

Data Sources for Henry's Fork Foundation Daily Water Supply Report

Disclaimer

The Henry's Fork Foundation (HFF) compiles raw data each day from the sources listed below, including from HFF's own network of water quality and streamflow measurement instruments. HFF staff use these data to calculate and report statistics on water supply in the Henry's Fork watershed. These data are subject to revision by the reporting agency, usually at intervals of 4-6 weeks. Most data are approved and archived annually several months after the end of the water year (October 1 – September 30) or irrigation year (November 1 – October 31). As a result, information in the daily report is subject to revision. When daily data are clearly inaccurate (negative daily precipitation amounts, for example), values are estimated until updated by the reporting agency. In many cases, data are reported differently in HFF's products than by the original collection agency (climate data relative to long-term mean rather than 30-year median, for example), so statistics will differ between HFF's report and that provided by the agency. Some hydrologic measures are calculated using models developed by HFF, and these measures will either differ from those calculated and reported by agencies or are products not calculated and reported by others.

The Henry's Fork Foundation provides the information in the daily water report as a service to its members and other watershed stakeholders, water users, educators, and water-resource planners and managers. We regularly update products and modeling methods to provide current information most relevant to these user groups. The HFF makes every effort to provide accurate information. However, neither HFF nor any other party represent that the information provided daily via email, on the [HFF web site](#), on any of HFF's [scientific websites](#), or on social media is in every respect complete and accurate, and are not responsible for errors or omissions. Users of HFF's information are cautioned to consider carefully the provisional nature of the information before using it. Neither HFF nor its staff members assume any legal responsibility for the accuracy or completeness of this information or for how it is used and interpreted.

Abbreviations, website links, and data sources

Table 1. Key to abbreviations. Each abbreviation is linked to the agency website most relevant to the upper Snake River basin.

Abbreviation	Description
AgriMet	USBR Pacific Northwest Agricultural Weather Network
ET	Evapotranspiration
HFF	Henry's Fork Foundation: water quality and water quantity . Other data dashboards and tools are linked from these sites.
IDWR	Idaho Department of Water Resources (Water Rights Accounting Data)
HydroMet	USBR Pacific Northwest Hydrological and Meteorological Network
NWS	National Oceanic and Atmospheric Administration National Weather Service: Pocatello office and Climate Prediction Center
NRCS	Natural Resources Conservation Service (National Water and Climate Center)
SnoTel	Snow Telemetry
SWE	Snow water equivalent (amount of liquid water contained in the snowpack)
USBR	U.S. Bureau of Reclamation (Pacific Northwest Region) U.S. Drought Monitor
USGS	U.S. Geological Survey (National Water Information System)
WD01	Water District 01 (Water Rights Accounting Data)

Table 2. Stations are listed by subwatershed, with stations sorted by elevation (high to low) or by location in the hydrologic network (upstream to downstream).

