Data Submitted (UTC 11): 3/27/2024 6:00:00 AM
First name: Anne
Last name: Millbrooke
Organization:
Title:
Comments: Dear Lolo National Forest Planning Team:

Thank you for the opportunity to comment on the Lolo Forest Plan Proposed Action.

My comments are organized under these headings

* Concentrated Recreation Use

* Wilderness and Backcountry

* Forests

* Grazing

* Aridification

* Rivers

* Roads

The sources that I mention in comments are listed at the end.

Even in sources published after the drafting of your plan cite evidence and sources available to the drafters, so please do not disregard any source published recently. In fact, pay particular attention to current state of science.

Concentrated Recreation Use

I fully support the concept of concentrated recreation use being confined to specific areas selected to serve the public in various parts of the forest, preferably on the perimeter of the forest.

Wilderness and Backcountry

I support the recommended wilderness areas: Great Burn, Bob Marshall Wilderness Addition, Sliderock, and Selway-Bitterroot Addition. In particular I support the recommendations to maintains existing wilderness characteristics and allowing natural processes such as natural succession, wildfire, avalanches, insects, and disease to function as the primary forces affecting the environment. In other words, let nature be natural in wilderness areas, as well as wilderness study areas, lands with wilderness characteristics, backcountry areas, and roadless areas. Furthermore, I support banning mechanized and motorized activities and withdrawing and

permanently retiring grazing allotments from wilderness areas, as well as wilderness study areas, lands with wilderness characteristics, backcountry areas, and roadless areas..

Forests

Section 4.4 includes the passage: "Vegetation management activities (including timber harvest, thinning, and prescribed fire) have a role in affecting the composition, structure, and pattern of vegetation and maintaining or trending vegetation towards the desired conditions. Natural disturbances, such as unplanned fire, insects, and disease, are also present in the landscape." This sounds like having your cake and eating it too. I will focus my comments on the vegetation management activities, including "timber harvest" (a euphemism for logging), "thinning" (too often just a euphemism for logging), and prescribed fire.

Community hardening, from the home and community outward, is the scientific consensus on how to deal with wildfire, at least the consensus beyond scientists funded by the Forest Service. Fire managers seem to dismiss the Forest Service approach of suppressing fires in the wild.

The Forest Service clearly defined the agency's policy in its 2022 strategy published as Confronting the Wildfire Crisis: "the U.S. Department of Agriculture, Forest Service is establishing a strategy for working with partners to dramatically increase fuels and forest health treatments by up to four times current treatment levels in the West." This is wrong for the Forest Service. It is wrong for the Lolo National Forest.

Bevington (2021) compiled articles on wildfires in California. He said in the introduction, "Running faster in the wrong direction is not a solution." Furthermore, wildfire is not a forest management issue per se but a public safety issue, so the solution, the policy should be to fight fires from the home and community outward rather than in wildlands. Resources should be reassigned to protecting homes and communities rather than continue the proven fruitless fire suppression in the forests.

In Bevington (2021), Ingalsbee reported the 20th-century fire suppression policy and practices that are not appropriate for the 21st-century climate. He concluded:

"Wildland fires are ecologically necessary and inevitable, but losses of life and property in urban fire disasters need not be inevitable if we adopt new fire management policies and practices suitable for 21st century climate conditions. We need to move away from 20th century mechanized fire suppression strategies, tactics, and tools (e.g., large airtankers) that are inappropriate and increasingly ineffective in the current climate. Suppression resources should be redirected away from fighting fires in remote wildlands where fire is ecologically necessary and instead focused on directly protecting communities."

Also in Bevington (2021), Cohen explained that "disastrous community wildfire destruction (greater than 100 homes destroyed) has only occurred during extreme wildfire conditions when high wind speeds, low relative humidity and continuous flammable vegetation result in rapid fire growth rates and numerous spot ignitions from showers of burning embers (firebrands); that is, the conditions when wildfire control fails (Cohen 2010, Calkin et al. 2014)." Hanson covered common myths about forests and fires. Wolf and Nowicki explained why forest biomass energy is not a good idea.

