

January 18, 2022

Objection Reviewing Officer, Northern Region
Federal Building
Building 26 Fort Missoula Road
Missoula, MT 59804

Filed electronically at: appeals-northern-regional-office@usda.gov

Please acknowledge receipt.

Re: Gold Butterfly Project: Objection to Draft Record of Decision (and FSEIS) by Goheens (lead objectors), FOB, and AWR

To whom it may concern,

Pursuant to 36 CFR ¶218, this is an objection to the Final Supplemental Environmental Impact Statement (FSEIS) and Draft Record of Decision (DROD) for the Gold Butterfly Project on the Stevensville Ranger District, Bitterroot National Forest (BNF). The Responsible Official is Forest Supervisor Matt Anderson. This objection is submitted on behalf of Gail H. Goheen; Stephen S. Goheen [collectively hereafter referenced as “Goheens”]; Friends of the Bitterroot (FOB) [Jim Miller, President]; and Alliance for the Wild Rockies—hereafter “Alliance” or “AWR” [Mike Garrity, Director]. We also hereby incorporate all comments (and related documents) in responses to the Gold Butterfly Project DSEIS submitted by the above named persons and entities, as well as any that have been or may be submitted by WildEarth Guardians and Native Ecosystems Council. In addition we incorporate all prior Comments to the DEIS and the Objection to the related DROD, concerning the Gold Butterfly Project, which were filed by Gail H. Goheen and Stephen S. Goheen, as well as those separately submitted on behalf of Friends of the Bitterroot and Alliance for the Wild Rockies (and WildEarth Guardians and Native Ecosystems Council) as part of the public record in this matter. We also incorporate and include any additional articles or documents submitted in conjunction therewith AND any other filings incorporated therein which are part of the record relating to this Project. [Whenever references are made to the current DROD and FSEIS, please assume the same should incorporate

any prior decisions and environmental impact statements referenced therein and related documents.]

1.) INTRODUCTION:

The Gold Butterfly Project is proposed for the Sapphire Mountains and foothills of the Bitterroot National Forest (BNF). The Forest Service on this project proposes a commercial timber harvest of approximately 5,284 acres in an area of 55,147 acres on the Eastside of the Bitterroot National Forest, in addition to other significant operations, treatments, and activities. All of the log hauling planned for this project is to be over one county road—Willow Creek Road (a road adjacent to the Goheen’s residence and that passes through the Goheen property). There are significant public health and safety issues associated with the plans for the Road’s use in numerous regards, as referenced later in these comments. Yet, the Forest Service has overwhelmingly ignored these issues in its determination to continue with the Project, and these shortcomings are not adequately addressed in the FSEIS and DROD. If anything, they are made worse by the logging that is envisioned by the faulty substantive and procedural analysis contained in those documents. The objections below outline some of the previously referenced problems with this project, and also in the DSEIS (in addition to those submitted by others and referenced above). Violations of legal requirements, suggested remedies, and related rationale is also set out in these objections.

2.) THE DROD AND FSEIS STILL FAIL TO ADEQUATELY ADDRESS THE IMPACT OF THE GOLD BUTTERFLY PROJECT ON PUBLIC HEALTH AND SAFETY MATTERS CONCERNING WILLOW CREEK ROAD IN RELATIONSHIP TO ADDITION TO AIR QUALITY.

A.) Federal and State Laws Affecting this Project in Regards to Public Health and Safety Must be Met.

Before reviewing separate public health and safety issues subsequently referenced, we wish to point out that when it comes to environmental issues involving forest service projects, Federal and State requirements affecting “people” (not just animals and vegetation, etc.) are relevant considerations. Surely these factors are met here. As to state and local law, Montana’s Department of Environmental Quality requires air quality consistent with the Clean Air Act, as well as Montana’s Constitution which entitles its citizens to “a clean and healthful environment” (Article IX, Section 1). We respectfully request that the Bitterroot National Forest Service honor and protect these rights and the well-being of all the people living in this county (as well as the environment and wildlife) which may otherwise be negatively impacted by the proposed Gold Butterfly Project.

Before reviewing separate public health and safety issues subsequently referenced, we wish to emphasize (again) that when it comes to environmental issues involving forest service projects, Federal and State requirements affecting “people” (not just animals and vegetation, etc.) are relevant considerations. The National Environmental Policy Act (NEPA; 42 USC, Section 4321 *et seq.*) requires federal agencies to complete detailed analyses of proposed actions that may significantly affect the quality of the human environment.” The severity of the impact should, amongst other factors, include: “the degree to which the proposed action affect public health or safety”; the “degree to which the effects on the quality of the human environment are likely to be highly controversial”; the degree to which the effects on the human environment are highly uncertain or involve unique or unknown risks”; and whether “the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment” (items 2,4,5, and 10 of 40 CFR 1508.27). Surely these factors are met here.

As to state and local law, Montana’s Department of Environmental Quality related laws and Constitutional protections, as referenced above, there are other added protections. In dealing particulates (a major problem as reviewed below), violations of Section 17.8.308 (2) ARM may also be at issue. (See Document K attached to the Goheen Objection to the original DROD), which states, “No person shall cause or authorize the use of any street, road, or parking lot without

taking reasonable precautions to control emissions of airborne particulate matter.”

B.) Clean Air Act (also adopted by DEQ) must be met regarding particulate requirements.

Through the Clean Air Act, the EPA’s National Ambient Air Quality Standards (NAAQS) lists various requirements for air pollutants, including standards for particulates in the air (40 CFR 50.13). Pursuant to it, the 24 hour standard for concentration of PM 2.5 particles (fine particles which are potentially particularly damaging to health) for a 24 hour average, is to be at or under 35 micrograms/cubic meter (a level which has been in place since 2006). [This contrasts with the standard from 1997 of 65 micrograms/cubic meter for these particles (almost double the current allowable rate). Yet the Air Quality Report for the original DEIS issued in 2018 utilized the 65 microgram standard (a shocking error for a professional report of this nature) and there has never been any correction acknowledged of this error since. [See Appendix C to the FSEIS, pp. 3-4, which again failed to respond to this issue.] Furthermore, it is apparent that the Forest Service is still not taking air quality mandates under the Clean Air Act seriously, as despite repeated attempts to call the past error to their attention in our responses to the DEIS, the DROD, and the DSEIS, they still do not seem to recognize the appropriate standard for PM 2.5 particles, as evidenced on p. 17 of the 12/17/21 DROD regarding the FSEIS. There, the Forest Supervisor declares that the Clean Air Act requirements for ambient air are “not expected to be exceeded as a result of implementing the selected alternative,” citing to the very unrevised Air Quality Specialist Report referenced above, that misses the requirement for PM 2.5 particles as being almost double than what is currently required (65 microgram standard vs the required 35 micrograms). Likewise, the DROD (at p.17) re the FSEIS, declares that it has met the requirements of NEPA when it comes to human environment issues--notwithstanding the fact that the Forest Service has turned its back on public health and safety issues as we have expressed in our comments to the FSEIS (and our earlier 2019 Objection to the initial FROD and our Comments to the FEIS filed in 2018).

C.) The FSEIS and DROD (and Other Project Related Documents) Still Don't Adequately Analyze the Design Features and Related Costs necessary to Meet Forest Service Requirements for Public Health and Safety; Attempt to Shift responsibility for the Majority of Such Costs to Ravalli County, Instead of Recognizing the Forest Service's Ultimate Responsibility for the Same; and Subsequently Fail to Include the True Costs for this Project.

