

2016 FPC Adult Ladder Hourly Water Temperature Graph and Query Metadata

Query Description

This graph compares the hourly ladder water temperatures for the entrance monitor, exit monitor and monitors located midway through the ladder at junctions or diffusers. It plots the difference between neighboring monitor temperatures on line graphs below the temperature graph. Hourly adult ladder water temperatures are graphed from June 1 through September 30. The data on these pages are from the Army Corps of Engineers' Hobo Water Temperature Monitors. The data is sent weekly to the FPC, uploaded into a database, used to create the graphs and tables on the result webpages and are available for download on a csv link below each graph. The result webpage includes a paginated table of the requested data, a link to a csv file (comma separated value text file) of the data (csv files open in excel), a tab containing metadata, a tab containing the location of the site and a link to a downloadable pdf of the metadata. **Caution: Hourly temperature data should be evaluated with caution, as measurement errors may occur for short periods due to equipment limitations and/or malfunctions.**

Field Names and Descriptions

Field name	Description
LadderName	This query graphs hourly adult ladder water temperature from several adult ladders on eight dams. Each ladder may have anywhere from 1 to four hobo temperature monitors. The seven dams are Lower Granite, Little Goose, Lower Monumental, Ice Harbor, McNary, The Dalles, John Day and Bonneville Dams. The ten ladders include: LWG_S - Lower Granite South, LGS_S - Little Goose South, LMN_N - Lower Monumental North, LMN_S - Lower Monumental South, IHR_N - Ice Harbor North, IHR_S - Ice Harbor South, MCN_N - McNary North, MCN_S - McNary South, TDG_N - The Dalles North, TDG_E - The Dalles East , JDA_N - John Day North, JDA_S - John Day South, BON_L - Bonneville_Lamprey_Passage, BON_N - Bonneville_WA_Shore, BON_B - Bonneville_Bradford_Island.
Date	The date of each temperature.

Time	The hour of each temperature.
ProbeName_x	The code for each monitor within the selected ladder. Each ladder may have anywhere from 1 to 4 hobo temperature monitors. Each monitor code ends with a number (1, 2, 3 or 4). Note: At The Dalles East Ladder, there is one hobo monitor (TDAAE2) and the other monitor being used is the forebay temperature monitor (TDAAE1).
tempx	The temperature recorded at the specified monitor (code plus 1, 2, 3 or 4), date and hour. The temperature is recorded in Fahrenheit. Note: At The Dalles East Ladder, there is one hobo monitor (TDAAE2 and temp2) and the other monitor being used is the forebay temperature monitor (TDAAE1 and temp1).
DifTemp_xtox	The difference in temperature between two monitors in the selected ladder. The specified monitors are identified by the monitor number. DifTemp4to1 is the difference in temperatures between monitors 4 and 1. Note: At The Dalles East Ladder, DifTemp_2_1 is the hobo temperature minus the forebay temperature.

Monitors and Locations

Lower Granite Dam

Hobo Probe Name	Hobo Probe Serial Number	Location
LWGAS1	10862501	Exit Pool
LWGAS2	10862500	Diffuser 14
LWGAS3	10862498	Turn Pool
LWGAS4	10862497	Entrance Pool

Little Goose Dam

Hobo Probe Name	Hobo Probe Serial Number	Location
LGSAS1	10873179	Exit Pool
LGSAS2	10873188	Turn Pool
LGSAS3	10873110	Junction Pool
LGSAS4	10862299	North Power House Entrance

Lower Monumental Dam

Hobo Probe Name	Hobo Probe Serial Number	Location
LMNAN1	10420512	North Exit Pool
LMNAN2	1175212	North Diffuser
LMNAN3	10420517	North Collection Channel
LMNAS1	10628959	South Exit Pool
LMNAS2	10618969	South Diffuser
LMNAS4	10420514	South Collection Channel

