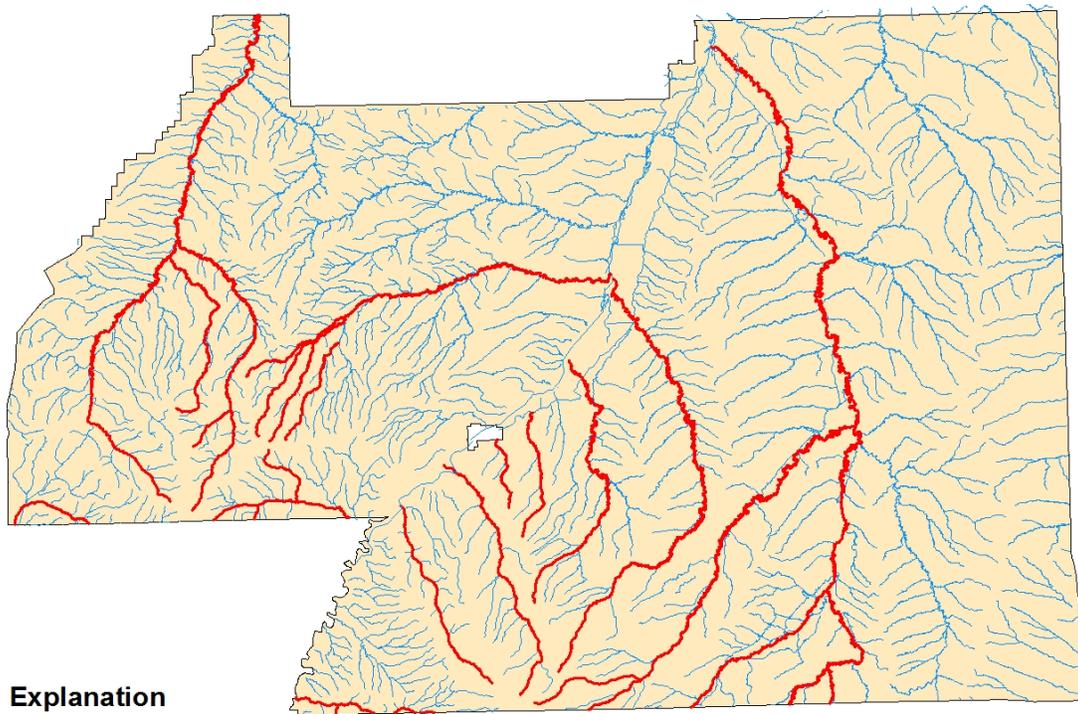
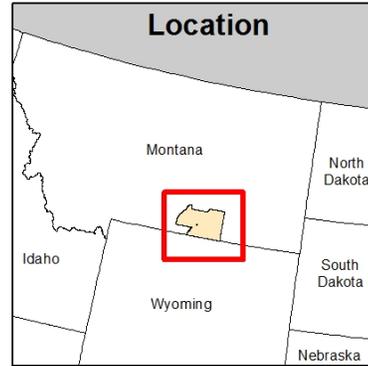




### Crow Reservation Water Temperatures

The Crow Reservation in south eastern Montana encompasses approximately 2.2 million acres of land within its exterior boundary. Residing within these Tribal lands is the eastern-most native population of Yellowstone Cutthroat Trout (Figure 1).



#### Explanation

- Historically occupied habitat
- Rivers and Streams
- Crow Reservation

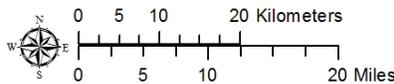


Figure 1. Map of the Crow Reservation depicting historically occupied Yellowstone Cutthroat Trout habitat.



# MONTANA FISH AND WILDLIFE CONSERVATION OFFICE



In 2010, the Montana FWCO (MFWCO), Bureau of Indian Affairs, and the Crow Tribe initiated a long-term stream monitoring program to collect temperature data from the cold-water streams within the Crow Reservation boundary. Since then, MFWCO and Crow tribal personnel have installed numerous thermographs along with two strategically placed air temperature sensors in or near various streams.