Altering forests releases carbon into the atmosphere. That is contrary to efforts to reduce greenhouse gasses in

the atmosphere and thereby mitigate climate change. DellaSala discussed that in his article in Bevington (2021). According to DellaSala:

"Most of the carbon in a forest remains on site after a wildfire (Campbell et al. 2007, Meigs et al. 2009, Mitchell 2015). Total annual emissions from wildfires over large regions are generally much less (~10% in active fire seasons) than total annual emissions from logging in the same region (Meigs et al. 2009, Campbell et al. 2012, Law et al. 2018, Oregon Global Warming Commission 2018). Some prior estimates of wildfire emissions have grossly exaggerated combustion of carbon during a wildfire. In reality, however; only a small portion of a trees[rsquo] biomass (mainly twigs and leaves) is actually combusted. Moreover, about half the carbon in burned forests remains bound to the soils for nearly a century, the rest of the soil carbon builds over millennia (Singh et al. 2012). After fires, growth of surviving trees and new vegetation sequester carbon, offsetting emissions within about 5-50 years (depending on site factors; Meigs et al. 2009, Mitchell 2015)."

DellaSala provides citations to studies on the release of carbon by logging and by thinning, as well as by wildfire. This is important. Morgan and Apt (2024) put it bluntly in their editorial in the journal Science: "Stop arguing and cut emissions." Rather than argue over what is the perfect solution to climate change, recognize that reducing greenhouse gas emissions is a key tactic. Adopt policies that reduce carbon emissions!

Wolf and Nowicki dismiss burning biomass to generate electricity as polluting , ineffecie, and expensive; that is, biomass burning is not environmentally appropriate. Their article and sources are in Bevington (2021).

Traditionally among indigenous peoples (cultural burning), and historically, prescribed fires have been small, local burns. Baker and Bevington, in Bevington (2021), identified five myths about prescribed fire. Rather than reduce fire and smoke overall, prescribed fire increases fire and smoke. That's their first point. Second, prescribed fire is inefficient for public safety compared to home and community hardening. Third, prescribed fire is less efficient wildfire for ecological restoration because fire is necessary to the ecosystems of wildlands. Additionally, forests where fire has been suppressed do not now burn up for lack of prescribed fire or fuel treatments. Baker and Bevington recommend "managed wildfire" over fire suppression. The fourth myth is that prescribed fire is "good fire." The fact is, prescribed fire can be good, but it can also cause ecological damage and harm public health. Therefore: "projects involving prescribed fire should not be exempted from proper environmental review." Finally, Baker and Bevington point out, cultural burning is not prescribed fire as practiced by the Forest Service.

Cheatgrass is not an excuse for prescribed fire. Not according to the science on cheatgrass as summarized in a literature review by Molvar et al. (2024). Cheatgrass is a problem, "arguably the most problematic, invasive weed in North America," according to Molvar et al. But, the authors add, "The relationship between cheatgrass and fire can most accurately be described as a livestock-cheatgrass-fire cycle," and, "Ultimately, livestock grazing drives the cheatgrass-fire cycle." Reducing or totally removing livestock and letting nature heal over decades is more effective than prescribed fire for controlling cheatgrass. Prescribed fire has proven ineffective, or in some regimes effective only in the short term, and repeated burning to decrease cheatgrass abundance increases erosion and other noxious weeds. Molvar et al. concluded, "Applying prescribed fire in cheagrass-infested areas poses a

strong risk of exacerbating the infestation."

Greenstripping is also not recommended by Molvar et al., who noted that "there is little evidence that the extensive and previously constructed system of greenstrips and fuel breaks that has existed for the past sixty years has made a decisive difference in fire size or spread."

Extreme weather already happens. Russell et al. (2024) documented the extreme weather event of September 2020, when dry easterly winds fanned wildfires, killed nine people, and destroyed over 5,000 homes and businesses in Oregon. And the harmful wildfire smoke spread the harm far from the wildfires themselves. The same weather system brought early snowfall to parts of the Rocky Mountains.

Wildlife need more consideration. How would the logging, thinning, prescribed burns, fuel breaks, shrub and forest (vegetative) treatments affect, for example, lizards? Forests provide cooling shade to lizards in hot weather. Remove or reduce these sanctuaries and what happens to tree-dwelling lizards? Zlotnick et al. (2024) concluded in a recent study that most lizards in North America will be negatively affected by the combination of deforestation and climate change.

