Woodland Park Zoo (Aarin Wilde)

December 11, 2025: this comment was previously submitted during the last informal comment session in August 2025. It is resubmitted now to remain part of the record.

This comment addresses a draft concept proposed under the WAC-173-350 Organics Rule Revision, specifically under compost exemptions WAC-173-350-220 Table 220-A: "Create exemption just for zoos for clarity – no primate waste. Previously was in the same exemption as on-farm agricultural composting." Woodland Park Zoo is the only zoo in Washington state using primate waste for compost, meaning we are the only facility that will be impacted should this concept become code. The zoo agrees that waste must be handled with great care, but in this case, this proposed change is unnecessary and unwarranted. If codified, Woodland Park Zoo's long-standing and safe on-site composting operation will be significantly impacted.

My name is Aarin Wilde and I am the current facility operator for Woodland Park Zoo's Zoo Doo program in Seattle. Prior to managing this facility, I served as an operator for a human composting facility. I have extensive experience as a compost facility operator, focused on composting sensitive and potentially pathogenic feedstocks in a manner that meets state and federal safety standards.

This draft concept arises from a concern that composting primate waste is similar to composting biosolids, and that the current exemption for zoo manure composting does not provide sufficient oversight in terms of facility design, temperature tracking, and operator training requirements to allow the processing of primate waste. However, composting primate waste on site at the zoo's facility does not carry the same risks as composting biosolids, and therefore does not require the same level of oversight as a biosolids facility. In addition, the zoo's current facility design and operations are already set up to ensure public health risk mitigation beyond what is required of other exempt facilities.

Biosolids equivalency

As an accredited facility under the Association of Zoos & Aquariums (AZA), the zoo is required to follow strict health and safety standards related to the animals in our collection, as well as the mitigation of public health risks to zoo staff and guests who are in proximity to those animals. Biological safety including preventing transmission of zoonotic disease is imperative in a zoological setting. Unlike biosolids composting, which processes organic materials derived from wastewater treatment plants and has high instances of pathogenic and physical contamination, the zoo operates as a closed system with biological safety as a top priority. All feedstocks composted by the zoo are generated onsite, in contrast with biosolids which are an accumulation of waste from multiple different sources.

When an animal is transferred into our zoo, or if an animal exhibits illness, our Animal Care and Animal Health teams follow strict quarantine procedures to prevent the spread of illnesses. We do not accept waste from quarantined or sick animals in our composting facility. Additionally, all animals at the zoo are routinely examined by the Animal Health team and any potential pathogenic issues are treated swiftly and accordingly. Since 2023, our lead veterinarian has supported the addition of primate waste into our compost, and has expressed no concerns about potential pathogens in the waste of the primate species we care for on site.

A recent example highlighting the zoo's safety standards to mitigate zoonotic disease risk is our quick response to Highly Pathogenic Avian Influenza (HPAI) on zoo grounds in Fall 2024. Our team of Animal Health experts implemented layered protections for staff and guests including but not limited to requiring additional PPE and cleaning protocols for staff involved directly in caring for birds, sanitizing equipment and tools that came in contact with birds or bird habitats and holding areas, and even stopping waste pickups from units that were adjacent to bird populations. Birds were removed from public viewing and placed back-of-house, ensuring their safety from wild birds and human safety from interaction. This response demonstrates a commitment to protecting public health from zoonotic disease transmission on the animal, staff, and visitor sides.

Temperature tracking, facility design, and operator training requirements

Woodland Park Zoo has generated compost for sale to the public since the 1980s. For most of the program's history, the zoo used a windrow composting method and only processed herbivore manure. In 2019, the zoo constructed a 1000 tpy capacity Capped Aerated Static Pile (CASP) system built by Engineered Compost Systems. This facility is built with the same design considerations as much larger permitted composting facilities and allows the zoo to track temperature information in real time via monitoring software. The zoo has an individual record of all compost batches generated since the facility's construction and retains those records as standard practice. Since the construction of the CASP system, no batch has ever failed to reach the minimum 131* F for 72 hours required for Process to Further Reduce Pathogens (PFRP). In fact, all batches have reached and maintained temperatures on average of 145* F for weeks at a time. The CASP system and its ability to monitor and track temperature accurately and consistently allowed for the integration of primate waste as an accepted feedstock in 2023.

In addition to automated temperature tracking, the facility is also designed to mitigate potential odor issues and includes a built-in leachate management system in the form of an underground collection tank. The leachate is then reused to wet down new piles of unprocessed feedstocks, making the system nearly circular. Finally, the zoo maintains a wastewater discharge permit to sanitary sewer through the King County Wastewater Treatment Division Industrial Waste Program.

As mentioned above, my expertise in compost facility operations in both zoo manure composting and human composting (natural organic reduction) is extensive. For each of these roles, I completed state-mandated trainings including the Compost Facility Operator Training provided by the Washington Organic Recycling Council (WORC) and the Natural Organic Reduction Operator License exam provided by the Washington State Department of Licensing. Woodland Park Zoo requires that the onsite facility operator for the Zoo Doo program complete the CFOT course through WORC within one year of hire; I completed this training in October of 2024 and have the same credentials as an operator in a permitted biosolids facility, as have all my predecessors.

As the facility operator, I submit our annual reports including compost sample lab analysis results to Ecology and the Jurisdictional Health Department as required for exempt facilities under table 220-A. Rigorous lab testing through Soiltest labs in Moses Lake, WA was completed to demonstrate that the integration of primate waste was successful and safe.

Operational Disruption

Woodland Park Zoo is the only facility in the state this code revision would affect. The zoo's facility has operated under a permit exemption outlined in Table 220-A for decades. The integration of primate waste has been very successful for the zoo and has helped divert a significant amount of organic waste from landfill while simultaneously processing it in a way that destroys pathogens. If this draft concept becomes code, the zoo will either need to eliminate primate waste from the facility once again or apply for a solid waste handling permit. Both options hurt this non-profit organization by creating a need for more work or funding.

Eliminating primate waste from the facility would result in approximately 2,000 pounds of organic material being landfilled per week instead of being composted. This would both increase disposal costs for the zoo and decrease potential revenue from public sales due to a reduction in volume. It is also antithetical to the goals of Washington's organics management laws, which seek to divert organic material from landfills. Regarding the public health concern around primate waste, landfilling this waste or discharging it to sewer as was done prior to composting on site would result in no pathogen destruction, compared to putting it through the thermophilic composting process.

Applying for and maintaining a solid waste handling permit would take away from staff time and resources which will impact our already challenging budget and staffing realities. As a facility that has already been proven to produce safe compost over the last 40 years, including after the addition of primate waste in very recent years, requiring a permit for the zoo's composting operation would be an inefficient use of time and resources for both the zoo and for Ecology and other associated agencies.