

Appendix 61

USGS Gaging Station Hydrologic Data

This appendix summarizes hydrologic data from USGS gaging stations. To view a file, click on one the following links:

[Flathead Lake](#)
[Flathead River at Columbia Falls](#)
[Flathead River Perma](#)
[Flathead River Polson](#)
[Hungry Horse Res.](#)
[Mid. Frk Flathead R.](#)
[N. Frk Flathead R.](#)
[S. Frk Flathead R.](#)
[Stillwater River](#)
[Swan River](#)
[Whitefish River](#)

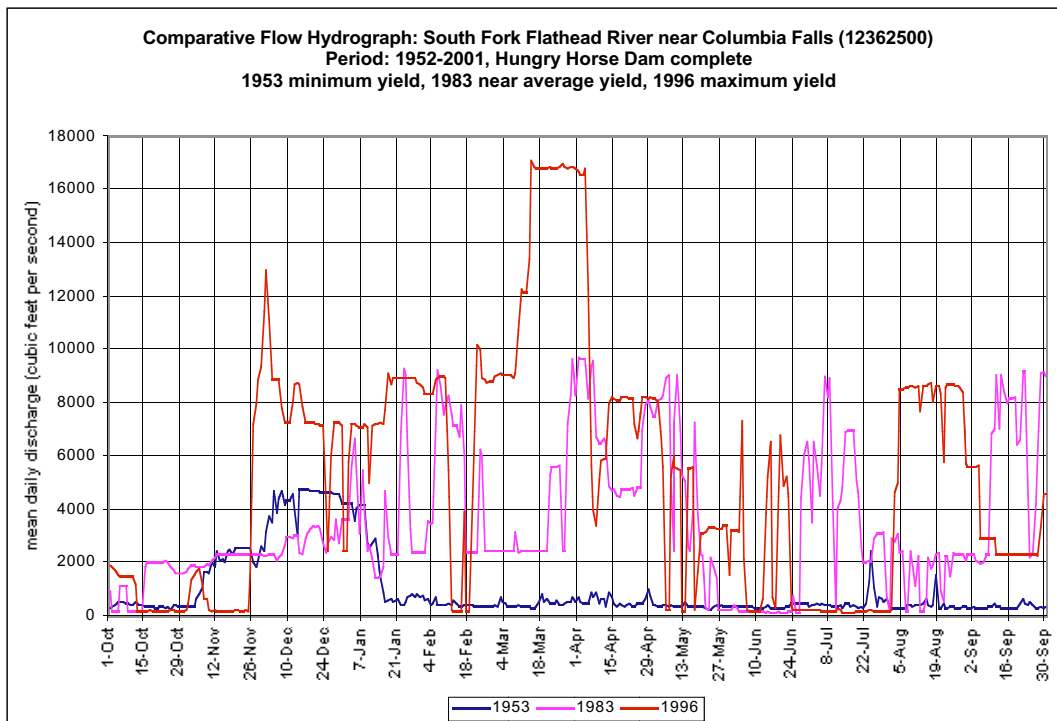
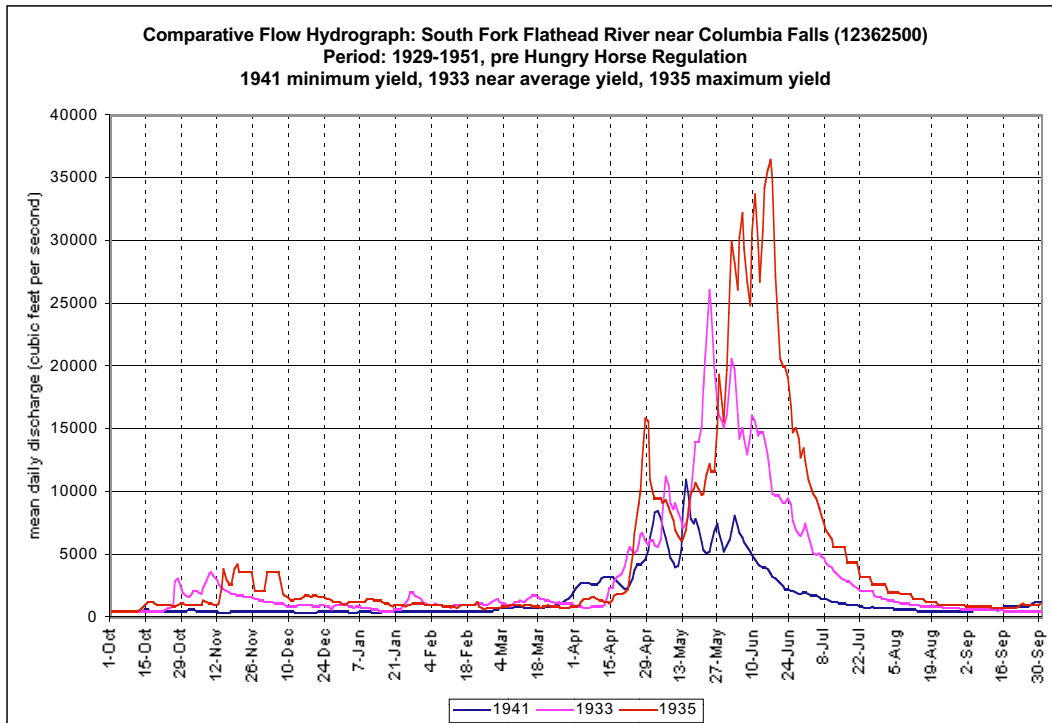
Each of the files include the following sheets or pages that can be viewed by clicking on the tabs at the bottom of each page within the file:

1. Read Me
A cover page describing the contents of the file.
2. Daily Flow Values
Mean daily discharge values for period of record.
3. Comparative Hydrograph Chart(s)
Annual hydrograph for minimum annual volume, maximum annual volume, and near average volume flow. For an explanation, see page 2 of this document.
4. Comparative Hydrograph Data
Mean daily flow values used to prepare Comparative Hydrograph Chart(s).
5. Duration Data Chart
Flow duration chart based on mean daily discharge. For an explanation of how to read this chart, see page 3 of this document.
6. Duration Data Compare
Mean daily discharge exceedence values used to prepare the Duration Data Chart.
7. Peak Flow Values Chart
Annual instantaneous peak flood flow series. For an explanation of this chart, see page 4 of this document.
8. Peak Flow Values
Instantaneous peak flood flow series for period of record.

