

Data Submitted (UTC 11): 5/17/2024 6:59:07 AM

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Organization: Water Steward

Title:

Comments:

Meg Trebon

Okanogan-Wenatchee National Forest

Methow Valley Ranger District

24 West Chewuch Road

Winthrop, WA 98862.

May 16, 2024

Electronically submitted by

web: <https://cara.fs2c.usda.gov/Public/CommentInput?project=63933>

Re: Midnight Restoration Project Proposed Action

Dear Ms. Meg Trebon and/or appropriate US Forest Service Officer(s)

On behalf of Mt. Goat Construction, Flow Like Water Massage and Washington Conservation Action we would love to hear your concerns and any questions you may have for the local communities. I also invite you to join the Flourishing Path!

"Water begets water, soil is the womb, vegetation the midwife." - Millan Millan

As a lucky parent to a magical 1 year old, I worry for their future and for the young generations future. The young generations are scared and worried for their future. Why? Because some adults are doing actions that are putting their future at risk. Everything revolves around money for the adults. We can't eat money nor can we drink oil. It's time to consider what we are doing and leaving behind for the near future and future generations.

When we stand together as one, we are one voice , we are stronger!

There are many focuses. Respect, recognition and accountability is only the beginning. Where's your attention?

May love be beside you.

The USDA Forest Service claims to ...

"Caring for the Land and Serving People"

I have seen otherwise time after time. I recently have been fully engaged with the logging you all did up at the

Golden Doe and to be quite honest with you. I am very concerned for our future if that is what you consider a fire mitigation restoration project. I have tons of footage of before and after moments where the golden doe was once thriving and now the neighboring riparian ecosystems are burnt and cut down as if they were an object. When in reality they are very special important fragile ecosystems to our local watershed. Not only did lots of Trees, Bushes, Snags, Rocks, Hillsides, Ponds and wildlife get affected by these unethical implementations. WDFW also sprayed herbicides in the fields after their prescribed burning process and ended up contaminating the local pond. This is one of the many reasons why I am concerned and want you to reconsider, reevaluate, and replan the project.

- * The Draft EA fails to satisfy USFS's essential legal obligations under NEPA.
- * The agency relies on "condition- based" analysis and management to evade the NEPA mandate to disclose site-specific actions and impacts before the agencies make decisions. As a result of this misplaced approach the USFS has arbitrarily and capriciously failed to consider a reasonable range of alternatives, failed to adequately disclose and analyze the full range of impacts of the Midnight Project, failed to issue an environmental impact statement ("EIS") despite the project's significant environmental impacts, and failed to allow sufficient public participation in the NEPA process.

- * Agencies must prepare an EIS for federal actions that will "significantly affect the quality of the human environment." 42 U.S.C. §4332(2)(C).

- * To determine whether a proposed action will have a significant effect on the quality of the human environment, agencies must prepare an Environmental Assessment (EA) "to aid an agency's compliance with the Act and support its determination of whether to prepare an environmental impact statement or a finding of no significant impact, 40 C.F.R. § 1508.1(h).

- * An EIS is required when this process raises "substantial questions" about whether an agency action will have a significant effect.

- * If the agency concludes in the EA that there is no significant effect from the proposed project, the federal agency may issue a finding of no significant impact ('FONSI') in lieu of preparing an EIS.

- * Fire is naturally a part of this local ecosystems but should not be implemented by unethical management organizations (WDFW, US Forest Service) rather include the indigenous people of the valley and or qualified environmentally friendly fire mitigation practitioners. It's not the fires it's the how

Based on the Forest Service's processes and decisions on the related and adjacent Twisp project (Golden Doe 2024), I strongly anticipate that the USFS will determine that the Midnight Project has no significant effects to the local ecosystems, will issue a FONSI, will not prepare an EIS, and thus will not undertake an adequate analysis of the environmental impacts of the Project or of alternatives to the Project or comply with Okanogan-Wenatchee National Forest National Forest Plan as required by the National Forest Management Act.

- * NEPA requires the USFS to take a hard look at the implementation and consequences of the Midnight Project and ensure that it has, "based [its decision] on a consideration of the relevant factors and provided a convincing statement of reasons to explain why a project's impacts are insignificant.