Wildfire is natural. It is a key driver of the Earth's biodiversity. He et al. (2019) concluded that based on extensive, scientific evidence, "fire is a major ecological and evolutionary force that promotes and maintains biodiversity at local, regional and global scales." Fire consumes biomass, creates environmental heterogeneity that drives biodiversity, and, they add, "promotes and maintains biodiversity by serving as an agent of natural selection in evolution and speciation, and by regulating nutrient cycles and biotic interactions."

Any prescribed burn decision should consider the release of mercury, not only naturally occurring mercury but also the mercury pollution from the abandoned mining sites within the Lolo National Forest. Certainly, please review the science in the 2024 scientific article by Aryeh Feinberg et al.

I recommend a full environmental assessment of the forestwide proposal. Please do not disregard any of my sources as being published after preparation of your proposal as the evidence, the sources cited therein were available at the time your proposal was in preparation.

Grazing

The priority of management should be conservation of the natural resources [mdash] water, wildlife, and native plants [mdash] on this public land, not subsidizing commercial grazing operations.

As Aldo Leopold wrote in A Sand County Almanac, "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." By that definition, livestock grazing on public land is wrong.

There is a lot of science about the environmentally damaging effects of livestock grazing. From that scientific literature, I conclude that commercial livestock grazing on public lands and the associated extraction of public grasses, forage, and water, is inconsistent with science-based conservation of our public lands.

Here is a list of scientifically documented harmful effects of commercial livestock grazing on public lands (including holistic, regenerative, restorative, passive season-long, and other livestock grazing).

HARMFUL EFFECTS

[bull] introduction of invasive species

[bull] disease transmission

[bull] increase in fire danger

[bull] increased soil exposure, drying, compaction, erosion, and sedimentation

[bull] off-road vehicle trails, with associated noise, speeds, erosion, compaction, sedimentation

[bull] construction of roads

[bull] trucks and other motorized vehicles creating unauthorized roads

[bull] construction of facilities, such as cabins, water lines, and fences

[bull] damage to riparian areas, wetlands, and watersheds

[bull] damage to streamflow regimes

[bull] diminished water quantity as well as quality

[bull] surface water pollution

[bull] damage to aquatic habitat and species

[bull] cumulative contributions to the desertification of the public land

[bull] loss of fish and wildlife, both reduction of population and loss of species

[bull] displacement of wildlife

[bull] fragmentation of wildlife habitat

[bull] disruption of wildlife migration

[bull] slaughter of predatory species, such as bears and wolves

[bull] disturbance of bird breeding, roosting and feeding

[bull] removal of native flora species, such as pinyon juniper

[bull] degradation of native plant communities

[bull] reduction of nature's carbon storage capability

[bull] methane emissions and carbon releases through livestock handling and transportation

[bull] exacerbation of climate stresses and thereby contributing to climate change

[bull] public subsidies for commercial operations on public lands

[bull] unfair advantage given to subsidized operations versus operations on only private land

[bull] unsustainable production of agricultural commodities on public lands

[bull] general over-burdening of fragile arid lands

[bull] exclusion of other uses, including habitat and wildlife conservation

[bull] reduction of public access to public lands

[bull] loss of solitude and foot-powered recreation

[bull] interference with post-fire habitat restoration

[bull] failure of land stewards to document trespass violations, overstocking, and other harms

[bull] failure of land stewards to enforce trespass, overstocking, and other regulations

[bull] politicization of public land stewardship

[bull] the amount land and water diverted to raising feed for the livestock during periods when not grazing on public lands, and associated use of chemical fertilizers, pesticides, and herbicides, as well as carbon and methane emissions

[bull] commercial marketing of unhealthy diet rich in meats

[bull] cumulative impacts over time

[bull] cumulative impacts of multiple harms

[bull] cumulative impacts of multiple harms over time

It's not just cattle that are the livestock problem on public lands. Sheep have a bad reputation too. "As sheep advance, flowers, vegetation, grass, soil, plenty, and poetry vanish"' wrote John Muir (1938). In a second example: [ldquo]The greatest curse to the miners and prospectors is that sheep are allowed to graze in the hills, destroying the grass and young trees, driving out the game, filling up the ditches and polluting the springs and ditches,[rdquo] That is according to [ldquo]Job Lot of Mining News,[rdquo] The Sumpter Miner, 18 July 1900, page 1.