(1) Outline of Major Costs for Requirements Concerning the Protection of Public Health and Safety:

The obligations of the Forest Service to protect public health and safety are inherent in NEPA, The National Forest Management Act, and The Clean Air Act. These issues have been raised before by us in the Comments to the DSEIS (pp. 14-16, and expanded elsewhere in the document, and others we have filed incorporated by it), but as explained hereafter, have been almost entirely ignored by the Forest Service relating to this Project. The majority of Project issues relating to public health and safety arise from the use of Willow Creek Road (and from the anticipated slash burning). Other objections delineated below (and in our earlier incorporated Comments to the DEIS and DSEIS and Objection previously filed relating to this Project), deal with more details of the Forest Service's failure to adequately assess, monitor, and protect the public from such health and safety issues. The bottom line, however, is that the costs relating to appropriately protecting public health/safety issues engendered by this project could easily run into hundreds of thousands of dollars and possibly approaching well more than a million dollars (presuming that there is are no liability claims that arise from damages done to affected persons). Those costs reasonably would include:

- Costs for chemical dust treatment, timely and as needed, applied on the gravel portion of Willow Creek County Road, as well as any other costs appropriate to reasonably maintain that portion of the road for safe travel during the timeline of the Project;

- Costs for appropriate maintenance of Willow Creek Road from Corvallis to the section of the road where the gravel portion now begins, resulting from the damage done from the Project (primarily log hauling)—to include repaving/chip-sealing when necessary;
 - Charges necessary to make the bridge across the Bitter Root Irrigation District (BRID) ditch along Willow Creek Road safe for the load requirements of the loaded logging trucks over the time of the Project, and to adequately protect travel of residents/other users while such repairs/replacement is accomplished.
 - Expenses for appropriate monitoring of the particulate levels to ensure The Clean Air Act requirements are upheld (whether resulting from gravel dust (or pavement dust) alone or in conjunction with other sources, such as slash burning;
 - Cost of monitoring and enforcing the Clear Air Act particulate requirements (even if it means reduced logging operations when required) and for the expenses incurred by the public for legal efforts to ensure such enforcement in the event the Forest Service fails to properly administer such obligations;
- ;
- Any expenses resulting from enforcing hours of travel and speed limitations along county portions of Willow Creek Road relating to logging operations—including not only during times before and after school (as currently planned), but also to protect safe school bus travel times to and from Corvallis schools.

These are true expenses necessary to protect public health and safety that are reasonably generated by the subject Project. They should not be shifted to the taxpayers of Ravalli County, or worse—ignored—with the potential for serious health (or even life-threatening) consequences for those affected.

To more fully explain the nature of the problems regarding the above issues, the rationale for the same, and suggested remedies, said matters are further discussed below.

(2) Costs for Chemical Dust Treatment on the Gravel Portion of Willow Creek Road and avoidance of treatment through water or through use of logging contracts:

As has been referenced in the comments to the DSEIS (p. 27), each loaded logging truck is the equivalent of 4000 to 7000 cars traveling down the road and the estimated number of truckloads is 6000-7000 on this project over a period of eight years. Validating these and other statistics regarding the INCREDIBLY increased use and damage to Willow Creek Road, are the statistics and authorities utilized earlier in this project (e.g., as “Updated Road Damage from Vehicles” appended to the original Objections we filed on the 2020 DROD and FEIS), which are incorporated in the chart immediately below [note that the sources referenced in the summary footnotes have are appended to the Comment to the FEIS which we filed]:



Projected Road Damage from Logging Trucks vs. Historic Traffic

Normal usage – $433 \text{ car trips/day}^1 \times 365 = 158,045 \text{ car trips/year}$

Alternative 2 – $158,045 \times 8 \text{ years} = 1,264,360 \text{ car trips normally during the project}$

Assuming logging trucks are loaded to weigh approximately 80,000 pounds² and have 5 axles, cars weigh approximately 4,000 pounds and have 2 axles, and using the GAO’s “fourth power” calculations³:

¹ Road usage statistics measured east of Willow Creek Cutoff Road; from communication with Ravalli County Road Administrator John Horat, cited in Goheen Comments of 7/30/18

² Federal Interstate Load Limit – see Document 8 attached to Goheen Comments of 7/30/18

³ <https://www.denenapoints.com/relationship-vehicle-weight-road-damage/> quoting the applicable formula from the federal General Accounting Office (<https://www.gao.gov/assets/130/127292.pdf>) - see Document 6 attached to Goheen Comments of 7/30/18

Logging Truck – 16,000 lbs./axle ÷ Car – 2,000 lbs./axle = 8 times more weight per axle
 $8 \times 8 \times 8 \times 8 = 4,096$ times more road damage from a loaded logging truck than an average car.

Assuming logging trucks are loaded to weigh approximately 92,000 pounds⁴ and have 5 axles:

Logging Truck – 18,400 lbs./axle ÷ Car – 2,000 lbs./axle = 9.2 times more weight/axle
 $9.2 \times 9.2 \times 9.2 \times 9.2 = 7,164$ times more road damage from a loaded logging truck than an average car.

Assuming 7,000 trips of loaded logging trucks, each doing 4,000 – 7,000 car trips of damage

Minimum - 7,000 trips x 4,000 car trips per logging truck trip = 28,000,000 car trips
Maximum - 7,000 trips x 7,000 car trips per logging truck trip = 49,000,000 car trips

Assuming road damage from trucks equivalent to 28 million - 49 million car trips:

Minimum - 28,000,000 from trucks ÷ 1,264,360 normal usage = ~22 times more road damage from loaded logging trucks than normal usage

Maximum - 49,000,000 from trucks ÷ 1,264,360 normal usage = ~39 times more road damage from loaded logging trucks than normal usage

Note: this estimate only accounts for loaded logging trucks coming down Willow Creek Road. It does not include road building/maintenance equipment, Forest Service trips for tree marking, logging supervision, etc., unloaded trucks going up, or logging crew vehicles, which would obviously add significantly more damage. This estimate also assumes that weight distribution between logging truck axles is even. If the distribution is uneven, road damage would increase.



Given the dramatic statistics above, it is more than obvious that there will be significant dust generated by the log hauling operation on the gravel portion of Willow Creek Road. The extreme likelihood that will occur is demonstrated by the factors referenced in the WRAP Fugitive Dust Handbook found in the Project website documents under the “Supporting Documents” tab, then the “Supplemental EIS Documents,” item “Supp-Air-002.” Section 6.1 of that document indicates that quantity of dust on unpaved roads “varies linearly with the volume of traffic.” (As mentioned in

⁴ http://forestry.msuextension.org/forestproducts/timber_haulers.html - MSU Forestry Extension findings of typical log truck weights - see Document 5 attached to Goheen Comments of 7/30/18

the chart above, with each loaded truck effectively being the equivalent of 4000-7000 vehicles, given the number of loaded trucks, the dust will be extreme.) The WRAP document confirms the factors of weight (and number of wheels), in addition to “speed” as being important in determining emissions (at section 6.2.2, p. 6-4). Thus the request that the below Objectors have made relating to asking for much lower speed limits (especially on the gravel section of the road), as noted hereafter, seem very warranted as at least a partial remedy for controlling dust.