A brief primer on how to read the charts within each file follows.

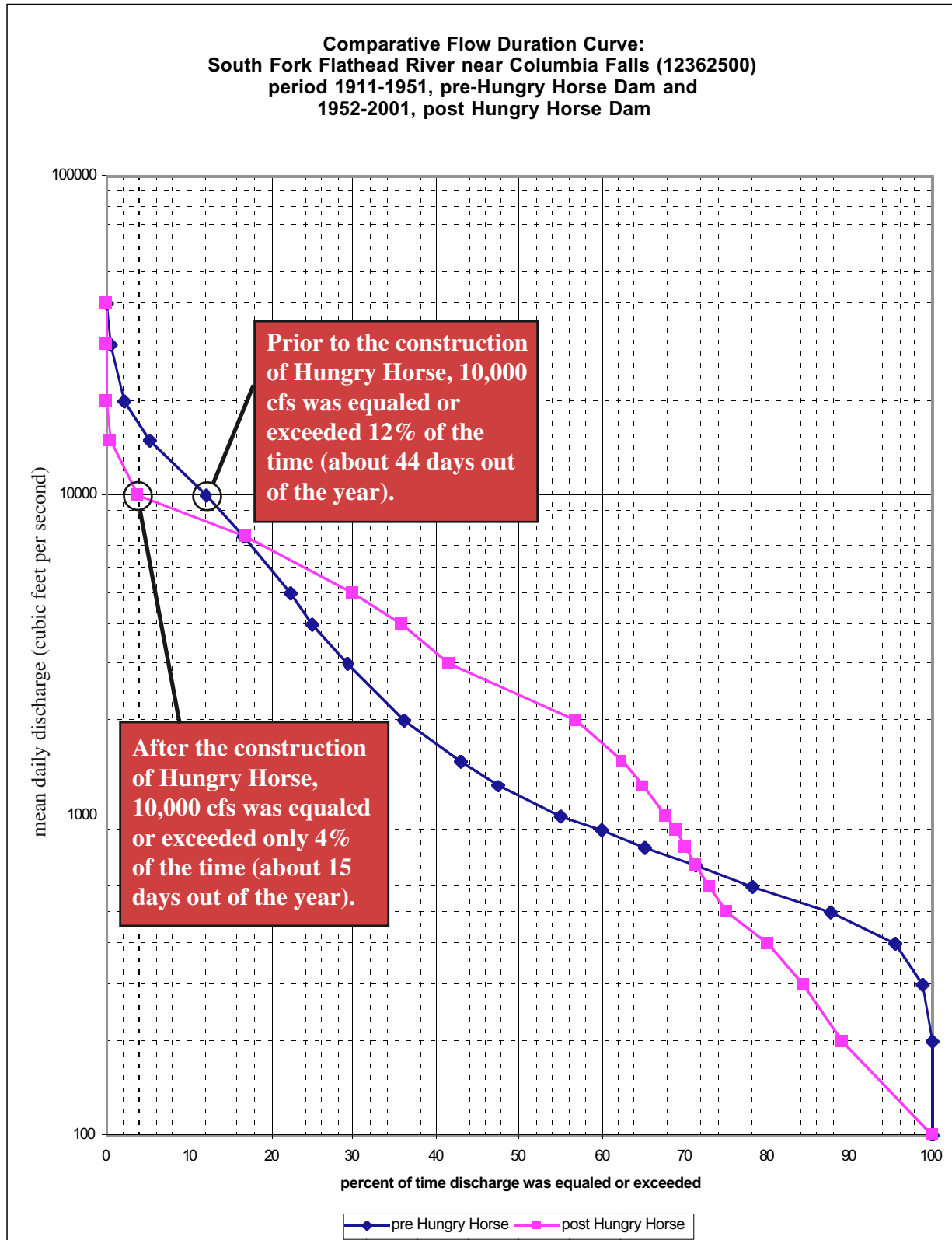
Comparative Hydrograph Charts

These charts show how the hydrograph of the river changes seasonally and as a result of regulation (when a river is regulated by a dam more than one chart will be included). In this file, the top chart shows the hydrograph of the South Fork of the Flathead River before Hungry Horse Dam started regulating the river. The three lines represent the river at three different years (minimum yield year, near average yield year, and maximum yield year). The bottom chart shows the hydrograph of the river with regulation by Hungry Horse.



Duration Data Chart

This chart tells the viewer the percentage of the time that a given daily discharge was equaled or exceeded. There will be two lines on the chart if the river is regulated, which allows one to compare pre-dam conditions with post-dam conditions. On this chart for the South Fork of the Flathead at Columbia Falls, it shows comparative flow duration curves for the period before Hungry Horse (blue line) and after Hungry Horse (magenta line).



Peak Flow Values Chart

This chart shows the viewer the annual peak flow for each year for the period of record. The red vertical line marks the year that regulation on a river started, which allows one to see the impact of regulation on peak flows. This chart is for the South Fork of the Flathead River at Columbia Falls. In 1952, Hungry Horse Dam began regulating the river, and the chart shows the sharp reduction in annual peak flows brought about by the dam.

