City of Chiloquin Wastewater Facilities Plan using lagoon storage on Highway 422 North

We have enjoyed living on our rural property for over 12 years and plan to remain here to the ends of our lives. We like the people of Chiloquin, our neighbors, the trees, fresh water from our own well, the wildlife, and looking at the stars on a clear night. In short, we love it here.

So, upon learning of the city's plan for sewer lagoons on city-owned property in our vicinity outside the city limits of Chiloquin, we did some research into the general use of sewer lagoons for wastewater treatment and had discussions with our neighbors. We were unable to attend the latest County meeting on the subject (May 11, 2021) and were never informed of last year's meeting in April 2020 during the pandemic. In fact, we were only made aware of this plan in a Facebook post by a concerned citizen. After looking into it further, we came to an informed decision to object to the use of the lagoons in this area. These are some of our reasons.

Soil, groundwater, aquifer, and environmental contamination. Although there are no guarantees in life, many assumptions have been made in the proposal for this project, which we fear does not take into consideration the general climate of this area, specifically cold temperatures, which could have detrimental effect on the lagoons themselves and result in leakage into/onto the surrounding soils. Since this area is largely pumice/sandy, the effluent from a leak could easily drain down into the aquifers, which could contaminate the private water wells of many homeowners in the area, including ours.

The EPA Wastewater Technology Fact Sheet¹ lists seven (7) disadvantages to a lagoon system, two (2) of which have to do with cold climates – the increased levels of sludge due to reduced microbial activity because of cold temperatures (six to seven months of the year in our area), and strong odors associated with reduction of the aerobic blanket (reduced microbial activity). The cold climate that we have in this area – we have seen it as cold as -24 degrees in the 12 years we've lived here – make us concerned for the maintainability of enough microbial activity to sustain the breakdown of sewage, therefore resulting in operational impacts to performance, and odors associated with reduced microbial activity. Temperature ranges referenced in this article² indicate water temperatures below 59 degrees can be problematic. In addition, burrowing animals, another disadvantage cited by the EPA, could be a big problem to the lagoon structures (leading to leaks), as anyone who lives in this area knows that we have a big gopher problem, and other burrowing animals looking for homes at any given time.

Mosquitos. Also listed by the EPA as a disadvantage is a problem with mosquito and other insects if vegetation is not controlled properly. We question whether or not a proper mitigation plan has even been thought about, given that the city's proposal is to have employees on site only on a weekly basis. When prevailing winds are from the north-northeast or east-northeast, we fear an influx of disease-carrying mosquitos in our direction.

¹ <https://www3.epa.gov/npdes/pubs/alagoons.pdf>

² https://www.tpomag.com/online_exclusives/2018/02/overcoming-winter-wastewater-challenges-via-bioaugmentation

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Odors. As already mentioned, odors and gases – ammonia, methane, etc. – are a potential problem seasonally, especially during fall and spring, and could be in winter if the proper balance of microorganisms is not maintained in the lagoons. Many landowners in this area maintain livestock, poultry, and other animals which could be harmed by gases released during these times. The winds this spring (2021) have been extreme, and consistently from the north-northeast, which would carry the odors/gases in our direction. Since we maintain a poultry flock, we are concerned that emissions coming in our direction could have deleterious effects on them. Thanks to the September 2020 wildfire and the loss of so many trees, the impact of the wind is felt here even more greatly, including the propagation of cyclonic dust storms across our and adjacent properties.

Deer/elk migration. Apparently the maintenance of the elk migration corridor is not a primary concern anymore. We have, in the past, been able to enjoy the sighting of elk and deer on our and neighbors' properties. As property owners, we were and continue to be held to the elk migration corridor regulations; and furthermore value our part in being good stewards of the surrounding lands. Putting this facility in the middle of it sets not only a bad example, but a bad precedent in the event that others want to develop the larger parcels of land that are held by single owners along highway 422 and other locations in the area. The Planning Commission is potentially opening the door to further abuse of our lands.

Other wildlife impact. Open sewer lagoons may attract both local and seasonally migrating birds; they could become infected with disease and chemical residues (legal and illegal drugs, agricultural chemicals, etc.) that would be in the lagoons. This area is temporary home to many migrating birds including bald eagles and ospreys, as well as permanent home to all types of raptors. Most, if not all of these, are protected. Migrating birds who pick up disease can potentially carry it along the western corridor. This year's issue with salmonella in the Pacific Northwest is just one example.

Land values. Any negative impacts resulting from the sewer lagoons could decrease our property value. This hurts the overall tax base as well as individual property owners.

We pray that the travesty of sewer lagoons in a wilderness that we are supposed to care for and nurture, will not come to pass, and that the City of Chiloquin will realize that they too will ultimately be impacted by further destruction of the land that needs to heal after the wildfires.

Respectfully submitted,