Another very important factor referenced in the WRAP document is the effect of surface treatments. While water is one type of such treatment, as noted at the bottom of p. 6-9 (section 6.5), “necessary reapplication frequency varies from minutes or hours for plain water under summertime conditions...” This compares to “several weeks or months for chemical dust suppressants.” Thus “chemical suppressants are generally more cost-effective than water...” (p. 6-9 at top of page, section 6-5). The WRAP document also discussed chemical dust suppressions on pp. 6-11 through 6-12, and it is apparent from that information that it is important to repeat chemical treatments when needed for them to be effective in controlling small particles. Thus the arguments that the below Objectors have made in their earlier filings (regarding the practical ineffectiveness of water treatments, and the need for chemical treatments on the road instead--but at appropriate intervals as needed) are supported by the evidence in the Forest Service’s own Supplemental Documents. Another alternative, of course, is foregoing the magnitude of the commercial logging in this Project or determining other possible haul routes.

The Forest Service has to some degree tried to address this problem by contracting with Ravalli County through it’s Dust Abatement” program to do some magnesium chloride treatments “on the gravel section of the road from the end of the pavement for 1.6 miles past the residences, for 5 years.” The first year of treatment was 2021. (See “Forest Service Response” at bottom of p. 3, Appendix C to FSEIS.)

While the undersigned appreciate the participation in the county Dust Abatement program, apparently it will mean up to only one application per

year (as currently administered by the County based on conversations with the Road Department Supervisor with Gail Goheen). We understand that such treatment is likely to be in sometime in the April to June timeframe, dependent on the weather. Thus there will probably be long stretches of time during the hot dry summer months as well as many other times during the year when log traffic is significant and treatments will be needed, and yet not available through the County program. Therefore it will be important to engage private contractors to fill the interim chemical treatment need for the gravel portion of the road. That is something that the Forest Service should be directly responsible for ensuring is done, and the Forest Service should not pass off dust abatement to logging contractors, etc., as frequently such efforts are not accomplished by contractors (by wide reports from nearby property owners on other projects), and literally it could be a matter of life or death to the people affected. That is especially true where the Project is so huge (the largest sale in decades as reported in the Ravalli Republic on December 17, 2021, announcing the DROD on the DSEIS). Yet the use of potential logging sale contracts is apparent, not only from the DROD (re the FSEIS) mentioned in the next paragraph, but also in the FSEIS itself, where at p.4 of Appendix C, it states in response to concerns in our Comments about dust control:

It is impossible to quantify the amount of dust that would be produced by each of the alternatives. However, dust can be addressed through the inclusion of Timber Sale Contract (CT5.31#_T-103 (dust abatement solutions) or placement of aggregate in timber sale contracts.

In other words—its “pass the buck and wash your hands of any responsibility for monitoring and enforcing.”

In discussing the Forest Service’s alleged commitment to manage dust control on Willow Creek Road, it is also important to emphasize that not only should the obligation not be transferred to logging contractors, but control through water usage should not be utilized. Why would that be a concern? Because despite the reference to an apparent commitment in the DSEIS (p.3 of Appendix C) to doing chemical dust abatement, seems to be

contradicted by Appendix A, p. 10 of the DROD now. There it states in response to the “Objective” to: “Minimize health impacts from dust to private residences and maintain adequate site distance for traffic”:

When conditions warrant, dust abatement for log hauling will be completed on sections of road for which the FS is responsible to maintain. The Forest Service will enter into a Schedule A road maintenance agreement with Ravalli County to undertake maintenance responsibilities for the entire 2.46 miles of gravel surface of Willow Creek Road. Conditions would not be warranted during the winter or if the road surface is moist enough to limit dust. Abatement could include either water or chemical application.

The reasons for not utilizing water were mentioned in the WRAP Fugitive Dust Handbook mentioned above which was a resource in the Forest Services own “Supporting” website documents.

Prior Comments to the DSEIS by these Objectors also addressed the issues of water versus chemical dust control (including magnesium chloride) at pp. 28-29, where it was stated:

Magnesium chloride treatment to control gravel dust under these circumstances is consistent with federal recommendations. In the Federal Highway Administration (FHWA) 2013 report, “Unpaved Road Dust Management: A Successful Practitioner’s Handbook,” (see attached Document H to the Goheen Objection, hereafter “Handbook”) a committee of more than 20 experts traveled to unpaved roads in 10 different sites across 4 western states, meeting with the respective host practitioners to gain a broad perspective to help road managers find successful means of dust abatement. A variety of chemical applications were observed, including magnesium chloride, calcium chloride, lignosulfonate, petroleum resin, synthetic polymer, synthetic fluid, electrochemical additives, sulfonated oil, and enzymes. The Handbook does not attempt to identify a “best product,” but attempts to identify a process to best manage an unpaved road system using chemical treatments. It reminds

practitioners that chemical dust abatement cannot make a bad road good, but that it can help keep a good road good.

According to the Handbook (p. 8), appropriate chemical dust control can limit the loss of fine road material, leading to: reduced dust levels; improved safety and driver experience; improved air and water quality; improved quality of life of nearby residents; extended intervals between gravel replacement needs; reduced maintenance costs through extended intervals between grader blading needs; and reduced public complaints. It states (p. 11-12) that, “Treating roads with an appropriate chemical additive will cost more up front compared to leaving them untreated, but the quantifiable benefits usually justify those extra costs... .

However, as referenced in the introductory portion of this section, even a magnesium chloride program must be applied with a frequency that it will keep dust particles within the requirements of the Clean Air Act. To date, arrangements for the same do not appear to have been done.

There is certainly added concern that the dust along the gravel portion of Willow Creek Road will not be properly maintained because there seems to be no serious commitment to monitor dust to avoid breaching Clean Air Act standards, as noted in the section that follows.

(3) The FSEIS and related DROD provide no reasonable process for the monitoring and enforcement of dust abatement procedures.

One of the Comments to the DSEIS (p. 30) made by these Objectors was:

So, what does the FEIS statement that residents adjacent to the road “may still temporarily experience dust conditions for a short duration of time (i.e., hours)” mean? It is probable (given the Forest Service’s intention not to monitor, as covered below), that the impact of these large and heavy logging trucks and equipment on the road will lead the nearby residents to experience “hours” of exposure to particulates in excess of that allowed by the Clean Air Act. Those

hours could be for most of the day [day after day]; 12 am to 5 pm (when logging traffic is allowed to occur as described in Chapter 3 of the FEIS, p. 108). Monitoring (as referenced below) is critical to meeting Clean Air Act standards in these circumstances. It is worrisome to see this issue treated so carelessly when the Forest Service and its contractors would benefit financially from looking the other way, for days, weeks, or perhaps even months at a time.

What was the response to the above Comments in the FSEIS (p.3), as well as in the Comment numbers 14-19 and 14-20 (on p. 78 of Appendix C to that document)? At p. 4 of Appendix C, the answer was:

Air Monitoring Station placement is determined by the MT DEQ see the 2021 MT DEQ Air Quality Monitoring Network Plan. The Northern Region has limited capacity to conduct temporary PM 2.5 monitoring downwind locations where active burning is taking place and if there is apparent need.

