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RE: TRK and WRK Comments on DEQ 401 WQC, 2023-301, Crane Forest Grove Data Center

Tualatin Riverkeepers (TRK) and Willamette Riverkeeper (WRK) submit these comments to request DEQ deny the Section 401 water quality certification for the Crane Forest Data Center. TRK is a community-based organization that protects and restores the Tualatin River watershed. Our 300 members and thousands of volunteers help us build watershed stewardship through engagement, advocacy, restoration, access, and education. TRK's concern for the overall health of the Tualatin River watershed leads us to closely monitor projects that may affect water quality and the health and existence of wetlands. WRK is a 501(c)3 nonprofit founded in 1996 with the sole mission to protect and restore the Willamette River and its tributaries. WRK has thousands of members across the Willamette River Basin and uses habitat restoration, trash cleanups, advocacy, and litigation to achieve its mission.

Applicant Heather Street Owner LLC proposes to construct two data centers on open farmland and wetlands. Construction of these data centers will permanently destroy three wetlands adjacent to drainage systems that discharge to the Tualatin River and replace permeable natural environment with almost 30 acres of impervious surfaces. TRK and WRK respectfully request DEQ deny the permit application and return it to the applicant as incomplete. TRK and WRK further request that DEQ consider the cumulative impacts of approving numerous data centers in a small area and reconsider the efficacy of 1:1 mitigation banking requirement.

I. The application is incomplete and should be returned to the applicant.

The additional information section of the Crane Data Center Forest Grove (401) Dredge and Fill Permit Application contains sixteen questions. The applicant answered "unknown" to seven of those questions, five of which have readily accessible answers if the applicant took the time to look into them. If an applicant answers "unknown" to a question with a readily accessible answer, DEQ should not deem the application complete, as DEQ cannot properly determine if the application should be approved without these answers.

The questions not answered by the applicant are:

- Are there state of federally listed species on the project site?
- Is the project site within designated or proposed critical habitat?
- Is the project site within a national Wild and Scenic River?
- Is the project site within a State Scenic Waterway?
- Is the project site within the 100-year floodplain?

- Is the project site within a designated Marine Reserve?
- Has a cultural resource (archaeological) survey been performed on the project area?

Two of these questions require the applicant to conduct additional research and may require the applicant to hire a biologist and an archaeologist to investigate the property. However tedious, the applicant must answer these questions. These unanswered questions not only result in an incomplete application but demonstrate the applicant's lack of care and consideration of the permitting process and the property they want to build on. DEQ should return the application to the applicant as incomplete and not consider it until all questions are answered with either yes or no.

II. Data centers impair natural and utility-based water systems.

Data centers are among the top ten water consuming industrial or commercial industries nationwide. Data center water consumption has three components: (1) water consumed directly by the data center for cooling and other purposes; (2) water consumed indirectly through electricity generation; and (3) water consumed indirectly via electricity used by the water and wastewater utilities that service the data center (Md. Abu Bakar Siddik et al., The Environmental Footprint of Data Center in the United States, Environmental Research Letters, Volume 16, 2021).

The amount of water consumed directly by a data center is largely dependent on the size of that data center. Crane Data Centers proposes to build two data centers on the Heather Street lot—one 180,000 sq. ft. structure and one two-story 363,000 sq. ft. structure. According to the U.S. Department of Energy, small data centers are facilities under 5,000 sq. feet of computer floor space (https://betterbuildingssolutioncenter.energy.gov/data-center-toolkit/small). Although the proposed building square footage does not equate to the available computing floor space, it can be surmised that the two proposed Crane data center building will be midsized or larger. A midsized data center typically uses 300,000 gallons of water daily, while large-scale facilities can consume as much as 4.5 million gallons of water a day (Texas Data Centers Use 50 Billion Gallons of Water as State Faces Drought, Newsweek, https://www.newsweek.com/texas-data-center-water-artificial-intelligence-2107500, Aug. 1, 2025). From the documents provided by DEQ and other permit decisionmakers, it is still unclear how much water the Crane Data Center in Forest Grove is anticipated to consume. And while the data center owners and developers are required to update the water utility infrastructure as needed, that does not negate or mitigate the sheer volume of water it may use.

As of July 2025, Washington County is home to at least 30 active data centers (https://www.datacenters.com/locations/united-states/oregon/hillsboro). This is a considerable amount of data centers and has a significant impact on water use in the county. DEQ should consider the cumulative impacts of these data centers before it issues another permit. If every data center is using the lower estimate of water consumption, that still equates to 9 million

gallons of water used daily. On the higher end, data centers in the county would directly use up to 135 million gallons of water daily.

