September 5, 2018

NEWS RELEASE
For Immediate Release

Contact: Jamie Laatsch
(208) 652-3567

Spring Freshet Moves Tons of Sediment out of the Ranch reach of the Henry's Fork

ASHTON – This year, the highest spring runoff flows since 2011 moved 1,900 tons of sediment out of the stream bottom from the Box Canyon to Pinehaven reaches of the Henry's Fork of the Snake River, with most of the sediment being moved out of the Harriman Ranch reach.

Thanks to a good water year in 2017 and careful management, Island Park Reservoir was full by mid-May, in anticipation of irrigation season. That meant that any runoff flowing into the reservoir would have to be released at that same magnitude. The result was that outflow from the reservoir during most of the spring essentially matched what natural flow would have been without Island Park Dam in place.

When snowmelt and runoff from heavy rain passed through the full reservoir in late April and May, we experienced a natural rhythm of our local hydrology that provides significant benefit to trout and aquatic insect habitat – a spring freshet. Unlike high flows that happen during irrigation season—when macrophytes (rooted aquatic plants) trap sediment on the stream bottom—this natural freshet occurred before macrophytes started growing, allowing high streamflow to pick up and move fine sediment that had been accumulating on the river bottom over the past seven years.

Aside from the highly visible effects of high flow and turbid water during the freshet itself, anglers observed large amounts of floating plants from mid-Box Canyon through Riverside this summer. The springtime freshet removed fine substrate that macrophytes use to anchor themselves to the stream bottom. As the plants grew throughout June and July, at some point they grew too large to remain anchored in the looser substrate against the steadily rising summertime outflow from Island Park Reservoir. The result was a lot of dislodged plant material floating down the river.

Anglers also noticed depressed summertime hatches at Last Chance, through the Ranch, and at Pinehaven, compared to the previous 4–5 years. With 1,900 tons of sediment being moved out of the stream channel from Box Canyon to Pinehaven this spring, it is likely that nymphs living on the stream bottom were also displaced, which would result in lower numbers of certain species this year. Finally, less substrate available during the growing season may have also resulted in fewer macrophytes overall, which could affect some species of mayflies and caddisflies that use the plants as habitat.

The benefits to the Rainbow Trout population from good winter flows take about a year and a half to be seen in the fishable population because it takes time for those juvenile trout that just survived the winter to grow to catchable size. Similarly, the long-term benefits to insect and trout habitat from this spring freshet would likely not be realized until next year. For example, next year we expect to observe that the cleaner gravel has resulted in higher relative numbers of fine-intolerant species of mayflies, stoneflies, and caddisflies and lower amounts of midges, worms, and some mayflies such as Brown Drakes, which favor fine substrate, from Last Chance to Riverside. Also, due to the cleaner substrate, we expect we will see an increase in relative abundance of PMD, Green Drake, and Flav nymphs at Osborne Bridge.

We also expect cleaner gravel to benefit trout spawning success, but it won't be possible to detect this for a couple of years to come. The springtime freshet was a large alteration to a natural system, and thus will have several short-term and longer-term impacts, some easy to predict and others surprising. However, overall, we expect the longer-term impacts to be beneficial for insect and trout populations.

Thanks to a four-year investment in an extensive network of water-quality monitoring equipment, thousands of water samples, customized data-processing and analysis capabilities, a new lab, and staff expertise, the Henry's Fork Foundation was able to measure the amount of sediment that moved in and out of every reach of the Henry's Fork River this spring—something that has never been done or even been possible until this year. Any changes to invertebrate populations will also be detected through annual invertebrate sampling next March.

The Henry's Fork Foundation (HFF) is the only organization whose sole focus is the conservation, protection, and restoration of the unique fisheries, wildlife, and aesthetic qualities of the Henry's Fork of the Snake River watershed. HFF's 2,500 members come from nearly every state and a number of foreign countries.

For more information: visit www.henrysfork.org, email jamie@henrysfork.org, or follow the Henry's Fork Foundation on Facebook, Twitter, and Instagram.

#####