

## **Applicant's Testimony and City's Response Regarding Kelley Creek Temperature Standards**

**By Katie Holzer, PhD Wetland Scientist, City of Gresham – October 30, 2023**

The purpose of this document is to provide a response to the Applicant's expert testimony Stacey Reed, AKS Engineering Senior Wetland Scientist, regarding Kelley Creek temperature standards. As detailed below, the primary issue is distinguishing between the year-round temperature standard and the seasonal spawning temperature standard. Using the correct temperature standard is relevant to whether a wetland is providing water cooling water quality benefits.

### **Stacey Reed**

*1:32:12 "DEQ's water quality parameter for the Johnson Creek watershed, which includes Kelley Creek, is for year-round, temperature and spawning temperature, and the State defines this as when the temperatures in the water exceed 18°C, which is about 64.4°F on an average 7-day period."*

### **City Response**

**DEQ's water quality standard includes biologically based numeric criteria that are protective of fish species during different stages of their life cycle. The number quoted is the year-round temperature criteria. The spawning criteria is 13° or 55°.4F<sup>1</sup>. It is applicable from October 15 – May 15.**

### **Stacey Reed**

*1:32:59 "I kind of look at it this way. So, when the air temperature is below 55°F, the water temperature in Kelley Creek is not exceeding that 64-degree threshold. So, in the cooler months the existing temperature in Kelley Creek is already cold."*

### **City Response**

**In the cooler months the water quality criterion is 55°.4F, not 64°.4F. Kelley Creek often exceeding the 55°.4F temperature in April, early May and late October.**

### **Stacey Reed**

*1:33:17 "So, to say it another way, when the air temperature rises in the summer months, that's when the Veranda wetlands have the opportunity to provide water cooling benefit."*

### **City Response**

**Kelley Creek is often exceeding the temperature criterion in April, May, and October, so it is in need of cooling in the spring and fall as well.**

### **Stacey Reed**

*1:44:07 "And DEQ considers the temperatures exceeding 64°F as being detrimental to the cold-water salmon species."*

### **City Response**

**The 64°.4F criterion noted is the year-round standard for migration and rearing<sup>2</sup>. DEQ also considers water temperatures at or above 55°.4F from October 15 – May 15 as being detrimental to the cold-water salmon species. This is the water quality criteria for spawning.**

---

<sup>1</sup> OAR 340-041-0340, Figure 340B and OAR 340-041-0028

<sup>2</sup> OAR 340-041-0340, Figure 340A and OAR 340-041-0028