

<b>Abbreviated Citation</b>	Oregon DEQ (2008)
<b>Full Citation</b>	Huff, D.D., S.L. Hubler, Y. Pan and D.L. Drake. Detecting Shifts in Macroinvertebrate Community Requirements: Implicating Causes of Impairment in Streams. 2008. DEQ06-LAB-0068-TR. Oregon Department of Environmental Quality, Watershed Assessment, and Portland State University, Portland, OR.
<b>Description</b>	Thermal optima and tolerance data for 234 taxa were provided by Shannon Hubler of Oregon DEQ. These data were derived from Oregon DEQ data from a wide range of wadeable stream types and span all of the major ecoregions in Oregon.
<b>Tolerance Calculations</b>	<b>Temperature</b> weighted average calculations are based on continuous temperature data during summer months (June through September) from 1st to 4th Strahler order streams. The optima were calculated via weighted averaging and relate to the 7-day seasonal maximum temperature (which is what Oregon's temperature standard is based on). For more details, see the Oregon DEQ (2008) report by Huff et al.
<b>Published</b>	no
<b>Highest Level of Taxonomic Resolution</b>	species
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<b>Data Integration Notes</b>	Jen Stamp (Tetra Tech) added in ThermalOptima_Rank and ThermalTolerance_Rank entries so that data could be better compared across datasets. Rankings were calculated using a 1-7 scoring scheme based on the following percentiles: 0, 0.1, 0.25, 0.4, 0.6, 0.75, 0.9, 1, such that low ThermalOptima_Rank scores = preference for colder water and high ThermalOptima_Rank scores = preference for warmer water, and low ThermalTolerance_Rank scores = narrow temperature range and high ThermalTolerance_Rank scores = wide temperature range.