Ice Harbor Dam

Hobo Probe Name	Hobo Probe Serial Number	Location
IHRAN1	10744917	North Exit Pool
IHRAN2	10933367	North Fish Ladder Diffuser
IHRAN4	10933368	North Entrance Pool
IHRAS1 (Probe 1)	10744918	South Exit Pool
IHRAS2 (Probe 2)	10744915	South Fish Ladder Diffuser
IHRAS4 (Probe 3)	10933366	South Junction Pool Diffuser
IHRAS5 (Probe 4)	10933369	South Entrance Pool

McNary Dam

Hobo Probe Name	Hobo Probe Serial Number	Location
MCNAN1	10629233	Exit Pool - WA
MCNAN4	10629235	Entrance pool - WA
MCNAS1	10629232	Exit Pool - OR
MCNAS3	10905153	Below Diffuser 8 - OR
MCNAS4	10905154	Entrance Pool - OR

The Dalles Dam

Hobo Probe Name	Monitor Type	Location
TDAAN1	Hobo Temperature Monitor	North Ladder Count Station
TDAAE1	TDG Temperature Monitor	Forebay Temperature
TDAAE2	Hobo Temperature Monitor	East Ladder Count Station

John Day Dam

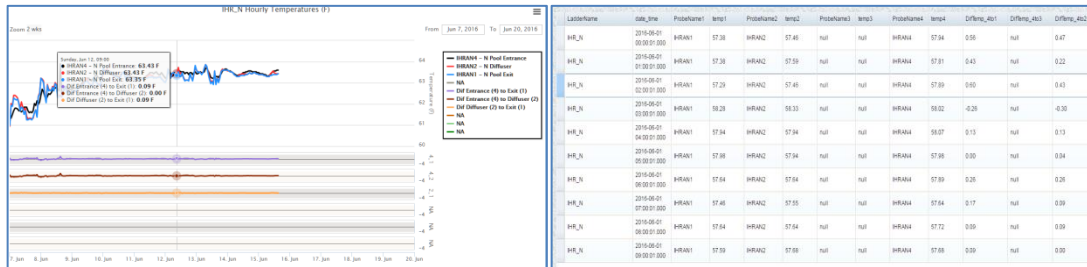
Hobo Probe Name	Hobo Probe Serial Number	Location
JDAAN1	Hobo Temperature Monitor	North Exit Pool
JDAAN2	Hobo Temperature Monitor	North Entrance Pool
JDAAS1	Hobo Temperature Monitor	South Exit Pool
JDAAS2	Hobo Temperature Monitor	South Entrance Pool

Bonneville Dam

Probe Name	Probe Serial Number	Location
BONAB1	Temperature Monitor	Bradford Island Count Station
BONAN1	Temperature Monitor	Washington Shore Count Station
BONAN2	Temperature Monitor	Washington Shore Adult Fish Facility downstream return pool
BONAL1	Temperature Monitor	Bradford Island Lamprey Passage Structure, near exit
BONAL2	Temperature Monitor	Cascade Island Lamprey Passage Structure
BONAL3	Temperature Monitor	Washington Shore Auxiliary Water Supply Lamprey Passage Structure
BONAL4	Temperature Monitor	Washington Shore North Downstream Entrance Lamprey Flume/Passage System

Query Notes:

- 🐟 Ladder water temperatures are graphed from June 1 through September 30.
- 🐟 The downloadable csv file contains data for the current year and selected ladder for each hour from June 1 through September 30. If there are no data for a date and hour, the word 'null' appears in that field.
- 🐟 At The Dalles East Ladder, there is one hobo monitor (TDAAE2 and temp2) and the other monitor being used is the forebay temperature monitor (TDAAE1 and temp1)
- 🐟 At The Dalles East Ladder, DifTemp_2_1 is the hobo temperature minus the forebay temperature.
- 🐟 **Caution:** Hourly temperature data should be evaluated with caution, as measurement errors may occur for short periods due to equipment limitations and/or malfunctions. For example, temperature probes are removed from the ladders for weekly download and then redeployed. The response time for the temperature probes to acclimate in the water is about 5 minutes. Therefore, measurements taken soon after redeployment may not be accurate reflections of actual temperatures and should be evaluated with caution.



Result Graph and Table