So, it appears that nothing has really changed when it comes to the Forest Service's efforts to try to hide from doing anything reasonable to monitor and enforce Clean Air Act PM 2.5 requirements to protect the health of those affected by the Project. Despite repeated efforts by these Objectors concerning these issues (most recently in the DSEIS Comments at p. 30), the DEIS Specialist Report – "Air Quality" is still effectively being utilized. In it (at p. 2), it was stated that appropriate monitoring stations are available in "Hamilton, Missoula, Helena, Frenchtown, Butte and several other sites in Montana." [These are the sites that the DEQ maintains as evidenced in the annual "State of Montana Air Quality Monitoring Network Plan" dated June 2021, and contained under the "Supporting" tab at the Project site, and there clicking on "Supplemental EIS," followed by AIR-003.] It is this very document, however, that obviously points to another solution to monitoring air quality in a reasonable, reliable, and cost effective manner. More specifically, at p. 14, dealing with fine particulates, it states:

...2. Fine Particulate Monitoring (PM 2.5)

As previously discussed, PM 2.5 is a pollutant of concern with Montana. DEQ is continuously look [sic] for opportunities to expand

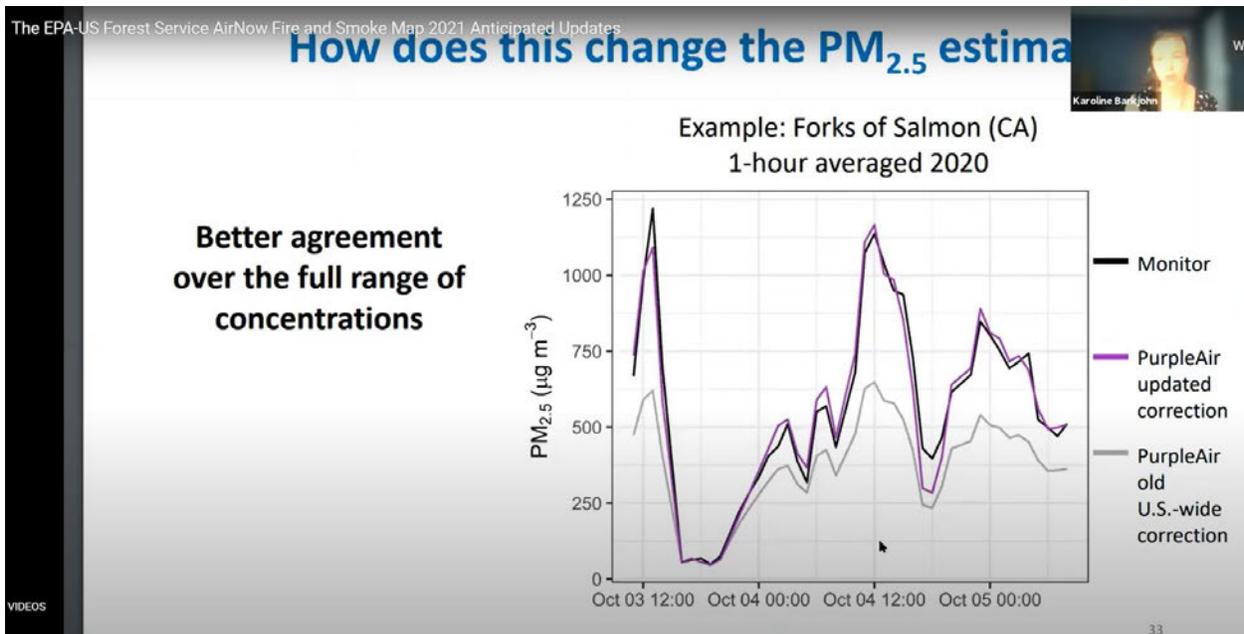
Montana's PM 2.5 monitoring network using a[n] assortment of air quality instruments which balances the need for regulatory quality NAAQS comparable data, as well as the necessity to provide quality data to the public and local health departments for general use. To this end DEQ is exploring the possible integration of lower-cost air quality sensors into the fine particulate network. A variety of sensor instrumentation are in the field under test conditions to gauge operation and data acquisition functionally, and to provide a comparison to current regulatory methods. DEQ will look to employ this sensor technology during the next several years. DEQ will continue to rely on high-accuracy regulatory methods to monitor fine particulate air quality impacts as well as its existing cache of portable monitors for use during high-impact events (i.e., wildfires) or special studies.

The Forest Service should have been aware of the ability to monitor with lower cost equipment, because as mentioned above, the "State of Montana Air Quality Monitoring Network Plan," was even part of the FS records. Furthermore, we (the Goheens) even indicated in our Comments to the DSEIS (at p. 32) that we had acquired reliable air quality monitors to help establish any violations of the Clean Air Act (as we referenced could be done in our Comments filed 8/2/2019 on p. 27 of the Objections to the original FROD).

The technology for the use of low-cost and reliable products to monitor air quality is an obvious and reasonably simple solution relating to the Gold Butterfly Project along Willow Creek Road. As part of the attachments to this Objection, we are providing the Forest Service with a copy of an article from the "PurpleAir" website [Document 1 attached] which shows products (including for outdoor monitoring) for less than \$300. In addition, we have provided a copy of another document attesting to the reliability of these sensors from credible sources. [Document 2]. A copy of an EPA referenced study from 2020 is also provided with this Objection [Document 3] which references and evaluates the "popular low-cost PM2.5 sensor" from PurpleAir." In that article, EPA indicates that these sensors are increasingly being used across the country, and goes on to explain these sensors when

collocated (so they can be compared to AQI measurements) are of “near-regulatory grade quality.” More specifically, the EPA found “results for PurpleAir sensors when corrected, accurately report NowCast AQI categories 90% of the time.” (A more detailed “PurpleAir PM 2.5 performance study from December of 2019 is also attached to these Objections as Document 4.)

The PurpleAir online map shows recent and current data from the network of PurpleAir monitors. This map’s data now defaults to being presented as the correlated EPA AQI Index number and category. The conversion formulas which turn the base data into this AQI index number have been shown to give results which are extremely consistent with actual EPA monitors over the full range of PM2.5 concentrations (see EPA example in image⁵ below).



The PurpleAir online map accessible to a user, can show the recently collected data as either a graph of real-time data, or as a graph showing the average of data collected over a period of time from 10 minutes to 24 hours. As the NAAQS standards relate to the 24-hour average, this means that it would be extremely easy for a Forest Service employee to determine

⁵ <https://www.youtube.com/embed/G7CNziDkUok?&start=1641>

with strong confidence whether the NAAQS standards were being met in the areas covered by PurpleAir sensors.

Based on the above information, it should be reasonably feasible and inexpensive for the Forest Service to monitor the dust from the Gold Butterfly along the gravel portion of Willow Creek Road and apply the measurements from the same to come up with reliable data for both monitoring and enforcing the Clean Air Act standards for PM 2.5 particles. This in fact could be done across the entire length of Willow Creek Road (as mentioned below in the next subsection (4) of this Objection), because as explained therein, the chip-seal portion of road is also likely to become quickly pulverized due to the Gold Butterfly Project log haul traffic. But monitoring also brings the duty of enforcing violations. Given the fact that the Forest Service is charged with the responsibility of complying with Clean Air Act requirements on this Project, it also need to be prepared to at least temporarily shut down hauling and as well as prescribed burning when a violation of the safe standard for PM 2.5 particulate measurements are being exceeded along Willow Creek Road.

The Forest Service cannot evade monitoring any longer due to complaints that there is “no way to monitor dust” or that it is too expensive to do so. For under \$5,000 they could probably put a monitor about every ½ mile along Willow Creek Road.