The fact is that livestock have grazed on public lands since the settlement of the West, and problems with the livestock grazing have been long known. In 1878 John Wesley Powell wrote a Report on the Lands of the Arid Region of the United States. Therein, he said, "Cattle, horses, and sheep have ranged through all of the valleys and upon all the mountains. Over large areas they have destroyed the native grasses, and they have everywhere reduced them. Where once the water from rain was entangled in a mesh of vegetation and restrained from gathering into rills, there is now only an open growth of bushes that offer no obstruction. Where once the snows of autumn were spread on a nonconducting mat of hay, [hellip] they now fall upon naked earth and are melted at once by its warmth."

Back in 2020 the Bureau of Land Management found that 42% of the BLM-administered rangeland failed to meet that agency's standards for range health. (Source: Public Employees for Environmental Responsibility, Press Release, 5 March 2020) I have not seen any such figure for the Forest Service, but I have seen the fences, the trampled riparian areas, the broken biofilm on dry soil, the polluted streams, when hiking and camping on public lands administered by the Forest Service.

In an emailed action alert (16 April 2021), Wilderness Watch advised,

* "Any revisions to Forest Service grazing policies should encourage and prioritize voluntary grazing permit retirement to reduce permitted livestock grazing across the National Forest system, including within Wilderness, so as to protect Wilderness, other public lands, and wildlife."
* "The Forest Service must develop policies that ensure the agency will maintain authority for grazing management decisions and hold grazing permittees accountable for the impacts their livestock has on public lands."
* "The recovery of imperiled or threatened species needs to be prioritized on National Forests and livestock grazing managed so as not to jeopardize species[rsquo] recovery."

I recommend the review article "Holistic Management: Misinformation on the Science of Grazed Ecosystems," by John Carter et al. (2014) in the International Journal of Biodiversity (2014). A summary of harms caused by livestock on public lands is in George Wuerthner's 2023 article "Livestock Grazing in Wilderness Areas," in The Wildlife News.

No industry should be allowed, much less helped, to degrade public resources, including public lands, public waters, public wildlife. Please do not throw money into projects that subsidize commercial livestock operators and facilitate livestock grazing on public lands. Please stop the proposed water project.

Aridification

PLEASE consider the effect of any prescribed fire, timber harvests, thinning, vegetation treatment on the ongoing aridification of the West.

The current trend is [ldquo]progressively lower river flows, drier landscapes, higher forest mortality, and more severe and widespread wildfires[mdash]not year on year, but instead a clear longer-term trend toward greater aridification,[rdquo] according to Jonathan T. Overpeck and Bradley Udall (2020). in their study of "Climate Change and the Aridification of North America," in the Proceedings of the National Academy of Science,

Aridification in a phenomenon throughout western North America. In January 2024 the journal Science Advances published an article on the "increasing prevalence of hot drought across western North America since the 16th century." The eight authors referred to the increasing "frequency and intensity of concurrent heat and drought events" and "winter precipitation deficits." See the source, Karen E. King et al. (2024). , Edward R. Cook, Kevin J. Anchukaitis, Benjamin I. Cook, Jason E. Smerdon, Richard Seager, Grant L. Harley, and Benjomin Spei, "Increasing Prevalence of Hot Drought Across Western North America Since the 16th Century." Science Advances, 10 (January 2024), eadj4389, https://www.science.org/doi/10.1126/sciadv.adj4289

The National Academy of Sciences focused the issue of aridification in a meeting of the Water Science and Technology Board in 2021. The National Academy explained, [ldquo]Frequent and severe drought is the new normal for the western U.S. The long-term climate outlook for the western U.S. is one of aridification, and the subsequent impact on water availability will necessitate innovative solutions to manage constrained water supply and demand. These solutions will be a portfolio of new technologies, bold social adaption, policy and legal frameworks, and economic incentives.[rdquo] The recording of those five hours of meeting is online.

A full environment assessment should precede any forestwide plan involving prescribed fire and other measures

that expose the ground to sun and wind and aridification.

