

September 12, 2012

Mr. Rick Ruzs, Chief of Groundwater Permits
Michigan Department of Environmental Quality
Constitution Hall, Permits Section, Water Bureau
525 West Allegan Street
P.O. Box 30473
Lansing, Michigan 48909-7973

Dear Mr. Ruzs,

Thanks very much for your response letters to Sleeping Bear Dunes NLS Superintendent Dusty Shultz and me (dated 8/22/12). I very much appreciate that you, as a public official, are willing to engage in constructive dialogue about this matter. Surely that is our best hope for coming to common understanding and resolution. In that spirit, I have posted your letters on the HomesteadSewage.org website for all to read.

As continuation of that dialogue, I have the following points and/or questions. I welcome any responses you may have:

1) In your letter to Dusty, you point out that there were 23 NPS inspections last year, and that none documented drift. Additionally, you note that no DEQ Water Resources Division (WRD) inspections detected drift. When looked at in this way, drift does not appear to be a very big problem.

However, when looked at more carefully, we find that 17 of the NPS inspections occurred when the system was not running because of needed service, rain, etc.. The remaining 6 all occurred when there was essentially no wind. To my knowledge there were not any DEQ inspections at all conducted while the system was running. This is similar to the situation the previous year (12 inspections; 6 when the system was running; 5 with minimal wind), except that one inspection that year occurred when the wind was blowing at 6.3 mph—and drift was felt blowing in the Ranger's face. Then there were my two observations (one each year), which were conducted on moderately breezy days (5 – 15 mph)—and drift was documented and videotaped both times (one of which was first noticed by feeling it on my face).

When looked at in this way—Of the very few meaningful inspections conducted, most actually revealed drift—doesn't it seem pretty clear that drift is occurring with some frequency? And when you consider that if it occurs even just occasionally, NPS must keep the surrounding parklands closed—it becomes clear that The Homestead has assumed all use & benefit from that NPS property.

This record (34 of 35 NPS inspections essentially wasted) brings up the point that it is quite difficult to detect and document this problem. First you have to be lucky enough that the system is running when you hike out there. Then, the highly variable breezes off Lake Michigan have to be blowing the right way when and where you are looking. Then you have to have the right lighting conditions and be looking from the right angle to see the fine mist blowing into the Park (or, equally likely, you will first feel it on your face. As you might imagine, that's rather disconcerting!). That is why, in order to eliminate just one of the obstacles, we have requested that you require The Homestead to either telephone the Park, or (preferably) post on a website,

A) when they plan to run the system in each spray field each week, and B) each day, provide updates on any variations that will occur from that week's plans.

2) Your letter to NPS states that you will look into having The Homestead lower the spray arc in the hope that this will resolve the drift problem. I appreciate your efforts in this regard; but I believe that if you study the sprayers in action with binoculars under the right light conditions, you'll see that the aerosolized mist is largely generated as the spray leaves the nozzle. A fine mist can be observed floating away from the spray head under moderate breeze conditions. It is clear that this mist is not on a downward trajectory, and will travel until it is stopped by trees or other objects—beyond the spray field boundary. The spray arc will not resolve this.

3) Regarding your clarification of the 100' isolation rule, I was surprised to read that it applies only to the point of discharge. It has seemed clear during discussions for many years that this referred to the total area being intentionally sprayed. What is the point of that rule? A system could legally be built with high-pressure sprayers 100' from the line, designed to spray up to within a few feet of it—surely resulting in considerable occasional overspray.

I'm further puzzled by your last sentence in that paragraph, in the discussion of whether the rule applies to the "property boundary" or the easement boundary (whose definitions have unfortunately not been adequately thought through—but that's another discussion). The sentence reads, "Irrespective of whether or not the rule applies to the property boundary or the easement boundary, the DEQ's authorization to allow a discharge within the easement area is consistent with the applicable rule." You seem to be indicating that you believe that the sprayers are over 100' from the easement boundary. If so, you might be under a mistaken understanding. Many of the sprayers are much less than 100' from the easement boundary, and normally spray to within 10' of it. Can you please clarify this?

4) Regarding your last point in your letter to NPS, regarding their request that you require a buffer area in order to try to eliminate drift into the Park: You state that "The WRD will not sacrifice basic environmental protection" (by reducing the area available for receiving the sewage).

I don't know of anyone who wishes to sacrifice environmental protection here. The issue is whether The Homestead, like the rest of us, will be required to properly handle its sewage without trespassing on neighboring National Park land. There are other ways of doing so, and that is what we all are requesting.

5) In the fourth paragraph of your letter to me, you discuss the fact that there is a conservative limit on fecal coliform. (You refer me to an earlier email message from Janice Heuer of WRD. My reply to that message, made at the time, is at, <https://skydrive.live.com/?cid=1dc7f78693918ed5#!/view.aspx?cid=1DC7F78693918ED5&resid=1DC7F78693918ED5%21168&app=Word> . Any follow-up comments that you might have to that are of course welcome.)

Basically, the problem is that, as I understand, fecal coliform is an indicator, used to indicate the presence of fecal matter (and the associated pathogens found in it). This makes sense in the context of swimming beaches, etc., because it accurately reflects the presence of fecal matter and associated pathogens. However, whereas fecal coliform is killed by chlorination such as that which the Homestead's effluent undergoes, various pathogens are not. Hence, coliform levels only reflect the levels of

pathogens that are killed through chlorination—not the others, which very possibly may be present. Low coliform levels thus can actually provide a false sense of security.

As noted previously: Your agency rates this effluent as safe only for partial body contact; not ingestion, as occurs when the mist is breathed; your engineer Janice Heuer has written (in a letter to Superintendent Shultz), “Sewage spray poses a hazard that justifies restricted access;” NPS guidelines call for respirators, etc., to be worn by employees when exposure is possible; available scientific literature contains many statements such as the following: “. . . It has now become well known that enteroviruses and Cryptosporidium are commonly present in water treated to meet the fecal coliform standard. Therefore, those who have contact with such water are exposed to part of the endemic pathogen problem that causes large numbers of people to become ill . . .” (<http://www.wwdmag.com/wastewater/monitoring-reclaimed-wastewater-usage-public-parkland-vegetation-reduce-risks>)

So the questions remain: Do you believe that the parklands surrounding the spray fields should be opened to public use and the warning signs removed, so the public can fully utilize all National Lakeshore lands? If not, doesn’t this constitute loss of essentially all use & benefit from that property by its owners? Would this be permitted (as has continued for 19 years here) in any other case, such as if it were a private individual who couldn’t use his/her backyard, and was pleading for you to address the illegal situation? Does Sleeping Bear Dunes National Lakeshore (“America’s most beautiful place”) warrant any less protection?

Thank you in advance for considering these thoughts and questions. I will post this letter along with our earlier letters on the HomesteadSewage.org website, and invite you to respond. I’ll reserve a place for that on the website. I will also send a copy of this to The Homestead Resort, inviting them to participate in this discussion.

Sincerely,

Tom Van Zoeren