

To: Jon Morgan, District Ranger, Forest Service, Monongahela National Forest, Cheat-Potomac Ranger District
From: Doug Wood
Date: March 25, 2022
Re: Upper Cheat Management Project

Thanks for the opportunity to comment on the Upper Cheat Management Project.
Below are excerpts of correspondences between myself and Chad Landress, Forest Fisheries Biologist. I have highlighted certain parts in yellow:

"On Wed, Feb 10, 2021 at 5:54 PM Landress, Chad -FS <chad.m.landress@usda.gov> wrote:
Hi Doug,

Sorry I wasn't able to connect with you today, I got wrangled into other duties, but I wanted to follow up with your questions. I expect this will help clarify and/or prompt additional questions, so we can always talk after you take a look.

Brook Trout

We do monitor several sites in the Clover watershed and Upper Cheat as a whole. In the attached spreadsheet is a summary of our available data. We don't have all the other 2020 data for these sites entered into our master database yet, but I pulled the fish data and added the brook trout numbers. This is biomass (pounds per acre); column AE.

Left Fork: we have two sites in Left Fork. We haven't collected brook trout at the lower site but I suspect they were there historically. At the upper site, we've collected brook trout at each of the 3 sample periods but there has been a dramatic decrease.

Right Fork: they were detected in 2016, but not 2010 or 2020. Low density in 2016. The site is pretty far downstream and is likely at the current downstream extent of a year-round population."

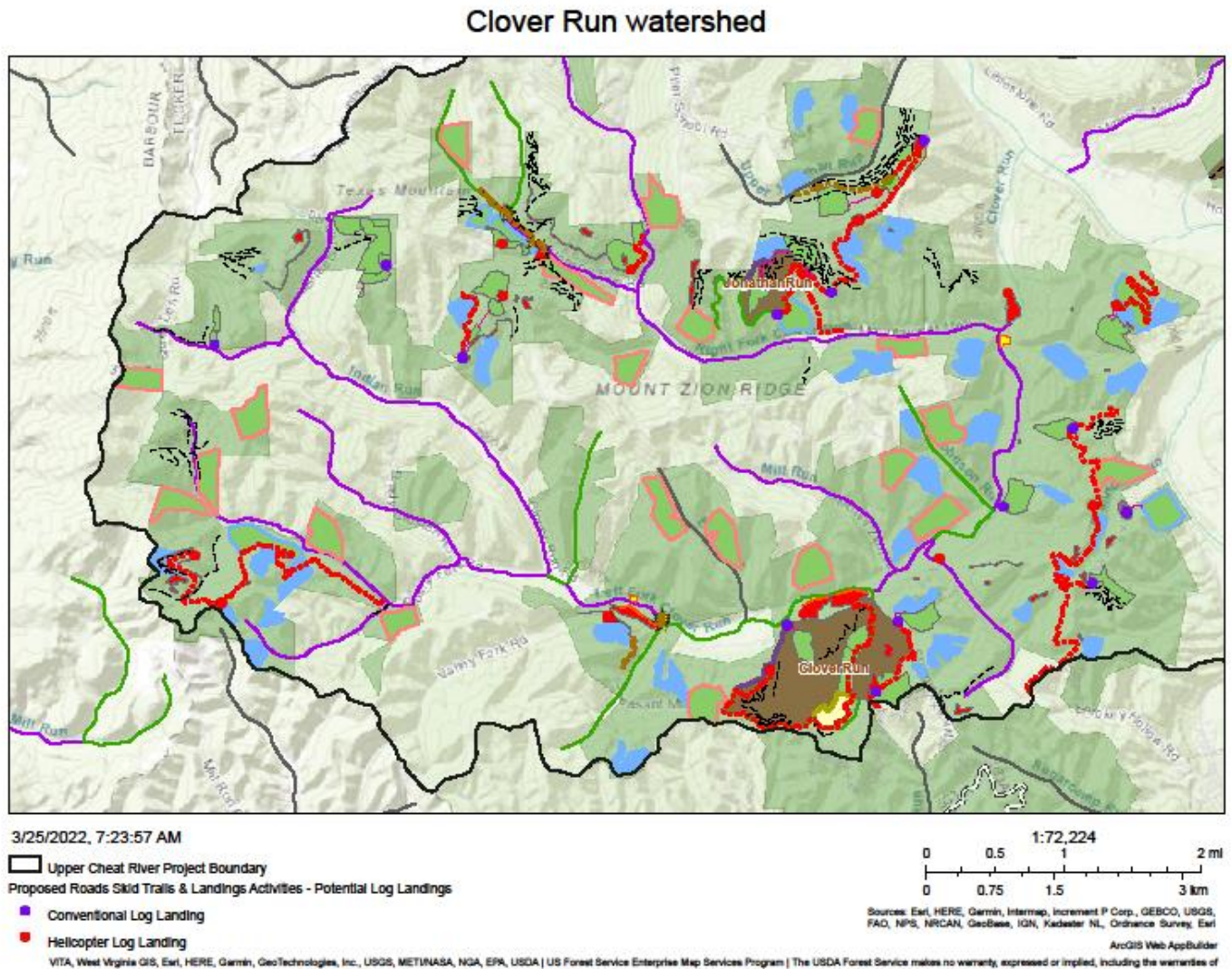
"On Sun, Feb 21, 2021 at 6:29 PM Landress, Chad -FS <chad.m.landress@usda.gov> wrote:
Hi Doug,