Why is enforcement so important? The answer to that question was summarized in our Comments to the FSEIS, as noted below:

Road dust generated by the Gold Butterfly Project presents a real threat to the health of those people who live near the gravel portion of Willow Creek Road. A literature review⁶ by researchers from West Virginia University and North Dakota State University showed that, “Road dust was found to have harmful effects of the human body, especially the respiratory system.” This review found 17 different studies reporting that exposure to road dust had adverse health effects on the respiratory system, including asthma and

⁶ “Road dust and its effect on human health: a literature review,” Khan, R & Strand, M. *Epidemiol Health*, v. 40. April 10, 2018. [See attached Document I to the DEIS.]

mesothelioma. It also found 7 articles reporting that road dust exposure adversely affected the cardiovascular system, and one study that linked low birth weights to exposure of the mother to road dust during pregnancy. This extensive research showing a broad spectrum of negative health effects from road dust indicates that thorough care should be taken to minimize the amount of road dust generated by the Gold Butterfly Project.

How much dust may we expect on Willow Creek Road? Document 12 (Goheen initial Project DEIS Comments), taken from a Ravalli County 2004 Gravel Roads Management publication indicates that a single vehicle travelling an unpaved road once per day for one year will produce one ton of dust per mile, “which equates to losing 100 tons of fine particles per year for each mile of road with an average of 100 vehicles per day.” No doubt the log truck traffic (given the added weight, friction, road surface, etc.) will pulverize any gravel on Willow Creek Road. Surely such dust particles need to be monitored, and the road surface needs to be appropriately treated as part of the impact resulting from the Gold Butterfly Project. That needs to be done certainly for public health. It also needs to be done for public safety in travelling the roads.

Since the preparation of the Goheen Objection to the DROD in 2019, filed relating to this project, other evidence has also come to our attention about the dangers of the PM 2.5 particles which are referenced as being so dangerous. For a summary of the systemic effects of breathing fine particles suspended in air, see:

<https://hms.harvard.edu/magazine/racism-medicine/particulates-matter>. [Item 5 attached.] That article points out how such particles (PM 2.5) can cause a host of health conditions including not only cardiovascular or respiratory vulnerabilities, but as many as 12 additional diseases, including kidney failure, urinary tract and blood infections, and fluid and electrolyte disorders. This was based on a study of 95 million Medicare hospitalization claims from 2000 to 2012. “The research demonstrates that even small, short-term

increases in exposure can be harmful to health, and quantifies the economic impact of the resulting hospitalizations and lives lost” (p.1). The article went on to point out that while older people may be more vulnerable than younger people with healthy immune systems, everyone is affected.

The Air Quality for this Project report [Shown under Project site “Supplemental” and then “Project File” then “Air Quality” Air-001 at p. 3)] states: “Dust would be produced from timber harvest and related activities, including yarding, log hauling, and road maintenance. It would also be produced during administrative use and use by forest visitors. It is impossible to quantify the amount of dust that would be produced by each of the alternatives.”^[7] That apparently is the excuse the Forest Service is using to put on a blindfold and pretend that the Air Quality Act requirements for particulates do not need to be met. Surely the Forest Service [can] access to monitors. Since the upper portion of Willow Creek Road will be closed during log hauling activities for recreational users, there will only be a few residents who will be traveling the gravel portion of the road during those times. The Forest Service knows that the Gold Butterfly Project is huge and by comparison would be overwhelmingly responsible for any road dust. Their decision not to appropriately monitor local air quality indicates a fear of what they might find and what it might mean for the project.

Further aggravating the dangers referenced, the gravel portion of Willow Creek Road passes between two spines of the Sapphire Mountains, which creates a canyon-like characteristic, which is likely to trap dust, diesel fumes, etc. [A photograph has been added below to these DROD/FSEIS showing the funneling effect which increases as one heads East.]

⁷ Essentially the same excuse is still being used, as noted on p. 4 of Appendix C to the DSEIS, which makes the same statement.



No reference has been made to this special feature and its likely aggravation of the accumulation of PM. This makes it even more important that local monitoring of air quality is made a priority.

Those involved with this Project should realize that we have acquired reliable air quality monitors, have used them to establish a baseline air quality under normal traffic along Willow Creek Road, and can use them to establish Clean Air Act violations. In that event appropriate relief could be sought through the Department of Environmental Quality for the state of Montana which is also charged with enforcing the same particulate standards as those established by the EPA, and/or litigation could ensue. No one needs this sort of expense and disruption. It would be far better from the outset to do what is right for the health of public citizens and mandated by law. [This point is referenced above in more detail in discussing the PurpleAir monitors.]

Another factor that will affect the air quality along Willow Creek Road is smoke from slash burning. The primary focus of the air

quality report was adverse air quality resulting from smoke arising from slash burns. While the “expert” asserted that smoke would primarily be directed away from the Bitterroot Valley, it was acknowledged that there may be “short periods of smoke during the night and early morning hours (Air Quality report, p. 3). It was also noted that residual smoke production from larger piles “would be expected for several days.” There has been no attempt to consider the impact of smoke particulate when combined with road dust and the need to restrict log hauling activity when conditions warrant (including when smoke may come from a wildfire). Such combination of factors needs to be addressed and enforced in plans for logging operations when dangerous levels of particulates are reached. Along these lines, it should be noted that evidence shows that prescribed fires in and of themselves can be especially dangerous to human health. In that regard we first point to a technical paper examining the nature of prescribed burns and their production of such particles, written by Haikerwal, *et. al.*⁸ [See document 6 attached.] That article warned of special potential concerns regarding prescribed fires:

Unlike wildfires that are of high intensity, prescribed fires are cool low-intensity burns and produce relatively short plumes...While low-intensity prescribed burns (low heat, light emissions) cause minimal risk to life and property, they can however emit large amounts of smoke particulates... . Furthermore, prescribed burns are conducted on a regular basis (annually) and impact communities each year. Wildfires, on the other hand, are unpredictable episodic events. There may also be differences in the pattern of smoke exposure (such as duration and frequency) from prescribed fires compared to wildfires. Exposures to smoke plumes from prescribed fires are generally shorter in duration but occur

⁸ Haikerwal, Reisen, Sim, Abramson, Meyer, Johnston and Dennekamp, *Impact of smoke from prescribed burning: Is it a public health concern*, Journal of the Air & Waste Management Association, 65 (5):592-598, 2015 [**See item 6 attached**].

more frequently than wildfire events, although studies are required to quantify the impacts from this. Prescribed burns are conducted under favorable meteorological conditions, for example, light winds and wind gusts, low temperature, and moderate humidity. These conditions limit the ventilation rate and smoke dispersion and thus promote the buildup of air pollution. As a result, smoke from prescribed burning can have a substantial impact on rural/regional areas, along with potential to impact airsheds due to long-range transport of smoke particles.

One of the important pollutants present in high concentrations in smoke from prescribed burns and wildfires is fine particulate matter (PM 2.5 with aerodynamic diameter $<2.5\mu\text{m}$), and research studies have shown that PM 2.5 concentrations consistently exceed the air quality guidelines... Smaller particles are of greater public health concern than larger size fractions for two reasons: First they remain in the atmosphere for longer periods of time and second, they can penetrate further in the respiratory system where they promote local and systemic inflammation. ...

Another study from the Medical Journal of Australia has been reviewed in various articles, as noted in <https://www.scimex.org/newsfeed/health-impacts-of-prescribed-burns-significant> [Item 7 attached] and <https://medicalxpress.com/news/2020-04-negative-health-impacts-significant.html>. [Item 8 attached] Those articles reiterate that a significant number of premature deaths, and hospitalizations (and related costs) attributable to elevated PM 2.5 concentration. “The study found that, although the impacts of smoke from individual prescribed fires was much lower than that of severe bushfires, their cumulative impacts were similar because of much greater frequency of prescribed burns” [quotation from Schmex].

