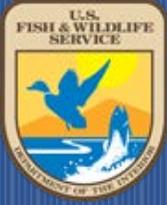


Montana Fish and Wildlife Conservation Office



BILLINGS – BOZEMAN – GREAT FALLS –
LEWISTOWN

October 2015

Preparing for winter at Red Rock Lakes

Winter can arrive early in Montana; particularly in higher elevations. Given the uncertainty of weather, Montana FWCO biologists working in conjunction with Red Rock Lakes National Wildlife Refuge staff, took advantage of nice fall weather to begin preparing for snow and the resulting limited access to our data collection equipment.

While the initial installation of four passive integrated transponder (PIT) tag reading arrays worked well during the spring and summer months, plans to leave them in through the winter required some additional infrastructure to prevent damage from ice and snow, as well as to ensure sufficient power.

With assistance and logistic support from Red Rock Lakes National Wildlife Refuge, the Montana FWCO crew and their equipment were transported to the remote sites in October.

The PIT tag arrays were subsequently elevated above ground level (approximately 5-6 ft) and extra solar panels were added at each site.

These stationary PIT tag arrays, part of a 3-year effort, will collect pre- and post-habitat restoration data that will be utilized to assess the biological

response of Arctic Grayling to restoration efforts on Elks Springs Creek.

The restoration effort, planned for the spring of 2016, will involve re-routing Elks Springs Creek into a historical channel.

The goal of this effort is to restore Arctic Grayling to this historically important spawning stream.



Deputy Refuge Manager, David Farmer, provides transportation to Montana FWCO staff Jim Mogen (left), Andrew Gilham (center), and Jason Marsh (right).
Photo: USFWS/Jim Mogen

Jim Mogen (left) Andrew Gilham (center), and Jason Marsh (right) work to “winterize” sensitive equipment by building elevated platforms to minimize effects of snow and ice.

Photo: USFWS/David Farmer



Jason Marsh finishes tuning the passive integrated transponder (PIT) tag reading arrays after they were elevated to protect from snow and ice.

St Mary Bull Trout Recovery:

Annual data collection efforts were concluded in October when Jim Mogen, Andrew Gilham, Josh Melton, and Jason Marsh, along with U. S. Bureau of Reclamation Natural Resource Specialist - Justin Kucera, traveled to St. Mary to conduct Bull Trout redd surveys.

Montana FWCO staff have been conducting redd surveys in upper Boulder and Kennedy creeks since 1997 as part of long-term monitoring efforts. These two streams are the primary spawning tributaries for the core migratory Bull Trout population of the main-stem St. Mary River drainage of Montana.

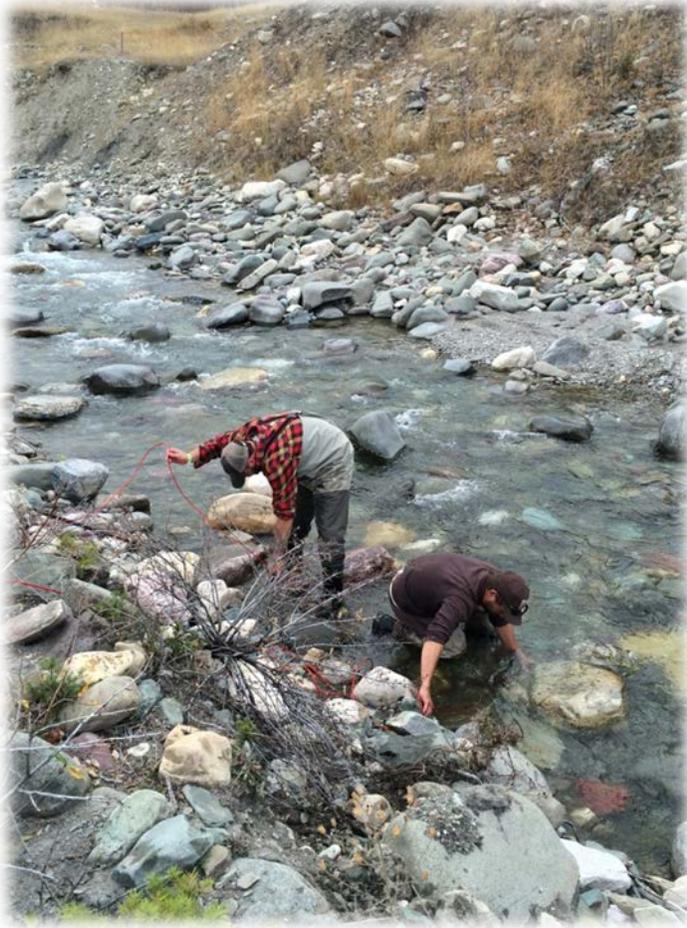
Though this year's count of 14 redds in Kennedy Creek was down from last year's 20 redds, it remains pretty close to the 19-year Kennedy Creek average of 16.7 redds. Redd counts in Boulder Creek, on the other hand, matched last-year's all-time high count of 66 which is well above the 19-year mean of 41.1 redds.