Crane Data Center's potential electricity consumption is also concerning. In 2023, data centers consumed 11.4% of Oregon's electricity (Kayla Zhu, Mapped: Data Center Electricity Consumption by State, Visual Capitalist, https://www.visualcapitalist.com/mapped-data-center-electricity-consumption-by-state/, Nov. 20, 2024) and this number continues to grow as the data center industry booms in Washington County and across the state. Indeed, data centers are behind the largest and fastest increases in demand for electricity, requiring electric utilities in the state to buy or produce more power, and expand electricity infrastructure to serve the data centers (Alex Baumhardt, For Gov. Kotek, natural resources adviser, water tops list of 2025 environmental priorities, Oregon Capital Chronicle, Jan. 27, 2025). In Hillsboro, data centers demand as much electricity as nearly every residential customer in all of Washington County combined. (*Id*.) TRK and WRK are concerned with data centers' electricity consumption because it is estimated that for every 1 mega watt-hour (MWh) of energy consumption by a data center, 7.1 m3 of water is required (Md. Abu Bakar Siddik et al., The Environmental Footprint of Data Center in the United States, Environmental Research Letters, Volume 16, 2021).

Additionally, wastewater discharged from data centers is likely to contain per- and polyfluoroalkyl substances – known as PFAS or, colloquially, as forever chemicals. PFAS are biopersistent, bioaccumulative, and pose serious health risks to humans including cancer, reproductive and developmental effects, immune system dysfunction, and hormonal disruption (PFAS | The Unseen Crisis: Uncovering 'Forever Chemicals' in Our Waters, Waterkeeper Alliance, 2025). As water-based cooling systems are crucial to the success of data centers, and PFAS are excellent refrigerants due to their low boiling point and nonflammability, most cooling solutions for data centers currently use refrigerants that fall under the category of PFAS (See https://submer.com/blog/pfas-contamination-a-call-to-action-for-the-datacenter-industry/ and https://www.datacenterfrontier.com/sponsored/article/33035570/understanding-pfas-concerns-for-two-phase-cooling-of-data-centers). As the water exits the data center cooling system, it is laden with chemicals, including PFAS. This contaminated water is then discharged into the wastewater management system, leaving utilities like Clean Water Services to deal with the mess made by data centers.

III. Current mitigation banking is not sufficient to offset ecological harms.

A 1:1 ratio of mitigation banking credits is not sufficient to compensate for the loss of natural wetlands. Mitigation banking consolidates wetlands, collapsing wetlands in a broad geographical area into a relatively small area. Consolidation "threatens the diversity and abundance of amphibians and wetland birds" (Gordon Steinhoff, Wetlands Mitigation Banking and the Problem of Consolidation, UCLA Electronic Green Journal, Issue 7, Fall 2008). Additionally, "wetlands within banks are less diverse in type than the wetlands they replace" (*Id*.).

Mitigation banking discounts the importance of small wetlands for biodiversity by assuming that one large wetland shares the same ecological benefits as spread out smaller wetlands. One large wetland of 40 acres is not ecologically equivalent to 40 small, isolated wetlands of one acre each, "small isolated wetlands are not expendable if the goal is to maintain the present level of biodiversity" (R,D. Semlitsch, Size does matter: the value of small isolated wetlands, National Wetland Newsletter, 22(1), 5-6, 13, 2000) so conservation efforts should include restoration of "the natural density and spatial configuration of wetlands" (R.D. Semlitsch, Critical elements for biologically based recovery plans of aquatic- breeding amphibians, Conservation Biology, 16(3), 619-629, 623 (2002); See also Gordon Steinhoff, Fall 2008). While large wetlands are important, small wetlands provide dispersed ecological benefits and should not be written off in the name of development. "Ecologically, small wetlands enhance connectivity by acting as stepping stones within habitat mosaics. They link larger ecosystems, facilitating wildlife movement, species dispersal and the maintenance of genetic diversity" (Convention on Wetlands, Small Wetlands: Their importance and strategies for effective conservation, Policy Brief 7, Gland, Switzerland: Secretariat of the Convention on Wetlands, 2025).