- * The term "significant" includes considerations of both the context and the intensity of the possible effects.

The forests provide the commons with a place of refuge during these crises. They provide a source of food, warmth, and material. In times of war and scarcity, people return to the forest for their survival. I once heard a really impactful story of an old man talking to his son, and they were in their home looking out the front porch across the valley. And he told them the story of how during the time of war and when things got really hard, they went to the forest for refuge. That was where they hunted the animals that gave them food. That was where they found wood for warmth and fire. And the forest really kept them alive. Now that forest was gone - it was a development. And so this old man was asking his son, where will the next generation go when they need refuge?

And the forests are not just a refuge, but they're actually the source of water. It's really easy for people to connect this after the fact, after they clear all the trees and then the water sources go dry. Let's work on connecting this beforehand and before more of our local forests are destroyed and damaged.

Basic human rights: Water, Food, Safety, Voice

Full Water Cycle

The sun evaporates liquid water into vapor carried inland by the wind. Microscopic organisms growing within the leaves of trees flow into the sky as the trees transpire. These organisms are hygroscopic, meaning they attract water, concentrating vapor into droplets, forming clouds and then rain. The phase change of water from gas to liquid creates a big change in volume and a drop in pressure.

?Trees and vegetation transpire water into the air, increasing the humidity and lowering the temperature. The low pressure created acts like a vacuum, drawing in more moisture from the coast. The rain falls onto cool shaded soil and infiltrates rapidly, following roots deeper into the earth. The Earth's body is hydrated with blood. Water returns as pure springs, feeding streams, rivers, and lakes with cool, fresh water throughout the year.

?Biomes on earth function as living breathing organisms. They respire water and create climate. Ecosystems act as the Earth's organs circulating water inland in a system called the biotic pump. Roughly half of the rainfall we receive comes from water evaporated and transpired locally. This process is a feedback loop. The more water that enters the cycle, the more life Earth can support on land. This natural water cycle results in a balanced and productive climate.

?So the full natural, healthy water cycle is really this thing of beauty, the interconnectedness between it all. You have this origination of life on land, starting with this early water cycle and the algae and the oceans producing the atmosphere. These bacteria and fungi move onto land and mineralize the rock, breaking it down to begin building the world's soils. Then plants could begin their work further regulating and balancing this movement of water. You have a buildup of matter, more food for the fungi and bacteria, and you have this increase in cycling of nutrients through the system. Eventually, animals and insects are aiding in that complexity by distributing different species around the world and increasing the complexity within the scenarios. Nature is this constant complexification. It's always more interconnected and more productive when left to its own devices.

How the Water Cycle Works

So this is how the water cycle works. This is the healthy, natural, fully functioning water cycle. In order for water to condense from vapor into liquid, it needs nuclei to form around. And so these hygroscopic microorganisms are forming one of the main nuclei for this phase change from vapor to liquid to occur. In that phase change, there's this drop in pressure which creates a vacuum, drawing in more moisture. And so you have this biotic pump, this functioning of living organisms and physical properties that's moving water from the oceans through the Earth's continents.

?A great example of this is the Amazon basin. In the Amazon basin you have the Amazon River, the biggest river in the world, moving 17 billion tons of water per day into the Atlantic Ocean. This is 20% of the planet's water moving into the sea. And on that same day, you have the trees in the Amazon transpiring 20 billion tons of water. And so you have more water just being transpired by the trees each day. Then you have this atmospheric river of moisture moving from the ocean through the continents.

?And so there's so many different heat and pressure impacts that happen with this water cycle. When you have these low pressure systems, it draws in more low pressure from the coast. And alternatively, when you have high

pressure, it pushes away that low pressure.

?A great example of this is Cypress. You can look at Cypress almost any time and there's clouds forming around it, but none on the land mass. This is because the land there is so degraded it forms this heat dome pushing all the moisture away. Yet moisture is entering the atmosphere constantly all around it by the sun evaporating water off the ocean, but it's not able to enter inland.

?Another really good example of this is the islands of Madeira and Ascension. These are two islands in a similar region. Madeira Island was named that because of its wood, and the Portuguese cleared this island and turned all of the wood into their warships. The island wasn't reforested and now you go there and it's a total desert because they removed the trees, they broke the precipitation cycles, and now that island is a desert. On the contrary, you have Ascension Island - an island that was scrub desert with goats overgrazing - where they removed the goats, revegetated the island, and now they have a healthy, thriving landscape there once again.