(4) As outlined hereafter, unless significant changes are made to the Gold Butterfly Project as it is currently laid out in the pending DROD and the related FSEIS, it is highly likely that the paved portion of Willow Creek Road will quickly deteriorate to the point where dust abatement becomes necessary for the remaining 5.83 miles of Willow Creek Road.

The focus of the above heading (4) was pointed out to the Forest Service in our Comments filed to the DSEIS (pp. 34-35), where we stated:

If the Forest Service continues to take the position that it is not legally obligated to maintain the paved portion of the road, and Ravalli County does not have the funds to repeatedly repave it, then the PM driven into the air from the passage of log trucks and other project-related vehicles driving over an amalgam of dirt and crushed pavement will likewise be an environmental violation for which the Forest Service will also be responsible. [For reference documents recited below, please see the arguments as they have also been made in the prior Goheen Comments and in particular the Goheen "Objection" to this Project, and the related attachments.]

Road dust on paved roads can also be resuspended by vehicular traffic and other disturbances (Nicholson, 1988). Moosmüller et al. (1998) showed that large vehicles such as trucks or buses resulted in high peaks in wind velocities and increased dust entrainment even from outside the driving lane. Heavy duty vehicles contributed eight times more resuspended road dust than light duty vehicles (Abu-Allaban et al., 2003). Resuspension is high from surfaces that have much loose material of suitable size to be entrained into the air (Kupianen, 2007). Düring et al. (2003) did not find a clear relationship between pavement condition and road dust emission levels, but noted that the highest emission levels tended to be on streets with the poorest conditions, and that their study did not include streets in very bad condition. If the paved road is ground to smithereens (as would be expected from the load referenced in the next Objection section, if not properly maintained), then monitoring

of these sections of the road should also be required, with appropriate curtailment of log hauling activity when appropriate under the Clean Air Act.

Remedy: To rectify the deficiencies to the Gold Butterfly Project as noted under the above Item 2 (and its subparts) of these Objections), the Forest Service should do the following:

-Undertake and pay for chemical dust abatement (not water dust abatement) on the gravel portion of the road (as well as the remainder of Willow Creek Road as it becomes so damaged that it too needs dust abatement to meet legal standards for particulate matter) to make sure that the Road meets the PM 2.5 requirements called for under the Clean Air Act and DEQ. This means that chemical treatments must be administered on an as needed basis, not just once annually.

- Not pass off responsibilities for road maintenance on Willow Creek Road to logging contractors on the project, but directly oversee/manage the dust abatement activity requirements.

-Monitor air quality throughout the Project along the gravel portion of Willow Creek Road (as well as any other portions of the road which become so damaged/pulverized that they also are producing too much dust), so that Clean Air Act and DEQ standards for PM 2.5 particulates are continually being met. This can be done through PurpleAir low cost outdoor monitors, but results from the same must be made continually visible to the public.

-Shut down logging operations or prescribed burning activities when PM 2.5 particulates exceed federal or state standards until corrective actions can otherwise remedy the need to meet required air quality standards.

-If continuous problems arise relating to maintaining required air monitoring problems and enforcement of PM 2.5 requirements—or it appears that they will arise (which certainly seems to be the

case)—the Forest Service should decrease the Project size to make certain that proper air quality standards can be maintained.

-Ensure that a designated person from a county Forest Service office is available to administer monitoring questions and enforcement matters that may arise.

-Require any logging contracts to not allow drivers to exceed 15 miles per hour on the gravel portion of Willow Creek Road (or any part of Willow Creek Road that become so pulverized that it effectively is reasonably equivalent to the quality of a gravel road), and 25 miles per hour on the remainder of the chip-seal/paved portion of the Road when it is reasonably good condition. In addition, administer the Project so that speeds are monitored to ensure enforcement of speed requirements.

3.) RESPONSIBILITY FOR THE MAINTENANCE FOR THE ENTIRETY OF THE WILLOW CREEK ROAD THROUGHOUT THE PROJECT SHOULD BE THE THE RESPONSIBILITY OF THE FOREST SERVICE.

In our original comments filed in 2018, Comment number 3 addressed the “Weight of Logging Trucks and [their] Impact on Paved Road[s]” we called attention to the damage that was likely to occur to Willow Creek Road from the logging truck operations. Consequently, we asked that the Forest Service take responsibility for maintenance of the paved portion of Willow Creek Road, rather than let that burden fall to Ravalli County taxpayers.

The Gold Butterfly FEIS (Ch. 3.5, p. 109) states that, “The number of estimated log trucks for both alternatives will have a direct detrimental impact on both the paved and gravel surfaces of Willow Creek Road. The extent and duration of surface damage is likely to be higher with Alternative 2 than Alternative 3 based on estimated log truck volume and implementation time. Impacts may include rutting, broken or deteriorating surfaces, potholes, and/or washboards. Maintenance, such as surface blading or resurfacing, will be needed during the life of the project to maintain Willow Creek Road at its use standard. Timber sale

contract stipulations preclude log hauling during wet periods when resource damage, such as erosion, will occur. Thus, hauling typically does not take place on U.S. Forest Service roads during periods of freeze/thaw or ice and snowmelt. Limiting log hauling during these times should help reduce damage to Willow Creek Road as well.” It goes on to state lower in the page that, **“Road maintenance activities by Ravalli County are expected to occur as needed to maintain the road at the desired standard.”** [Emphasis added.]

Section 2.) C.) (2) of this Objection above explains and provides authority for the likely impact of the Gold Butterfly Project on Willow Creek Road during the course of the Project. The calculations expressed therein are based on logging trucks weighing between 80,000 and 92,000 pounds when fully loaded, cars weighing approximately 4,000 pounds, recent traffic density reports from the Ravalli County Road Department, and the GAO’s report linking road damage to the fourth power of weight per axle (see supporting documents 5, 6, 7, and 17 attached to our the original Goheen Comments), demonstrating that the loaded logging trucks from the Gold Butterfly Project can be expected to cause 22-39 times more road damage than normal traffic would. These calculations do not even include the damage that would be done by unloaded logging trucks, heavy vehicles brought in to perform road construction and maintenance, Forest Service vehicles, or other vehicles traveling on Willow Creek Road in connection with the Gold Butterfly Project. Thus, the multiplier (when compared to normal vehicle travel on the road) is likely to be much higher than the conservative estimate of 22-39 fold increase of road usage—and this is over an eight-year span. Repairing the cumulative road damage associated with this project would undoubtedly require hundreds of thousands of dollars, and likely much more to adequately maintain Willow Creek Road at a safe standard.

As referenced in the Goheen Objection to the original ROD/FEIS, John Horat (Ravalli County Road Administrator) confirmed that the County maintains the paved/chip sealed area section of the road from Corvallis to where the gravel section begins (a distance of 5.83 miles according to the FEIS, p. 105). Mr. Horat was able to provide per-mile then estimates for the cost of the county could be expected to pay for repaving Willow Creek Road. He cited a recent agreement with a private contractor in which the county paid about \$170,000 per mile for repaving a similar road. He also stated that if the county was to do the work

itself, the cost for materials (exclusive of labor, insurance, etc.) would be about \$90,000 per mile (the differential with the contracted outprice would also include some profit for the contractor). [From reviewing other materials, the cost of chip sealing the road would undoubtedly be less, but the longevity would likewise be less than repaving, especially given the extreme stress the road would be experiencing from heavy vehicles.]