In addition to the annual redd surveys; the crew also installed a passive integrated transponder (PIT)-tag antennae array near the mouth of Boulder Creek. This array will be used to monitor both upstream and downstream movements of juvenile, sub-adult, and adult Bull Trout previously PIT-tagged in the system.

Lastly, fish salvage and reconnaissance efforts in lower Swiftcurrent Creek, downstream from Sherburne Dam, were completed.



Boulder Creek Bull Trout redd counts, St. Mary Drainage, Montana, 20-Oct 2015. Photo: USFWS/Jim Mogen



PIT-Tag antennae sensor wires being placed across Boulder Creek, St. Mary Drainage, Montana. Photo: USFWS/Jim Mogen



PIT-Tag array receiver, batteries and solar panels mounted alongside Boulder Creek, St. Mary Drainage, Montana.

Photo: USFWS/Jim Mogen

Air Force and USFWS collaborate on Natural Resource Management under the Sikes Act:

Pollinators, such as bees and butterflies, are essential to life as we know it. However, recent reports suggest some pollinators are declining. Subsequently, a Presidential Memorandum was issued 20 June 2014, which among other things, directs the Department of Defense to, "...consistent with law and the availability of appropriations, support habitat restoration projects for pollinators, and shall direct military service installations to use, when possible, pollinator-friendly native landscaping..."

During October, as a follow-up to September's National Public Lands Day events at Malmstrom Air Force Base, Dr. Elin Pierce, Montana FWCO, led an effort to create pollinator-friendly habitat.

Much preparation was needed to identify a source for the approximately 80 native nursery-grown plants, coordinate among various flights, and implement the project.

Over 30 volunteers and workers, including military personnel and U.S. Fish and Wildlife Service employees, rallied for the effort consisting of juniper removal, replacing rock and soil with topsoil and compost, and planting.



Air Force and civilians working together to create pollinator-friendly native-plant landscaping on Malmstrom AFB, Montana. Photo :USFWS/ Dr. Elin Pierce

Air Force and USFWS collaborate on Natural Resource Management...
(continued)

October concluded our 2015 invasive weed control efforts on the undeveloped portions of Malmstrom Air Force Base.

At the conclusion of the season, Montana FWCO biologists, Robbin Wagner and Josh Melton, effectively treated 0.125 acres of Leafy Spurge, 2.47 acres of White Top, approximately 3 acres of Spotted Knapweed, and 0.6 acres of Dalmatian Toadflax.

Other notable natural resource taskers:

- A site visit was conducted with Mr. James Jacobs, a Plant Materials Specialist from the Bozeman office of USDA-NRCS, to discuss candidate locations, grass species, and soil conditions for planned 2016 prairie grassland restoration efforts.
- A meeting was held with Operations deputy group commander about planned 2016 projects to mount game cameras near missile launch and alert facilities within the Rocky Mountain Front Range to collect presence/absence data for T&E species.
- Site visits were conducted with Dr. Bryce Maxell, noted bat and herpetologist

researcher, to discuss amphibian surveys on Powwow Pond, as well as, to search for potential roosting areas near the helicopter maneuver area.