?These global heat dynamics on Earth are really driven by the water cycle. You have this albedo effect from the clouds reflecting that radiation from the sun back into space. Then you have the snow and ice also reflecting that so that the heat, the Earth doesn't heat up too much. Then you have the transport of heat into the upper atmosphere by currents, by air streams, and this moisture being transpired by the trees and vegetation carrying that latent heat into the upper atmosphere.

?So this is really the regulation and balancing of the temperature on Earth. And so the vegetation is really key to balancing out these temperature and heat dynamics. And the plants are regulating that temperature. They're cooling an immense amount with each gram of water they transpire. And not only that, but the trees are also sheltering and protecting the Earth from the sun so that soil temperatures can be cooler and so that the organisms living on the surface can have a more hydrated, lush existence.

?And so we can really see how this starts to affect the whole landscape, the landscape level hydrology. You have these water tables and watersheds. A watershed or water catchment is the region of an area that feeds to the same river. And so we can see how impacting these water cycles starts to break and disrupt that whole watershed and can even have an impact on the water table, the level of water within the earth. And throughout history, there've been many different people who really had an advanced understanding of our world.

?One of them, in my opinion, is Viktor Schauberg. He was a forester in Austria over 100 years ago who really drew all these conclusions about our impact on the water cycle. And so he, through observation, he had no schooling, he really learned all these fundamental characteristics of water. He was able to use water in ways other people weren't able to. He made these log chutes that were able to carry logs that people thought weren't possible down these grades to where they were sent out to market. And he thought if he made the process of logging really efficient, people could reduce the amount of trees that they removed from the forest.

?What he found is that the greed of humans didn't cooperate and they just deforested at an even greater rate. And so he stopped cooperating. And because he was the only one who knew how to build and run these systems, they weren't able to keep building this type of log chute. Viktor talked about the quality of wood, the quality of wood 100 years ago and how atrocious it was from back in the day. And just to think of the quality of our wood and our forest today is so poor in comparison to 100 years ago, I shudder to what he'd think if he saw what we're working with now.

?So he was this brilliant man who had all of this deep connection with water and learned all of these interesting things. Why don't we know more about him? He really was one of the most advanced scientists of the time. Well, he lived in the time of the Nazis and he was absorbed by the Third Reich and became a prisoner of war. They tried to use his inventions for war, and then when the Americans won, they took him as a prisoner in the exploits of war, and they really broke him. Everyone who knows him, when he came back to Austria, he was a shell of his former self. And so this is why he's really not a household name, because at the end of life, he was just beaten to a pulp.

Watershed Death Spiral

It started in the Levant, the Fertile Crescent, the birthplace of agriculture. Humans started growing grains and

clearing large areas to do so. This affected the soil health, leading to the loss of the soil and also the loss of the vegetation systems that controlled the moisture. The condensation nuclei were lost in the process and so was the precipitation. The rain cycles became more and more erratic. It became harder to inhabit and longer periods of drought became frequent. So eventually led to the desert of the Middle East that we know today.

?These same practices spread around the world along with this water paradigm of drainage. Somewhere between 6000 and 8000 years ago, the domesticated animal and the plough came to the Sahara, Africa. The Sahara was a rich savanna full of life. But again, through changing the vegetation systems, humans turned it into the desert that it is today. The same for the Tibetan Plateau, an area that was continuously inhabited for 20,000 years. But 6000 years ago, when the domesticated animal and plow arrived, it transitioned to a desert.

?We know this from sediment core samples in lakes showing trees that couldn't survive there today, but more than 6000 years ago were very prevalent. And this tells us that it's not humans actually that are creating this destruction, but the water paradigm and the way that humans relate to water, because humans inhabited this area for 20,000 years without impacting the climate. Yet 6000 years ago when the domesticated animal and plow arrived, this is when this transition to desert occurred.