If a third party (or Ravalli County, factoring in its employee, insurance, overhead, etc.) was doing the work to repave the 5.83 miles referenced above due to project damages, and a logging contractor (or the Forest Service) was paying to have that work done, the approximate cost would be almost one million dollars. ($\$170,000 \times 5.83 = \$991,000.$) Since the load and damage to the pavement/chip seal will occur over an eight-year period, interim treatment no doubt will be necessary if Willow Creek Road is to remain passable and reasonably safe for not only Project traffic but for the residents and others using the road. There are approximately 500 households accessing Willow Creek Road along its entire county length, and given likely average occupants, probably 1200-1300 residents utilizing Willow Creek Road. (See Document 16 referenced in the Goheen original Comments to the DSEIS, which lists property owners compiled in 2018 from Onxmaps software.) These residents should not be expected to safely use a road that has been torn to “smithereens” (as one of the County road personnel described the result of projected Project traffic on the chip-seal portion of Willow Creek Road without proper maintenance); such a surface would not be satisfactory to log truck operators either.

As reflected in the Objection file by Ravalli County to the original ROD/DEIS , Ravalli County cannot afford to pay for the maintenance costs referenced above. (See item 9 of the attachments, which the Forest Service obviously already has in their records). Despite the position expressed by the County, and throughout the course of the Project planning the Forest Service has maintained that the financial burden for maintaining the Road should be the Ravalli County’s responsibility. It has done so in part relying on the County/Forest Service Road Agreement. In addition to the County’s own statements as to why that should not be the case (as stated in their 2019 Objection referenced earlier in this paragraph), this Objection incorporates the arguments made at pp. 13-20 by these Objectors to the DEIS (and related attachments) which was also incorporated by reference into

the Comments we filed to the SDEIS. There are numerous arguments expressed in all of these references why the County is not contractually bound to the Forest Service to maintain the Ravalli County road maintenance resulting from the very extraordinary Project activities planned for this Road and they are incorporated herein.

The road agreement only anticipated usage consistent with Forest Service administrative access. Furthermore the Forest Service's own Handbook and Manual (documents F and G attached our Objections to DROD and FEIS back in 2019) called for Forest Service responsibility. As noted therein:

- The Forest Service Handbook (FSH 1509.11, subpart 31.21 and 31.22) [Document F] clearly anticipates that cooperative Forest Service Road Agreements can call for the Forest Service to provide funds "in whole or in part" to projects of this nature, and also anticipates that the same can become part of a Schedule Agreement. Additionally, Document G attached [FSM 7703.4] encourages the local authorities to bear only a proportionate share of reconstruction when they can't afford to accept full responsibility (implying the Forest Service can bear their share or all of said costs).
- It is also anticipated under FSM 7703.5 (Document G) that such costs for which the Forest Service bears responsibility may be recovered from "commercial haulers commensurate with their use." (See e.g., the Air Quality report (pp.3-4) which anticipates passing dust abatement costs on to the contractor.) The problem with the application of this practice in the planning for the Gold Butterfly Project is that it does not appear that the realistic road and related expenses have been included in the economic analysis AND that such obligations and expenses should be made available by the Forest Service up front to any contractors bidding on the project to avoid the legal morass that might otherwise ensue.

Despite the filings referenced in this Section, the Forest Service has not expressed a willingness to be financially responsible for the Willow Creek Road damage for this Project. That is true even though the all of the access for the entire 55,000

acre project and the related 6,000 to 7,000 load of logs, are scheduled to use only Willow Creek Road access. The FSEIS (Appendix C, p. 5) in response to Comments relating to the Forest Service's obligation to assume financial responsibility for Project effects on the Willow Creek Road, responded:

Willow Creek Road is an open county road that provides the only legal access for the Gold Butterfly Project area. This public right of way is open to all legal motorized traffic yearlong, including heavy haul traffic associated with logging operations. ...[Then the Forest Service goes on to refer the road agreement and commits to maintaining the entire aggregate portion of the Road (although poorly, as it doesn't seem to intend to do reasonable and necessary dust abatement as explained earlier in these objections).] The Forest Service also ignores responding to other specific comments in the FSEIS about their responsibility (*see e.g.*, responses to Letter/comment numbers 14-16 and 14-21).

The December 2021 DR0D offers little more. It does say (at p. 6): The Bitterroot National Forest is also Committed to working with the Ravalli County Board of Commissioners to seek solutions for maintenance and repair of the paved portion of Willow Creek Road." (Similar comments were made on p. 7 relating to the rationale for the Decision.) The problem is the Forest Service has been singing the same song since 2018, as reflected in the Objection we filed to the ROD/DEIS (at p. 14)...BUT nothing has happened to move them forward in accepting actual responsibility commitments, and their behavior and responses have been nothing short of evasive.

The citizens of Ravalli County should not have to pay for the maintenance of Willow Creek Road resulting from the Gold Butterfly Project, and those using the Road (especially those living near or adjacent to it) should not have to suffer the inconvenience—if not absolute danger—of using the Road during the Project.

Remedy: To ensure that the taxpayers of Ravalli County are not put in a position of potentially paying taxes for road maintenance resulting from the Project (which should be the Forest Service's responsibility), and to protect those traveling on Willow Creek Road (especially those whose residences adjoin it), the following should occur:

- **Before proceeding further with Project Plans, the Forest Service should commit to making ongoing payments for at least that part of the ongoing maintenance use of the road which is attributable to their increased use of the road due to the Project. Presumably this should be something along the lines of the formula expressed in these objections reflecting that the Project is likely to create use effects of between 22 to 39 times (for just log truck hauling alone from the forest) that currently is based on the usage analysis above referenced. Of course this assumes that the County would also have to be agreeable and written contractual agreements would need to be in place, assuring that funds for such maintenance are made available to the County or to a contractor responsible for the road maintenance.**
- **Willow Creek Road should be restored to at least as good a condition as it is in pre-Project, at the conclusion of the Project, and the expense for that work should be borne by the Forest Service.**

4.) THE GOLD BUTTERFLY PROJECT, AS PLANNED DOES NOT ADEQUATELY ADDRESS THE ISSUE OF MAINTENANCE OR REINFORCEMENT OF THE COUNTY BRIDNGE ACROSS THE BRID CANAL AND RELATED PROBLEMS.

In our original comments to the DEIS in 2018 (p. 6), we addressed the “County Bridge across BRID Canal and Related Problems.” The problems with the adequacy of the Bridge for the Project hauling and related public safety issues still remain unresolved.

It is extremely unlikely that the bridge as currently constructed could safely hold the weight of even one loaded logging truck, much less the high volume of heavy vehicles necessary for the Gold Butterfly Project. As noted above in Objection 5, a loaded logging truck weighs between 80,000 to 92,000 pounds. The bridge’s signage calls for a load limit of 19 tons (38,000 pounds, far less than a standard loaded logging truck). See the current sign with the 19 ton posting in the phograph below:



The Gold Butterfly FEIS makes only one mention of this issue, in Appendix C, to Comment 5e.09, (instead, it falls in the “No Further Response Necessary” section). The comment states that, “Any upgrades or maintenance planned for the Willow Creek Road/ Bitterroot Irrigation District Bridge must include considerations for ingress and egress to allow residents and road users access during bridge repairs (117-6).” The Forest Service’s response to this comment claims that, “Any maintenance and repair work conducted on portions of Willow Creek Road or the Bitterroot Irrigation District Bridge would be conducted in consultation with and coordinated by Ravalli County and the Montana Department of Transportation.” Ingress and egress access is very important for residents East of the Bridge, as there is no other vehicular route out to population centers and services, as has been previously mentioned. Apparently that is not of concern to the Forest Service or their responsibility according to them, despite the potential impact of the Project.