Rivers

I support protecting the following 21 rivers and streams as Wild and Scenic eligible. These streams have outstanding recreation, fish, and wildlife values and include:

* Rattlesnake Creek
* Rock Creek
* Lolo Creek, South Fork Lolo Creek
* Clark Fork River (St. Regis to Quinns)
* Blackfoot River, North Fork Blackfoot River
* Clearwater River, Colt Creek
* Morrell Creek
* Monture Creek, Middle Fork Monture Creek
* Lodgepole Creek
* North Fork Fish Creek, West Fork Fish Creek, Straight Creek, Cache Creek
* Deer Creek, Cromie Creek, Up Up Creek
* West Fork Thompson River

In addition to the 21 rivers and streams listed above, Wild and Scenic eligible protections are also warranted for the Thompson River, Fish Creek, South Fork Fish Creek, and the St. Regis River. The Forest Service dismisses these streams as neither unique nor important within western Montana. I disagree. These rivers possess outstandingly remarkable values that are unique within the region of comparison and include:

* Thompson River [ndash] whitewater boating, exemplary angling, and important habitat connectivity between the Clark Fork River and cold water climate refuge headwaters in the West Fork Thompson River
* Fish Creek - whitewater boating, exemplary angling, and important habitat connectivity between the Clark Fork River and cold water climate refuge headwaters within the Great Burn
* South Fork Fish Creek - exemplary angling, and important habitat connectivity between the Clark Fork River and cold water climate refuge headwaters in Cache Creek
* St. Regis River [ndash] exemplary angling, critical spawning grounds, and cold water climate refuge habitat

Westslope cutthroat trout should be added to the Species of Conservation Concern list due to lack of distribution of high genetic integrity and the potential for increased distribution resulting from restoration. Finally, the Forest Service needs to better operationalize climate refuge within its Conservation Watershed Network by protecting riverside shade cover, cold water seeps and springs, areas of persistent snowpack, microclimates, genetically pure fish populations, and riverine connectivity.

Please consider these improvements within the Proposed Action to better protect western Montana rivers.

Roads

It is unclear to me what the plan is for roads. Therefore, I can only say that on principle I oppose the construction of roads, including so-called temporary roads often developed in association with vegetation treatments, timber harvests, thinning forests, and fire breaks.

As Edward Abbey famously said in his book Desert Solitaire (1968), "Let people walk." The quality of experience of access on foot is better for the users, the native plants, the wildlife, the watershed, and the soil biome. Also, the absence of motorized and mechanized access contributes toward meeting the national goal of 30-30 to mitigate climate change and the accompanying climate chaos.

The problem of roads has been long known. A road is a divider, a barrier. "Strong undulations of boundary with roads penetrating valleys between reserved 'wilderness' ridges destroy the unity and value of such ridges for wilderness purposes," concluded the Wildland Research Center in the classic 1962 study of Wilderness and Recreation[mdash]A Report on Resources, Values, and Problems; Report to the Outdoor Recreation Resources Review Commission. Road carve up any landscape and create barriers in ecosystems, including the microecosystems.

Roads damage both wildlife, ecosystems, and wilderness characteristics. Bees are an example. "Roads pose a significant threat to bee movement," according to an article of that title, by Gordon Fitch, Chatura Vaidya, and Lori Lach, in the Journal of Applied Ecology (2021). Those researchers explain that roads consequently also hinder flower pollination.

Additionally, roads reduce fire resiliency, according to James D. Johnston and his colleagues in the refereed journal Environmental Research Letters (2021). Furthermore, since most wildfires have a human cause, roads increasing human access increase fire danger.

Too much access, too much motorized and mechanized recreation, too much recreation much less motorized and mechanized recreation, is NOT good for the native flora nor the native fauna. It is not good the watershed. It is not good for the natural carbon storage capacity. It does not protect the wild and wilderness characteristics of the Lolo National Forest.

"Roads warp the earth in every way and at every scale, from the polluted soils that line their shoulders to the skies they besmog. They taint rivers, invite poachers, tweak genes. They manipulate life's fundamental processes: pollination, scavenging, sex, and death." So wrote Ben Goldfarb in the High Country News (2023). "More than 80% of the United States lies within a kilometer (approximately 0.6 of a mile) of a road," is among the facts Goldfarb reported. That's enough roads!

Roads are permanent scars. Stephen Rostain and his colleagues recently reported in Science (2024) on an Amazonian agrarian-based civilization more than 2000 years old. They found that roads were "the most notable elements of the landscape" The "straight-dug" intersite routes were dirt roads through damp jungle.