Station Name	Type	Station ID	Elevation (ft)	Data Type(s)	Description and Use
Teton River Subwatershed (Teton Watershed upstream of Crosscut Canal)				Water supply from Teton River	
Grand Targhee	NRCS SnoTel	1082:WY	9,260	SWE, Climate	Climate in Teton Range (Fox Cr. to Bitch Cr.)
Phillips Bench	NRCS SnoTel	689:WY	8,160	SWE, Climate	Climate in Snake River Range (Trail Cr.)
Pine Creek Pass	NRCS SnoTel	695:ID	6,710	SWE, Climate	Climate in Big Hole Range
TR ab. S. Leigh Cr.	USGS Water Data	13052200	5,956	Streamflow	Streamflow in Upper Teton River
TR nr. St. Anthony	USGS Water Data	13055000	4,973	Streamflow	Regulated flow, natural-flow calculation point
Fall River Subwatershed (Entire watershed; upstream of Chester)				Water Supply from Fall River	
Lewis Lake Divide	NRCS SnoTel	577:WY	7,880	SWE, Climate	Climate in northern Fall River headwaters
Grassy Lake	NRCS SnoTel	499:WY	7,330	SWE, Climate	Climate in southern Fall River headwaters
Grassy Lake	USBR HydroMet	13046500	7,135	Reservoir content	Reservoir storage and delivery
FR near Chester	USGS Water Data	13069500	5,054	Streamflow	Regulated flow, natural-flow calculation point
Upper Henry's Fork Subwatershed (HF watershed upstream of Ashton)				Water supply from upper Henry's Fork	
Black Bear	NRCS SnoTel	347:MT	8,160	SWE, Climate	Climate on Yellowstone Plateau
White Elephant	NRCS SnoTel	860:ID	7,670	SWE, Climate	Climate in mountains surrounding Henry's Lake
Crab Creek	NRCS SnoTel	424:ID	6,870	SWE, Climate	Climate in Centennial Range
Island Park	NRCS SnoTel	546:ID	6,300	SWE, Climate	Climate on Henry's Fork Caldera floor
Henrys Lake	USBR HydroMet	13039000	6,457	Reservoir Content	Reservoir storage and delivery
HF nr. Lake (HL Outlet)	USGS Water Data	13395000	6,451	Streamflow	Regulated flow, natural-flow calculation point
Island Park Reservoir	USBR HydroMet	13042000	6,303	Reservoir Content	Reservoir storage and delivery
HF near Island Park	USGS Water Data	13042500	6,228	Streamflow	Regulated flow, natural-flow calculation point
Buffalo River	HFF (ex-USGS)	1304300	6,250	Streamflow	Natural flow at former USGS station maintained by HFF
HF near Ashton	USGS Water Data	13046000	5,093	Streamflow	Regulated flow, natural-flow calculation point
Valley Areas and Lower Watershed				Climate and water use in agricultural areas	
Alta	USBR HydroMet	ALTY	6,430	Climate	Climate in Teton Valley (near Driggs)
Ashton	USBR AgriMet	AHTI	5,299	Climate, ET	Climate and ET in higher-elevation agricultural areas
Rexburg	USBR AgriMet	RXGI	4,875	Climate, ET	Climate and ET in lower-elevation agricultural areas
Crosscut Canal at Head	IDWR/WD01 Acct.	13049560	5,055	Diversion	Diversion of storage water from HF for delivery to Teton R.
HF at St. Anthony	USGS Water Data	13050500	4,953	Streamflow	Regulated flow
HF blw. St. Anthony	HFF	Lower HF	Varies	Streamflow	Regulated flow in HF above and below Cons. Farmers Canal
Crosscut Canal at End	IDWR/WD01 Acct.	13050018	5,019	Canal Discharge	Delivery of storage water to Teton River
NF TR nr. Sugar City	USGS Water Data	13055250	4884	Streamflow	Regulated flow downstream of large diversions
SF TR nr. Rexburg	USGS Water Data	13055340	4854	Streamflow	Regulated flow downstream of diversions
River Reach Diversions	IDWR/WD01 Acct.	1304/5****	Varies	Diversion	Canal and pump diversions from Fall R., Teton R., HF
Exchange Well Injection	IDWR/WD01 Acct.	1304/5****	Varies	Well Discharge	Delivery of well water into Fall R., Teton R., lower HF
River Reach Gains	IDWR/WD01 Acct.	1304/5****	Varies	Discharge	River gains from and losses to aquifer
HF nr. Rexburg	USGS Water Data	13056500	4,810	Streamflow	Regulated flow

Periods of Record

Hydrologic data

Records of streamflow and reservoir content vary. However, complete daily records of most diversion and water-rights accounting data date back to water year 1978. Thus, means and other statistics for streamflow data are calculated over water years 1978 through the most recent full water year. The only exception is streamflow in the South Fork Teton River and North Fork Teton River, where the period of record starts with water year 2004, when those gages were installed. Because of [changes in irrigation practices](#) through the 1980s and 1990s, diversion is reported over irrigation years 2001 through the most recent full year.