?Australia is one of the most extreme examples. Lake Mead in the center of Australia there was a giant freshwater lake and the whole continent was lush and verdant. Through fire and disturbance and a breakdown of these vegetation systems, you get the great central desert that is today. The same can be said for Turtle Island, what we call modern day North America. Through this area, there was this transition from humans living in deep connection and relation with the landscape to this constant extraction. Now we're yielding the results of that with horrific, catastrophic wildfires every year, smoke filling the air, droughts, fisheries failures, and all of the issues that we're seeing.

?And this is happening in modern times with the clearing and the Amazon. As the rainforest is cleared, the heat domes start to form. You have more pressure on the ocean, more intense hurricanes off of the Atlantic. But you also have a breakdown of the biotic pump feeding water through the rest of South America. In the Amazon, more than 80% of the precipitation they receive is driven by these hygroscopic microorganisms. So we used to think if you cleared all the Amazon at once, you would get a savanna. We now know if you clear all the Amazon at once, you'd actually get a desert because the amount of precipitation would reduce by 80%. And so this process of desertification of the world really has continued throughout time with the first major civilizations. Then it was continued through the empires, the monarchs, then colonization, and now capitalistic colonization. And it's the exploitation of the natural world and the exploitation of humans through a shared narrative and psychological conditioning.

?These days we have humans of their own free will, extracting the land they live on for the accumulated wealth of someone else. Imagine the insanity. We have this happening all around now where people are extracting their own value for someone else's wealth. And so this is really the truth behind the crisis Earth is facing. Humans have changed the environment. We've created the watershed death spiral. We've created these natural disasters, this cycle of flood, drought, and fire. And we've desertified 1/3 of the earth in the last 10,000 years, but we've disrupted the water cycle on almost every piece of this earth.

?And if you look at the watershed history and its trajectory, it looks really grim. You have the clear cutting and repeated cutting of the original forests and the regrowth, and then the transition to these huge monoculture tree farms that are not even really a forest. You have the tillage of soil around the world, the breakdown of this living soil organism and the loss of soil due to that. We have the reduction of the huge vegetative systems around the world to a simple one story monoculture, with bare land in between and bare fallow in between seasons.

?Then we have the overgrazing of what little vegetation remains, like the maggots picking the last bits of flesh off the bone. We have the removal of the wild species from most of the earth, and these wild species have a deep connection in relation with the landscape. They have an evolutionary history with the different plants and organisms within that landscape. So as we lose them, we lose the health and diversity of the landscape. We've removed these wild species just to introduce the most lucrative and accepted animal species to extract value out of that land.

?And so you have this simplification of these natural systems from forests to savannas, from grasslands and soil ecologies, we have this simplification happening everywhere. And it's not just in the types of systems, but the genetic variation of systems. In the natural world, we have this constant increase in complexity and diversity, but

now we're trimming that all down to just the simplest type. So instead of this forest, with all of these different genotypes and phenotypes, we now grow a field of 100 acres of one type of apple. And so now when this disturbance comes through, it doesn't take a select variation. It takes it all because we've lost that diversity.

?We have these drainage systems to remove waste and excess water, and these are really still stemming from our disease concerns. Even though we don't manage our sanitation the same anymore, we're draining water to points of use from high in the landscape down into the cities and streamlining that straight lining it down the system. Instead of letting water slowly move through the landscape, like it naturally does, we're collecting it in reservoirs, feeding it in pipes, and then feeding it downstream even further. We have this dredging and hardening of our waterways. It started for transportation to be able to navigate the rivers, and then it continued for development, first for agriculture, draining all the wetlands for our arable lands, but then draining to produce more land, to develop more homes, more cities. And we've really lowered the water table within our whole landscape. Not only that, but you then have this hardening of the waterways, because now all the water is not able to connect with its floodplain. It's flowing down and with energy. And so it's causing erosion. We harden the banks, but it just moves that erosion from place to place, further constricting that water from reintroducing to its floodplain. You have the building of massive hardscape with huge drainage systems, cities and roads everywhere that you see a building that you see a road, it's draining the water away. And not just the rain that hits that structure, but usually it's draining the water moving through the ground in those systems as well.

?Then you have this mining of water from the ground. We have the draining of our aquifers to the extent where the Earth is subsiding each year. We have fracking and mining contaminating waters thousands of years old and we're lowering fresh water to the point where we have saltwater intrusion from the ocean, destroying those aquifers for millennia.

