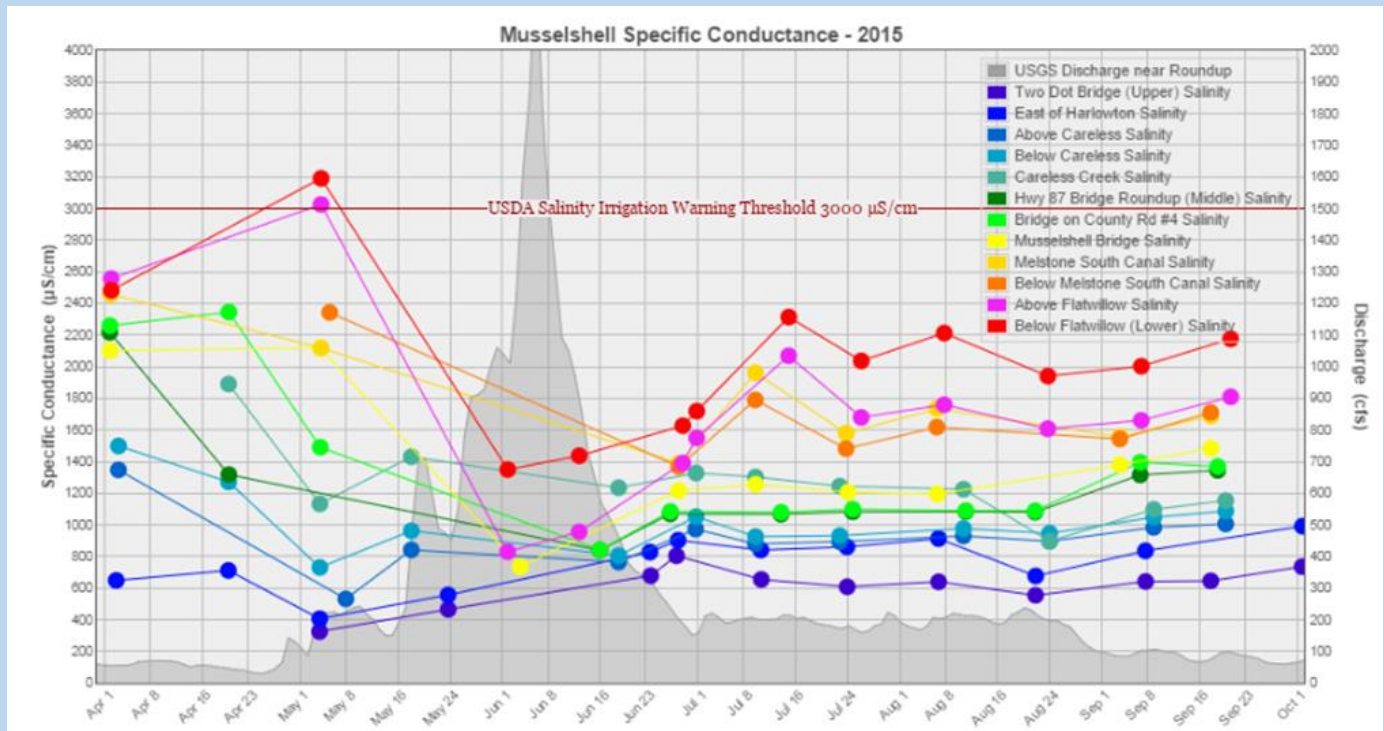


Musselshell Watershed Coalition 2015 Salinity Data Summary

Specific conductance (SC) is the amount of electricity that water will conduct and is directly related to how much salt is in the water. The general SC threshold suggested by USDA is 3000 uS/cm. Above this concentration, crops can experience drought stress because of the salt.



Did you know...

Deionized (DI) water has all the salt removed and does not conduct electricity (SC = zero).

Snow and rain are nature's DI water!



The lowest SC measured in 2015 was 326 uS/cm on May 3rd by Leon Hammond at Two Dot Bridge, which is the most upstream sample site on the Musselshell main stem. This measurement was shortly after April 27th when the [NRCS SNOTEL gages](#) in the Little Belt and Castle mountains show the snow pack really starting to come off.

SC values increase moving downstream on the river and the highest values in 2015 were consistently measured at the Below Flatwillow site near Mosby by Tammie Starkjohann. At this site the highest SC of 3191 uS/cm was measured on May 3rd and the only other value above the USDA irrigation threshold was on the same day at the site Above Flatwillow.

The lowest SC values at the sites in the upper Musselshell were in early May, while it was a full month later in early June that the lower Musselshell sites saw their lowest SC values. Mountain snowpack came off between the end of April and early June according to SNOTEL, so the upper river had lowest values at the start of snowmelt and the lower river had lowest values at the end of snowmelt. The highest SC values measured in 2015 were a little higher than in 2014 but the general pattern of seeing the highest SC in the lower river in May was consistent. The biggest difference in the 2014 data was the large drop in SC in the lower river associated with the massive 2014 August rain event.

2015 Salinity Data Summary – Thank you to the Volunteers!

From May through October, five dedicated volunteers spent 200 hours collecting over 100 data points spread out over close to 300 river miles and entering it into an online database to display on the website. The MWC Salinity Program would not be possible without these individuals dedicating time over the 25 week season.

Volunteer biographies taken from the MWC October 2015 newsletter written by Matt Schmidt (2015 BSWC Member).



Leon Hammond is the water commissioner for Zone 4, project manager for Upper Musselshell Water Users Association, and ditch rider for Deadman's Basin Water Users Association. When he is not running water, he is the shooting sports instructor for the Wheatland County Rifleman's 4-H Club in Harlowton. He is also an Army Veteran and an active member of the American Legion Post #15.

Sample Sites: Musselshell at Two Dot Bridge and Musselshell East of Harlowton



Pam Mickelson is a kindergarten through 4th grade teacher at Ryegate Public School and a landowner along the Musselshell River. She became involved with water quality monitoring after Matt Schmidt, MWC's Big Sky Watershed Corps member, spent a day at Ryegate School doing guest lectures.

Sample Sites: Musselshell Above Careless Confluence, Musselshell Below Careless Confluence, and Careless Creek at Musselshell Confluence



Donna Pedrazzi is the District Administrator at Lower Musselshell Conservation District in Roundup. She and her husband own and operate a ranch along the Musselshell River. She became involved in water quality monitoring through her activities with the Coalition and regularly participates in MWC activities as a representative of the Lower Musselshell Conservation District.

Sample Sites: Musselshell at Hwy 87 Bridge near Roundup and Musselshell at County Road 4 Bridge



Lynn Rettig lives in Musselshell and is the water manager for the Delphia-Melstone Water Users Association. He also serves on the board of the Montana Water Resources Association. He became involved in water quality monitoring through his activities with the Coalition.

Sample Sites: Musselshell at Bridge at Musselshell, Musselshell Above Melstone South Canal Return, and Musselshell Below Melstone South Canal Return



Tammie Starkjohann is a member of the Rowton family, a Petroleum County Centennial family. The Rowton Brothers ranch operates largely on the Musselshell River and Tammie and her husband work on the ranch, as well as other off-ranch jobs. Her family is involved in the Coalition and she became involved with water quality monitoring through this connection.

Sample Sites: Musselshell Above Flatwillow Creek and Musselshell Below Flatwillow Creek