Additionally, small wetlands "act as natural sponges, absorbing excess rainfall and reducing the risk of flooding" as well as managing stormwater runoff (*Id*.). As farmlands are converted to industrial sites, stormwater runoff will increase and the properties risk flooding if former permeable ground is converted to impermeable ground. These small wetlands are being filled at an alarming rate in the name of industrial development and are not being mitigated adequately.

While mitigation banking is not a sufficient way to compensate for loss of natural wetlands, if filling a wetland is required for a project and there is no way to avoid it, then the credits required should be at least 2:1. For this project, developers must first show that there is no possible way to avoid filling the natural wetland, taking steps first to avoid, then to reduce, and as a last resort, to offset any impacts on natural habitats. Then, if there is no possible way to avoid filling the natural wetland, that would mean that for this project, the applicant must purchase at least 2.56 wetland credits.

IV. Data centers located on formerly permeable ground negatively affects both surface and ground waters and leads to less climate resiliency.

Data centers are water intensive facilities and have recently been regularly sited on formerly undeveloped land, including wetlands. This requires the conversion of permeable land into impermeable land. The Crane Data Center Forest Grove project proposes to "create approximately 29.35 acres of new impervious surface area." In natural environments, "soil and vegetated surfaces are capable of absorbing and infiltrating rainfall and snowmelt, as well as the small amount of runoff that may occur" which recharges the groundwater and prevents pollution from entering our waterways (Beth Yount, Impervious Surfaces and Stormwater Impacts, PennState Extension, August 16, 2024). Impermeable surfaces cannot absorb the water and runoff; instead the water and runoff flows over the surface until it reaches a draining point,

picking up "nutrients, trash, pollutants, and sediment along its path" that then drains into nearby waterways "contributing to a large flush of pollutants and a rapid rise in [surface] water levels" (*Id*.) and an eventual depletion of groundwater.

The applicant for the Crane Data Center has proposed three new stormwater dry ponds to capture the runoff from these new impermeable surfaces. "Stormwater runoff will be collected…and conveyed to the ponds for treatment" (DEQ 401 WQC, 2023-301, Crane Forest Grove Data Center) however, the method of treatment is not disclosed nor evaluated for efficacy. Furthermore, the application states that the "treated" stormwater will be "released into the proposed Heather Street storm system, which discharges into an existing ditch system *flowing into the Fernhill wetlands area*" (*Id*.) [emphasis added]. The Fernhill wetlands are intended to improve the quality of water that has already been treated and released by Clean Water Services' Forest Grove Water Resource Recovery Facility—not stormwater runoff from an industrial site. The contaminants in the runoff from the data center could harm both the wetlands themselves and the Tualatin River, into which the Fernhill wetlands flow. Additionally, the Fernhill wetlands area is home to an existing wetland mitigation bank, so not only will this project fill natural wetlands, but also threaten wetlands created for mitigation purposes.

Groundwater recharge is "directly linked to the ability of precipitation to soak into the ground and trickle through to the water table" (*Id*.). When the ground is covered by impermeable surfaces, the opportunity for this recharge is significantly reduced which then leads to reduced stream volume and flow. Washington County already has areas with groundwater restrictions; heavy pumping has strained regional groundwater sources in these areas and other areas of Washington County could be at risk if the groundwater is further depleted by a lack of groundwater recharge.

Impermeable surfaces also create a heat island effect, increasing ambient air temperatures and requiring more energy for cooling (See Rebecca Pineo, Permeable vs. Impermeable Surfaces, University of Delaware Cooperative Extension, October 2024, originally 2007). As the climate changes and temperatures rise, adding to the reduced stream flows and increased air temperatures that are already occurring harms our water sources and makes our communities less climate resilient, in direct competition with Washington County's work "to make our communities more sustainable and support the community in adapting to a changing climate" (Addressing Climate Change in Washington County, https://www.washingtoncountyor.gov/sustainability/addressing-climate-change-washington-county).

The increase in impermeable surfaces pollute surface water, flood surface water, erode streambanks, fail to adequately recharge the water table, and create a heat island effect. By placing these data centers on former farmland, our ground and surface waters are at risk and our communities are less climate resilient.

For these reasons, TRK and WRK request DEQ deny the applicant's incomplete permit application, and if Heather Street Owners LLC resubmits the application, conduct a cumulative

impact analysis and increase mitigation banking requirements. Thank you for your time and consideration.

Sincerely,

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Tualatin Riverkeepers

and

Lindsey Hutchison
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Willamette Riverkeeper