?We have the damming of rivers around the world to create large scale reservoirs to feed the water into these systems. But instead of letting the water move through and feed the system all the way through, we collect it to a point, feed it through a pipe, and then drain it downstream even further. So we're moving that water as quickly through the system as it can. This doesn't enable the landscape to benefit from the water as it moves back to the ocean. And so the results of this are the transition of the world's great forest to drylands, and from grasslands to desert.

?And we've seen in just the last 10,000 years the desertification of 1/3 of our Earth. When humans interrupt, contaminate, and disrupt the water cycle, we are left with extremes. Forests are clear cut, wetlands drained, and vast landscapes plowed. These actions disrupt the water cycle. Barren land is created where forests once stood. Hard surfaces, roads, and buildings where once was water. On the hot and dry soil, the water can no longer infiltrate. So it quickly leaves, no longer able to replenish the groundwater. From the excess runoff, rivers flood their banks, damaging infrastructure. So the rivers are dredged deeper, lowering the water level in the whole landscape. The exposed and hardened ground absorbs more heat, resulting in rising temperatures and hot air.

?As coastal humidity tries to move inland, the hot air pushes back, causing the pressure to build. When the pressure finally overcomes, its power is destructive, more intense, with less regularity, a cycle of extreme drought followed by extreme weather events. When it rains, it floods and the storm water runs quickly downhill, resulting in flooding and erosion, leaving destruction and drought in its wake. All the while, the water table is sinking and the water quality is declining. Springs go dry, the rivers run low and heat up. Less fish, less life. The ecosystem begins to collapse.

?Humans drill for groundwater to irrigate, draining the last remaining reserves of water in the Earth. Drought becomes frequent, wells start to go dry and crops begin to fail as stress and competition increase. Eventually the fires come and the landscape burns. Desert is all that remains from a once lush and thriving landscape. This is a cycle of extremes and destruction leading to water scarcity, food scarcity, poor water quality, disease, famine, war, stress, and angst for the future. As the Earth's biomes desertify, the climate becomes increasingly inhospitable and erratic. This watershed death spiral makes life harder for all of Earth's inhabitants. And so this is the watershed death spiral. It's a feedback loop to a lower and lower quality and quantity of life on land. It's a cycle of wildfire, flood, and drought. And what are the results? Water stress, water scarcity, failure of agriculture, failure of fisheries, starvation and hunger, war, refugees and homelessness. You can really quickly start to see how so many of these quality of life issues that we're facing these days stem from the watershed death spiral.

Stomata: Cell structures in the outermost layer of tree leaves and needles that are involved in the exchange of carbon dioxide and water between plants and the atmosphere.

Turtle Island: a name for Earth or more specifically North America, used by some Indigenous peoples in Canada and the United States.

Hygroscopic: readily taking up and retaining moisture, specifically referring to soil

Runoff: Water traveling on the surface of the earth, usually during in a rain event

Urban Heat Island: A large area covered in pavement, buildings, and/or other man-made structures, which absorb and re-reflect the sun's energy, creating abnormally warm air temperatures, warmer surface runoff temperatures and impacting the health of all living things in and surrounding it.

Channelized: a waterway that has been straightened, and potentially lowered and levied to increase drainage and runoff to create more dry land.

Biotic: Living things, part of a natural system

Watershed: An area of land, defined by its ridges, that feeds the same waterway, river, basin, or sea.

Traditionally this is used in the same way in the USA as Water Catchment is used internationally. Taken literally, (shed means to pour out or spill) watershed implies that the water is all draining away, which is what we have tragically done to most of our landscapes.

Water Catchment: An area of land in which water flows from high elevations to lower elevations, where the water eventually converges into a river, basin, or sea. Used interchangeably with watershed in some places.

Water Basin: any area of land where precipitation collects and drains off into a common outlet, such as into a river, bay, or other body of water.

Links

Wildfire remediation : A Permaculture Perspective

<https://www.youtube.com/live/IK6LNREwle8?si=1QcDTx2JH3fY9tIh>

The Flourishing path

<https://www.youtube.com/live/WmA6Nve5J1Y?si=NGCP7to-RY52uUTv>