From: van Manen, Frank
To: Fortin-Noreus, Jennifer
Cc: Mark A Haroldson; Servheen, Chris
Subject: Re: IGBST follow-up
Date: Monday, April 25, 2016 12:41:52 PM

Jennifer/Chris,

Forgot to follow up on this, a few thoughts:

On Wed, Apr 20, 2016 at 1:56 PM, Fortin-Noreus, Jennifer <jennifer.fortin-noreus@mso.umt.edu> wrote:

> Hi,
>
> I wanted to follow-up on a few items that were discussed during the Study Team meeting last week.
>
> First, Chris and I discussed the on-going monitoring of cutthroat trout a bit more in the car. Given constraints on manpower for Kerry it would be feasible from our perspective to modify the monitoring protocol in the Conservation Strategy. One option would be to continue monitoring a few of the most productive streams to maintain data on cutthroat trout trends and use mercury levels in the hair of bears caught in the Yellowstone Lake area to quantify cutthroat trout intake. Samples from bears caught in the area between 2010 (after the end of our Lake study) and present day could also be used. In addition, if there are well-used rub trees in the area they could be used to collect additional samples for mercury analysis.

This is a tricky topic; it is not entirely clear to me how much of a time constraint the cuttthroat trout monitoring is for NPS. Given that ongoing monitoring shows first signs of cutthroat recovery and bear use, it seems that continued monitoring with current methods, even if imperfect, would be worthwhile. It's the age-old dilemma of the desire to maintain a long-term, consistent dataset even when more advanced methods are available. At this point, wouldn't revising the monitoring protocol in the CS be risky?

> Second, although there wasn't time to discuss fire ecology at the meeting I have some data that may be useful. During my Yellowstone study we collected a lot of habitat information at the site visits, including if the location was in a burned area and distance to the edge of the burn. That information could be combined with age of burn and severity in many cases. I have always intended to return to the habitat use chapter of my dissertation to re-analyze the data for publication but haven't had the time or statistical support for the modelling. Please let me know if you would like to discuss this further.

Unfortunately, we did not get have a chance to delve into this topic; this is probably

for longer-term research planning but I think there will be quite a bit of interest from managers. Our thinking was more of an ecosystem-wide study using GPS data; but smaller-scale studies and site visit data might help us identify the appropriate research questions.

Maybe we can discuss more in Anchorage...

Cheers,

Frank