2016-2017 Water Temperature Data Collection in the Lower Willamette River, Oregon, in Support of Cold-Water Refuge Monitoring

Overview

In the summers of 2016 and 2017, the U.S. Geological Survey (USGS) collected water temperature data in tributaries and other off-channel features of the lower Willamette River. Water temperature measurements were also collected at a variety of locations and varying depths within the mainstem river. These data were collected to identify locations of potential cold-water refuges and monitor daily and seasonal patterns in water temperature. These measurements serve other uses such as monitoring for Willamette River water-temperature TMDL requirements of local municipalities and understanding water quality diversity in the reach. These data collection efforts were supported by Meyer Memorial Trust, the City of Lake Oswego, and the City of Wilsonville.

Datasets Collected by the USGS

1) Continuous water-temperature measurements of tributaries entering the lower Willamette River at 12 sites between Willamette Falls and the Columbia River in 2016 and 10 sites within the Wilsonville and Lake Oswego management areas in 2017.
2) Discrete point measurements of temperature in tributaries, at tributary confluences, and within the mainstem Willamette River in summers 2016 and 2017; some also include measurements of dissolved oxygen and/or specific conductance.

Locations of continuous temperature monitors in tributaries of the lower Willamette River, summers 2016-17

Willamette River Mile (RM)	NWIS Site Name *waterdata.usgs.gov/nwis*	NWIS Site Number
	Summer 2016	
4.9	Unnamed trib to Willamette R at RM 4.9 on LB (left bank)	453548122465100
5.9	Unnamed trib to Willamette R at RM 5.9 on LB (left bank)	453509122460800
6.9	Doane Creek at mouth, at Portland, OR	453432122445800
7.8	Saltzman Creek at mouth, at Portland, OR	453405122442800
9.8	Balch Creek at mouth, at Portland, OR	453258122422100
16.2	Stephens Creek at mouth, at Portland, OR	452808122401100
18.4	Johnson Creek near mouth, at Milwaukie, OR	452642122383600
18.5	Kellogg Creek at mouth below Kellogg Dam	452630122383200
20.1	Tryon Creek near mouth, at Lake Oswego, OR	452521122392900
21.3	Glenmorrie Creek at mouth, at Lake Oswego, OR	452428122392000
22.0	Arbor Creek at mouth, at Lake Oswego, OR	452360122383800
25.5	Abernathy Creek near mouth, at Oregon City, OR	452153122360500
	Summer 2017	
20.1	Tryon Creek near mouth, at Lake Oswego, OR	452521122393000
21.0	Oswego Creek in large pool, at Lake Oswego, OR	452439122394000
21.0	Oswego Creek nr dam outlet, at Lake Oswego, OR	452439122395000
21.3	Glenmorrie Creek at mouth, at Lake Oswego, OR	452428122392000
22.0	Arbor Creek at mouth, at Lake Oswego, OR	452360122384000
36.9	Willow Creek near mouth, at Wilsonville, OR	451807122443000
37.6	Boeckman Creek near mouth, at Wilsonville, OR	451753122451000
38.7	Unnamed creek near mouth at RM 38.7 nr Wilsonville	451726122462000
39.0	Coffee Lake Creek near mouth, at Wilsonville, OR	451740122465000
39.9	Corral Creek near mouth, at Wilsonville, OR	451725122474000

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Abernathy Creek at Oregon City, summer 2016

Accessing the USGS Datasets

1) Continuous water-temperature data and additional site information can be accessed through the USGS National Water Information System database (waterdata.usgs.gov/nwis) using the site number listed in the table to the left.

2) Discreet point measurement data can be accessed at www.ScienceBase.gov using the citation or DOI number listed below:

*Mangano, J.F., Buccola, N.L., Piatt, D.R., Smith, C.D., and White, J.S., 2017, Point measurements of temperature and water quality in main-channel and off-channel features of the Willamette River, **2015-16**: U.S. Geological Survey data release, https://doi.org/10.5066/F7VQ315D.*

*Piatt, D.P., Smith, C.D., and Gordon, G.W., 2018, Point measurements of temperature and water quality in the main channel and off-channel features of the lower reaches of the Willamette River, Clackamas River, Molalla River, and Johnson Creek, **2017**: U.S. Geological Survey data release, https://doi.org/10.5066/F7KH0MJP.*

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