Even the tires on motorized vehicle shed a chemical additive (6PPD-quinone) that turns streams toxic for many fish, and tread wear particles are a significant source of microplastic pollution, both facts document in an article by Zhenyu Tian and his colleagues in the journal Science (2020) and by Bibai Du and his colleagues in Environmental Science and Technology Letters (2022).

But that is just the tip of the metaphorical iceberg. Jim Robbins reported in Yale Environment 360 (2023), "The painstaking parsing of 6PPD and 6PPD-q was just the beginning of a global campaign to understand the toxic cocktail of organic chemicals, tiny particles, and heavy metals hiding in tires and, to a lesser extent, brakes. While the acute toxicity of 6PPD-q and its source have strong scientific consensus, tire rubber contains more than 400 chemicals and compounds, many of them carcinogenic, and research is only beginning to show how widespread the problems from tire dust may be."

Tire pollution can actually exceed exhaust pollution, as Brenda Lopez and her colleagues reported in Science of the Total Environment (2023). And exhaust pollution is a problem with motorized vehicles that significantly adds greenhouses gases to the atmosphere, contributing to climate change. Among the exhaust gases are unburnt hydrocarbons, carbon monoxide, carbon dioxide, nitrogen oxide, and sulphur dioxide, and then there are the particle emissions.

Noise pollution is also a problem with motorized vehicles. According to the World Health World Health Organization, traffic noise harms health, the noise being second only to air quality in terms of the degree of influence. Thomas M[uuml]nsel and his colleagues discussed the WHO noise guidelines in the journal Annual Reviewof Public Health (2020). Birds and other wildlife do not habituate to traffic noise; for example, Sue Ann Zollinger and colleagues documented the disruption in growth of young finches in their study published in Conservation Physiology (2019). Goldfarb (2023) summarized research on the negative impact of road noise, noise being in his words an "inescapable impact." It is inescapable if vehicles move across the land, whether on or off road.

Constructing a road and providing motorized and mechanized access would harm the road verge and create a barrier where connectivity is what native species require. Vehicles introduce invasive species, cause erosion and sedimentation, compact the soil, and harm the soil biome. Even minor road construction is disrupts nature; for example, "minor road redevelopments have negative effects on the recovery process of avian diversity," according to Bi Nan Wu and colleagues in the journal Forest Ecology and Management (2023).

A road may be provided with all efforts to reduce road impacts, but that is not protecting the flora, fauna, soil, air, human experience of these public lands. The history of failed efforts to reduce road impacts is nearly as long as the history of roads. The 2020 report The Environmental Consequences of Forest Roads and Achieving a Sustainable Road System, by Wild Earth Guardians, provides a literature review of failed efforts.

Roads are a human construct. People use roads. People cause widespread disruption of animal movement, affecting fitness, survival, and population viability [mdash] of terrestrial and aquatic species. Tim S. Doherty, Graeme C. Hays, and Don A. Driscoll documented negative impacts on birds, mammals, reptiles, amphibians, fish, and arthropods, and reported the same in their article in Nature Ecology & Evolution (2021). Based on 208 studies on 167 species, they concluded that human activities such as hunting and recreation increase wildlife movement distances more than agriculture and habitat fragmentation.

Jesse Whittington, Petah Low, and Bill Hunt studied the effectiveness of temporal road closures and found that temporary closures improved habitat quality for wildlife, but they caution that "full closures may be required to increase wildlife use in many situations." Their work appeared in the Nature journal Scientific Reports (2019).

There is absolutely nothing wrong with a motorless area; in fact, motorless is a positive attribute of an area. "Because the extent of the global road network is increasing at a rapid, unprecedented pace, the pervasive and sometimes dramatic impacts on ecosystems and their services in rural areas will continue," noted the Environmental Protection Agency in its report on The Ecology of Rural Roads: Effects, Management & Research (2021). "Pervasive and sometimes dramatic impacts on ecosystems and their services" is the only likely result from constructing any road giving the growing population and increasing population pressures on public lands.

"Recreational development is a job not of building roads into lovely country, but of building receptivity into the still unlovely human mind." So said Aldo Leopold. I agree.

Again, thank you for this opportunity to comment.

Sincerely,

Anne Millbrooke

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