I appreciate the thorough review and input associated with the data provided. [...]
While the Clover Run watershed isn't as alkaline as other streams on the Forest (e.g., much of the Potomac, Elk, etc) there is a rather substantial limestone seam at the headwaters of the Left Fork and it is one of the more alkaline systems in the Upper Cheat. There are usually multiple stressors on aquatic ecosystem health, but in this case of brook trout populations the smoking gun is largely pointed at increased stream temperatures. At our Left Fork Clover water temp sites, there has been an increasing trend in water temperature over the past fifteen years. The lower site in Left Fork has gone from 47 days to 90 days with average temps > 18 C. The upper site has gone from 26, to 31, to 43 days with average temps > 18 C. [...]
Unfortunately, this data points to that overarching human effect: climate change. In regard to brook trout, the most appropriate actions we can take to increase resilience in these populations is to take actions to reduce water temperature: treating skid roads (new and old) to restore groundwater back to the ground, planting riparian areas (limited opportunity on NF, but we are going to plant every open area left in the project area), improving aquatic organism passage at road crossings to allow brook trout and other aquatic species to find cold water refugia, and restoring in-stream habitat and adding large wood to reconnect floodplains, increase soil saturation, and retain water longer and higher in the watershed.

On a bright note, when we have taken these steps, we've actually documented decreased water temperatures in the same time frame (e.g., Upper Greenbrier projects).

Thanks again for taking a quantitative look at the area. My apologies for the incorrect information. It would have been caught later in the process but this just expedited recognizing and correcting the error."

From the image below, it appears that the Forest Service-owned land approximates about half of the Clover Run Watershed. Stream reaches which are known to support Brook Trout are shown in purple and those that are highly suspected of supporting Brook Trout are shown in green. That information is from the WVDNR Natural Heritage Database.



The Forest Service has no control over land management activities on the privately owned portions of the watershed, which traditionally have supported logging, agriculture (primarily livestock pasturage), and residential development, all of which include the removal of trees and/or maintenance of treeless areas. As a plethora of research has shown, logging increases direct solar radiation on forest soils and increases the temperature of water that runs off those logged areas (and other, treeless areas) especially during spring and summer. As Chad's note indicates, planting open areas is one of the steps the Forest Service intends to take to decrease stream temperatures. However, at the same time the Forest Service intends to create more open areas via logging and thinning. The Forest Service cannot ensure that tree planting will take place on logged and

treeless private lands, but it can take steps to mitigate the expected increase in stream temperatures from private land management, by appropriate measures on Forest Service-owned parcels. As Chad explained, the decline in brook trout populations in the studied parts of the Clover Run Watershed are most likely due to increases in water temperature and “the most appropriate actions we can take to increase resilience in these populations is to take actions to reduce water temperature”. Oddly enough, in his list of most appropriate actions to reduce water temperature he did not mention the avoidance of logging on Forest Service land, which would counter water temperature increases due to private land logging and treeless area maintenance. Climate change is a primary driver of stream temperature increases, but it most certainly will not be mitigated in the Clover Run Watershed by increased tree harvesting and prescribed burns on Forest Service lands. In fact, the tree harvesting and prescribed burns will contribute directly to increased stream temperatures and may result in the extirpation of Brook Trout from the lower portion of the mainstem Left and Right Forks of Clover Run. Thus, the planned tree harvesting runs counter to the current federal administrative directive to mitigate the decrease in biodiversity through federal agency actions. The planned tree harvesting will also exacerbate the climate change problem, which President Biden has instructed federal agencies to attempt to reverse, not increase. A large percentage of the Forest Service-owned land in the Clover Run Watershed consists of mature forest, which typically sequesters more carbon than young forest. By cutting the mature stands in the watershed, the Forest Service will be acting directly against President Biden’s directives to mitigate climate change and enhance biodiversity.

I respectfully request you to task your management planning team to re-evaluate the management of the Upper Cheat Management Project Area in light of the Presidential directives to mitigate climate change and enhance biodiversity, and to ensure the continued viability of Brook Trout in the Clover Run Watershed.

Thank you,
Doug Wood

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