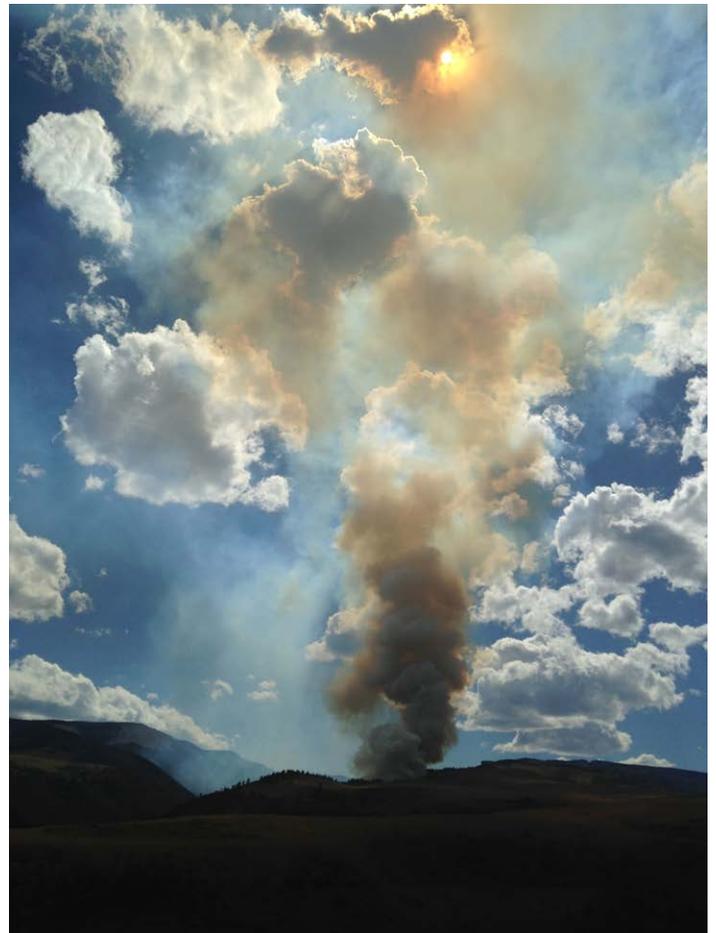
The data collected from these devices will facilitate Yellowstone Cutthroat Trout conservation on the Crow Reservation, as well as be shared with the western US inter-agency regional data managers to help improve assessment of effects from climate change.



**Yellowstone Cutthroat Trout conservation and restoration involves collaboration with partners, long hours, and sophisticated equipment. Here MFWCO biologist, Robbin Wagner, is deploying a water temperature monitor in Rotten Grass Creek, Crow Reservation to collect long-term data to assist assessing climate change effects on stream temperatures (Photo credit, Michael (Josh) Melton,**

During July, thermograph data were retrieved and an additional thermograph was installed in Rotten Grass Creek.

Unfortunately, the attempt to install a thermograph in Lodge Grass Creek was thwarted by a wildfire.



The beginnings of a wildfire halted MFWCO efforts to install a thermograph in Lodge Grass Creek. (Photo credit, Michael (Josh) Melton, USFWS, Montana FWCO)

Additionally, approximately 1,300 genetically-pure Yellowstone Cutthroat Trout were stocked into East Basin Creek in Black Canyon, and an assessment for migratory barriers was attempted in Lodge Grass Creek Canyon, all to further our efforts to secure this unique native trout on the landscape.



## **Bull Trout**

Much of July was focused on preparing equipment for annual Bull Trout survey and monitoring efforts within the St. Mary River Drainage. Field crews initiated survey efforts late-July and will continue into early August.

## **Arctic Grayling:**

Final removal of the fish trap and weir was completed after waters receded in Red Rock Creek.

MFWCO staff provided review and comment to Ecological Services on the draft determination for Arctic Grayling.

## **Sikes Act:**

July was a busy month of coordination among programs on Malmstrom Air Force Base. While the Integrated Natural Resources Plan (INRMP) update is a priority, there are numerous other ongoing activities. Accomplishments this month include developing a “fact sheet” for Malmstrom that includes identifying species listed as Threatened, Endangered, and Candidate or proposed candidate species, as well as state species of special concern that might be encountered either on the base or the associated missile field.

A grant proposal was developed seeking funding under FY2014 National Public Lands Day grant. This proposal outlines a plan to plant memorial trees on base and to create educational pollinator gardens throughout the base. Collaborators include base Airmen, AmVets (trees), 4-H, Scouts, Airmen Spouses Club, and MSU Master Gardeners.

Finally, a multi-base request for proposals was developed for IDIQ bidders to inventory invasive plants on several USFWS Region 6 bases (MT, WY, ND, SD, and NE). Ultimately, the results of this effort will provide a multifaceted control strategy for several bases that will allow USFWS improved capability for invasive plant control.

## **Safety:**

The joint CDSO for Montana and Northern Rockies FWCs, participated in an annual Station Safety Audit Jim Behrmann.

ATV/UTV training and certification was completed.



# MONTANA FISH AND WILDLIFE CONSERVATION OFFICE



## Fish Passage

A new cooperative agreement was initiated with Montana Fish Wildlife and Parks to develop passage on Davis Dam on the Musselshell River, Montana. The Davis Dam was identified as the 1<sup>st</sup> major barrier to sauger, a state species of special concern, and other native prairie fish migrations into the Musselshell River from the Missouri River. This project, once completed, will provide access to 30+ miles of habitat. Funding was provided through the National Fish Passage Program and NFHAP Great Plains Partnership



Davis Diversion Dam, Musselshell River, Montana  
(Photo credit, Mike Ruggles, Montana Fish Wildlife and Parks)

Working with our Partner's for Wildlife Program, MFWCO provided support with a fish passage project to benefit Arctic Grayling in a tributary to the Big Hole River, Montana.