River Condition Report Card, 2016

Spokane RIVERKEEPER®

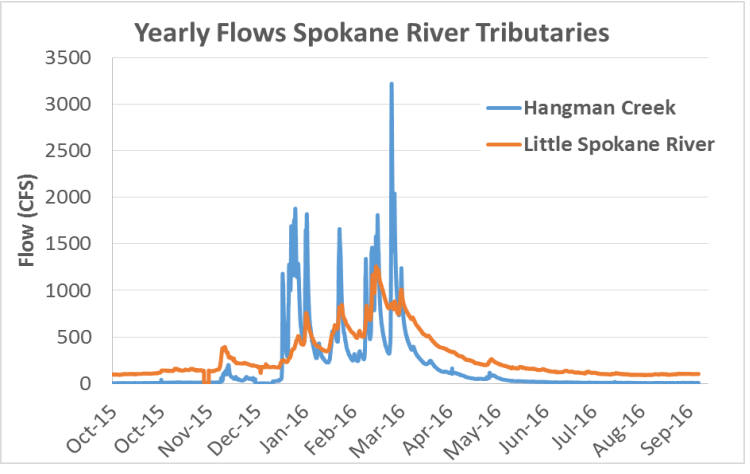
Hangman Creek Overall Grade: **F**

The River Condition Report Card reports the levels of pollution and the general condition of Hangman Creek. In order to grade water quality we use Washington State Water Quality Standards and established notions of what a healthy ecosystem is. Our grades are not an extensive or exhaustive study of conditions, but an assessment of the conditions based on our observations. In order to receive an "A", the river needs to meet state water quality standards every time (with the exception of extreme events) and reflect a healthy river ecosystem. Poor water quality or river conditions are reflected in a below average to failing grades. When rivers receive failing grades, the public loses.

Hangman Creek polluting the Spokane River 3/16/16

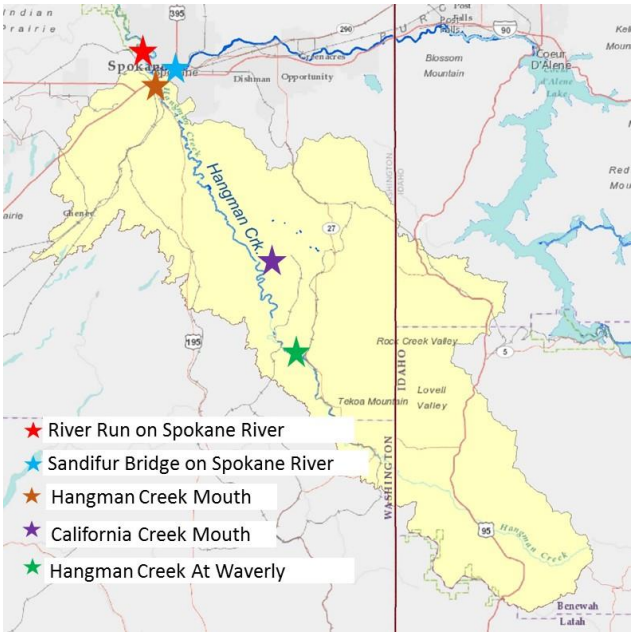
Indicator	Grade	Notes
Temperature	F	Water Temperature in Hangman Creek exceeded standards for cold water fish, including trout for most of the summer.
Turbidity (Water Clarity)	C	Turbidity peaked in January and March (shown above), creating sediment plumes during the spawning season for Columbia Basin interior redband trout.
Riparian (stream-side forest) Condition	F	Hangman Creek is in poor condition with regard to its shoreline (riparian) forest condition. By some estimates, the creek has lost 70% of its forest cover, exposing it to harmful sunshine in the summer months. The lower creek is in better condition.
Nutrients (Nitrate, phosphorous)	D	Hangman Creek contains high levels of nitrate and phosphorus, nutrients that originate in fertilizer, especially during runoff events.

Flows on Hangman Creek are extremely flashy, creating flow conditions that rise and fall quickly. Rapid runoff carries pollutants, scours streambeds, and creates hazards for recreation. Flashy streams are in part a result of the loss of streamside vegetation in the watershed (see below).



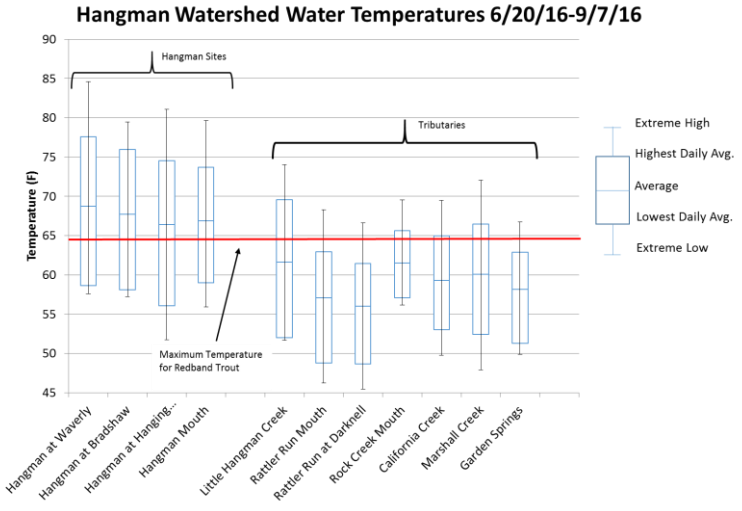
Water Quality Results

Spokane RIVERKEEPER®



Map of sampling sites

Temperature: Water temperature in Hangman Creek exceeded the 18 C standard from June-August. High water temperatures are caused by lack of shade plants and stream-side forests along the creek bank. Temperatures in Hangman Creek are lethal to native redband Trout. The larger pattern during the summer is very high temperatures in the Palouse region with cooler temperatures near the mouth, due to ground water inflow. Some tributaries have cooler water during the hottest months.



Turbidity (Water Clarity): Turbidity is a result of sediment flowing into Hangman Creek, creating conditions that suffocate fish, buries their eggs, and contains other pollutants. Hangman Creek contained high turbidity, especially in January and March, with visibility reduced to as low as 7 cm. Increasing streamside vegetation in the watershed could greatly reduce harmful sediment loads.

Hangman Creek in May, 2016. Runoff clogged the creek with sediment.

Shoreline vegetation (Riparian) condition: The condition of shoreline vegetation on Hangman Creek is in very poor shape. Some estimates say 70% of this vegetation is gone. In the upper reaches of the river nearly all of the shoreline vegetation has been stripped off of the creek due to land use practices. On the lower creek the riparian condition is in much better shape and there are reaches near the confluence with the Spokane River with fully functioning forest. With the upper creek compromised, numerous problems occur that have an effect on water quality all the way down the river.

Streamside vegetation traps sediment, nutrients and provides shade.

Help Hangman Creek, the Spokane River and Little Spokane River!

- Contact your local legislator and tell them you support efforts to clean-up our surface waters.
- Report pollution problems to the Washington Department of Ecology. 509 - 329 - 3400