Climate data

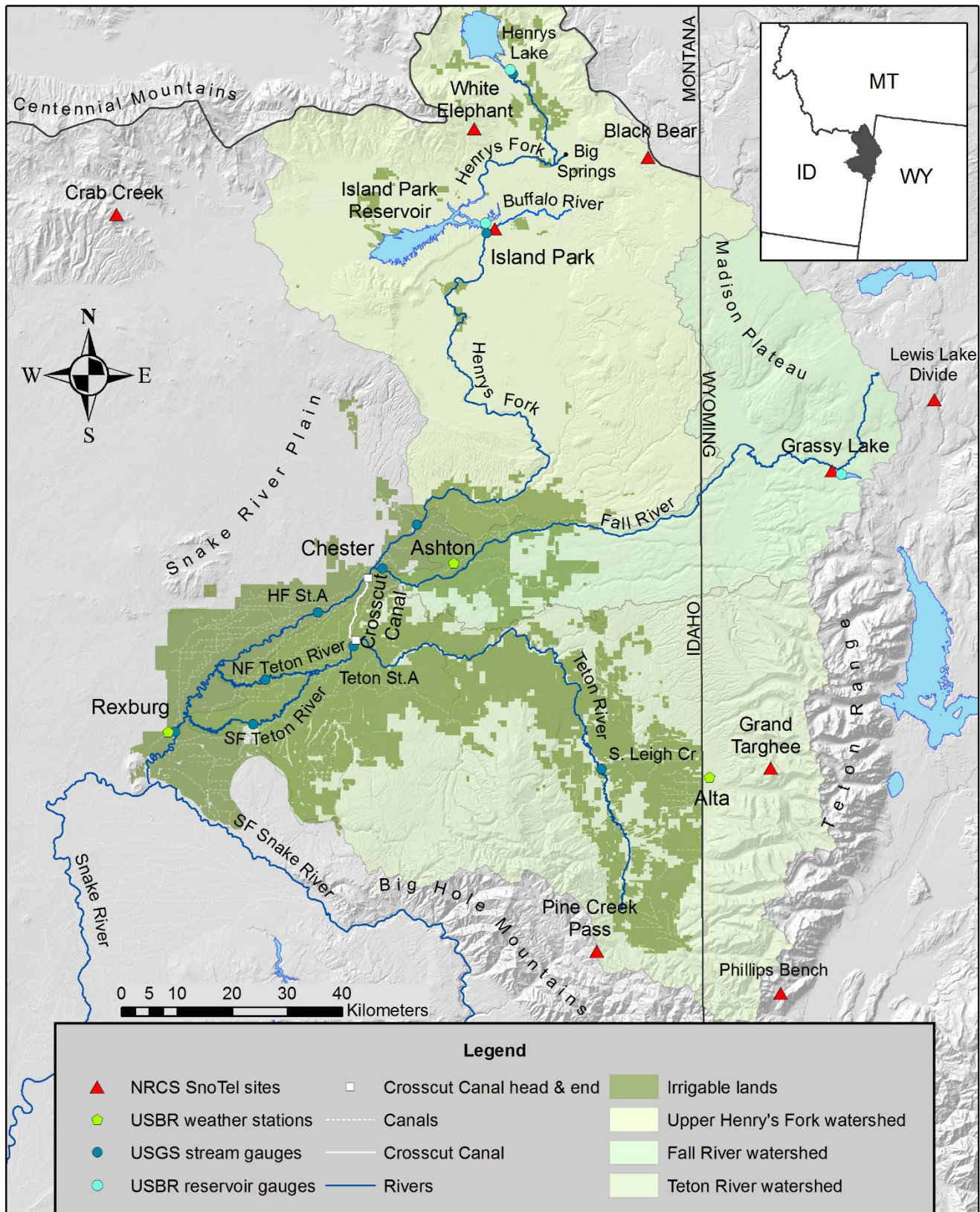
Periods of record vary across sites and parameters. However, for all stations except Grand Targhee, complete daily records start at the beginning of water year 1989. The record at Grand Targhee starts with 2007, but we have used standard statistical methods that relate Grand Targhee data to those of neighboring stations to extrapolate the Grand Targhee record back to 1989. Thus, all climate data are calculated over water 1989 through the most recent full water year.

Table 3. First water year in periods of record for climatic data.

Station Name	Type	Station ID	Elevation (ft)	SWE	Precipitation	Temperature	Evapotranspiration
Teton River Subwatershed (Teton Watershed upstream of Crosscut Canal)							
Grand Targhee	NRCS SnoTel	1082:WY	9,260	2007	2007	2007	NA
Phillips Bench	NRCS SnoTel	689:WY	8,160	1981	1981	1989	NA
Pine Creek Pass	NRCS SnoTel	695:ID	6,710	1989	1989	1989	NA
Fall River Subwatershed (Entire watershed; upstream of Chester)							
Lewis Lake Divide	NRCS SnoTel	577:WY	7,880	1981	1981	1984	NA
Grassy Lake	NRCS SnoTel	499:WY	7,330	1981	1981	1988	NA
Upper Henry's Fork Subwatershed (HF watershed upstream of Ashton)							
Black Bear	NRCS SnoTel	347:MT	8,160	1972	1979	1984	NA
White Elephant	NRCS SnoTel	860:ID	7,670	1983	1983	1989	NA
Crab Creek	NRCS SnoTel	424:ID	6,870	1982	1982	1989	NA
Island Park	NRCS SnoTel	546:ID	6,300	1982	1982	1989	NA
Valley Areas							
Alta	USBR HydroMet	ALTY	6,430	NA	1982	1986	NA
Ashton	USBR AgriMet	AHTI	5,299	NA	1989	1988	1989
Rexburg	USBR AgriMet	RXGI	4,875	NA	1989	1988	1989

Weather Forecasts and Outlooks

We start with information from a variety of short-term (1–7 days), medium-term (6–14 days), and long-term (3 weeks and longer) [weather](#) and [climate](#) products, most provided by the National Oceanic and Atmospheric Administration (NOAA). We also rely heavily on the [U.S. Drought Monitor](#), a collaborative project of the University of Nebraska and several federal agencies. We interpret and modify these national and regional products in the context of local geography based on our experience with weather in the watershed, 45 years in the case of HFF's Science and Technology Director Rob Van Kirk. Real-time data from local weather stations, including [HFF's](#), are also used to downscale these broader-scale products to provide the most accurate watershed-specific forecasts.



Map of Henry's Fork watershed, showing the three subwatersheds, irrigable lands, canals, rivers, and location of primary federal agency data collection stations.