

Dave Peterson

From: Rob Van Kirk <rob@henrysfork.org>
Sent: Monday, November 15, 2021 12:35 PM
To: Dave Peterson
Cc: Matt Hively
Subject: Re: Buffalo OCMP

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

With regards to the ecological flows section of the Low Impact Hydro Institute Certification, Fall River Rural Electric Cooperative (FRREC) is required to provide daily streamflow data for the Buffalo River as part of Operational Compliance Monitoring Plan (OCMP) for the Buffalo River plant FERC 1413-032. Under the original OCMP approved in 2006, FRREC records daily river stage readings in the Buffalo River at US Geological Survey station 13043000. USGS had operated and maintained that station regularly from 1936-1941 but discontinued the station in 1941. USGS made periodic field measurements between 1984 and 2016. Through a funding agreement with FRREC, USGS updated and maintained the rating curve from 2006 to 2016, and this curve was used to estimate streamflow from FRREC's daily stage readings. USGS stopped maintaining the rating curve in 2016 but provided the rating to the Henry's Fork Foundation (HFF), which has since maintained it.

Under current procedures, FRREC records river stage daily using the original USGS wire-weight gage and provides those stage records to HFF at the end of each month. HFF measures streamflow at the station 10-12 times per year to maintain the rating curve and produces estimates of daily discharge once each month after receiving the daily stage data from FRREC. HFF uses an acoustic doppler current profiler and standard USGS methods to measure streamflow. The full dataset of daily streamflow estimates and field measurements is available from HFF upon request.

Going forward, HFF plans to install a continuous-recording transducer and staff gage at the station, develop and maintain a new rating curve, transmit stage and streamflow data in real time to a data server, and make the data publicly available on a website. HFF has existing hardware, software, and IT capabilities to do this and has received a WaterSMART grant from U.S. Bureau of Reclamation to install this real-time gage as part of a watershed-wide project to provide hydrologic data and modeling products not currently supplied by government agencies. As of November 2021, USGS has conducted environmental review for the equipment installation, and HFF has received permission from the Idaho Department of Transportation to install the equipment in the highway right of way where the station is located. Some of the equipment has already been installed, but unavailability of electronic components has prevented installation on the timeline specified in the grant. HFF plans to complete the installation as soon as parts are available. After installation, there will be a period of overlap during which FRREC will continue to provide daily stage readings and HFF will begin operating the new equipment. The overlap will allow "old" and "new" data to be used to estimate streamflow while simultaneously developing a new rating curve. Once it is developed, real-time and daily mean data will be collected by HFF without need for daily, manual stage readings. Public availability of data on the web is scheduled for 2023.

The existing 2006-present flow record and any other information regarding future plans for the station can be obtained from Rob Van Kirk at rob@henrysfork.org.

Rob Van Kirk, Ph.D.
Senior Scientist
[Henry's Fork Foundation](http://henrysfork.org)