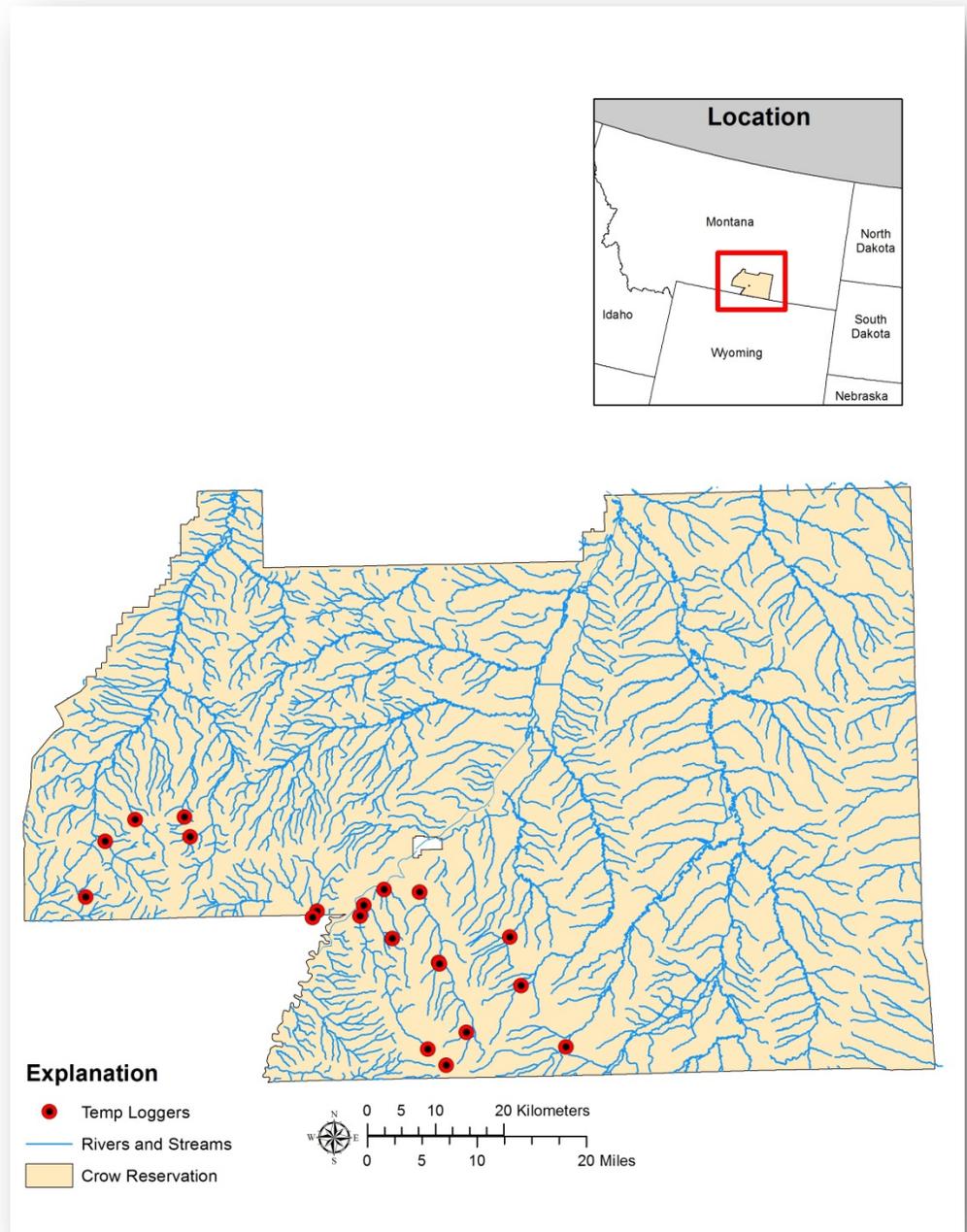
UH-1N "Iroquois" helicopters of the 40th Helicopter Squadron housed in a hangar that may also serve as a bat roosting area. Photo :USFWS/ Dr. Elin Pierce

- Coordination with the Wing Safety Flight was initiated to discuss recent safety record and upcoming plans for game camera surveillance of problematic off-runway roosting site used by Canada geese.

Stream Temperature monitoring on the Crow Reservation:

As fall begins to fade into winter, biologists from the Montana FWCO, worked diligently to download data from thermographs and collect stream discharge measurements from Black Canyon, East Cabin, Little Bull Elk, Soap, Rotten Grass, and Lodge Grass creeks.

These thermographs are part of a long-term temperature monitoring strategy on the Crow Reservation that will provide data useful in assessing climate change effects and predicting suitability of several streams in sustaining native Yellowstone Cutthroat Trout populations.



Thermograph locations on the Crow Reservation, Montana

Other happenings:

- Andrew Gilham and George Jordan initiated a collaborative project with Dr. Mike Brown, South Dakota State University, to develop a standard weight equation for Arctic Grayling. Currently length-weight data have been obtained from Wyoming, Montana, British Columbia, Alberta, Northwest Territories, and Alaska. Once completed, standard weight equations will provide an additional tool to evaluate how robust Arctic Grayling populations are.

- Dr. Elin Pierce earned the title of "PT Champion" for taking first place in a physical training competition hosted by the Malmstrom Air Force Base Fitness Center. The competition, opened to military and civilian members, consisted of pushups, sit-ups, and a 1.5 mile run.

Elin dominated the competition scoring a total of 193 points to win first place, whereas second place scored 180 points and third place was had with 176 points.

See also:

<https://www.facebook.com/MalmstromAirForceBase/videos/81847741898654/?pnref=story>



Master Sgt. Paul Watts (left), Dr. Elin Pierce (center), , and Master Sgt. Robert Taylor (right), pose for a photograph after the Malmstrom Air Force Base physical training competition Oct. 27, 2015. (U.S. Air Force photo/Airman Collin Schmidt)

*For more information, click on the following logos
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