Nothing has seems to have changed in the Forest System's position since the DEIS. In response to concerns expressed about needed repairs and maintenance by the Forest Service because the Bridge wasn't strong enough to handle logging loads, the FSEIS (Appendix C, letter/comment number 14-22), the Forest Service said:

The Willow Creek Bridge is a county bridge over the Bitterroot Irrigation District and does not belong to the Forest Service. The county has maintenance responsibility. The State of MT DOT does the Federal highway inspections, which are required every two years. Those reports can be obtained from the State DOT bridge Dept. If an overload permit is needed that can be obtained from the State of Mt.

An attempt to locate the report online by Objectors has been unsuccessful so far, but from talking to government related personnel regarding the Bridge (MDT ID 04144), apparently the bridge was last inspected in November of 2020 (next regular inspection planned for November of 2022). As is shown by the photograph above (taken today), the bridge is still posted for a load limit of 19 tons [38,000 pounds]. Ravalli County does not have to be responsible for rebuilding the bridge to the level adequate to handle the logging trucks. Rather, by law (7-14-2127 MCA; Document C), no vehicle above the weight limits should be allowed to pass over the bridge.

As the bridge in question is narrow, any significant maintenance or reinforcement could require that a secondary bridge or a widened bridge be constructed to allow traffic to pass while said maintenance or reinforcement was being done. This could require obtaining an easement from one of the owners of the property bordering the bridge. While none of this is impractical, the failure of the FEIS to provide a design feature outlining the Forest Service's plan of action on this issue is a significant oversight.

We were earlier told that the inclusion of the BRID in a Schedule A Road Agreement was specifically intended to allow the Forest Service to perform a load assessment on the bridge to determine its ability to handle the traffic that would result from the Gold Butterfly Project. However, it appears that no assessment was ever made (most probably because the Forest Service did not want the answers). Under the circumstances, we will be asking the Ravalli County

Commissioners to request that this bridge be assessed and posted by the Montana Department of Transportation's Bridge Load Posting program which was initiated last year and is currently underway [see document 10 attached announcing this engineering study]. Because by statute 7-14-2201 (3) (b) [document 11], the county governing board or any member (given knowledge of risks) could become personally liable for any resulting problems if they do not make this request, we anticipate that the request will be made, and that the bridge will be scheduled for a load assessment by the MDoT, since the Forest Service has not followed through on its initial intent to do so. Furthermore, for the reasons referenced above in these Comments to the DSEIS [Section B.) 2.]), Ravalli County has the ability in several ways to effectively curtail or shut down the Project if there the load limitations (by weight and over time) impact the safety of the Bridge. These are expressed to some degree in their Objection to the DROD and related FEIS which is attached as document 9.

Apparently there is currently no Agreement affecting the chip-seal/paved portion of Willow Creek Road or the Bridge (which the Forest Service seems to acknowledge based on the statements about planning to work with the County in the future on a possible road agreement. Regardless the County still has extraordinary power relating to the road and Bridge, as they quote in document 9 Namely they have the "power under MCA 7-14-2127(1) to limit or forbid certain classes of traffic on Willow Creek Road." [For a copy of said statute see document 12 attached.]

Remedy: As Was the Case with the paved portion of Willow Creek Road, the Forest Service has at Least Presently Rejected Any Responsibility for Maintaining the BRID Bridge or Ensuring its Safety. Therefore, the Objectors Maintain that the Following Should Occur:

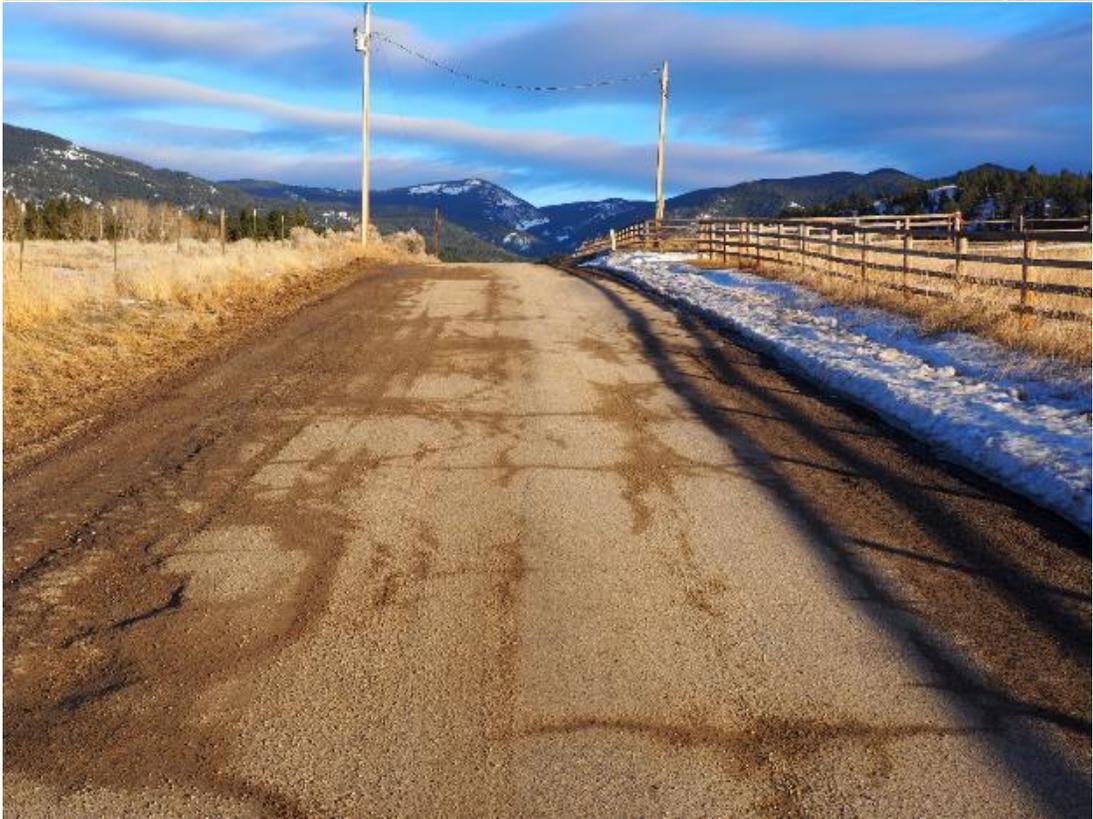
- **Before proceeding further with the Project, the Forest Service should either arrange for an engineer to do a load rating for the BRID bridge or should assist in seeking assistance for the State to do so under their new program referenced above for such studies.**

- **Before proceeding further with the Project the Forest Service should work with the Ravalli County to financially assist in doing in bridge rebuilding necessary to ensure safe passage over the bridge during the life of the Project and do so with the County in a disproportionate manner similar to that suggested for Willow Creek Road as mentioned above regarding the Part 3.) above suggested remedy.**

5.) THE GOLD BUTTERFLY DOCUMENTS (INCLUDING THE FSEIS AND THE RELATED DROD) DO NOT ADEQUATELY ADDRESS THE ISSUE OF PUBLIC SAFETY DUE TO INCREASED TRAFFIC FROM LOGGING TRUCKS ON WILLOW CREEK ROAD.

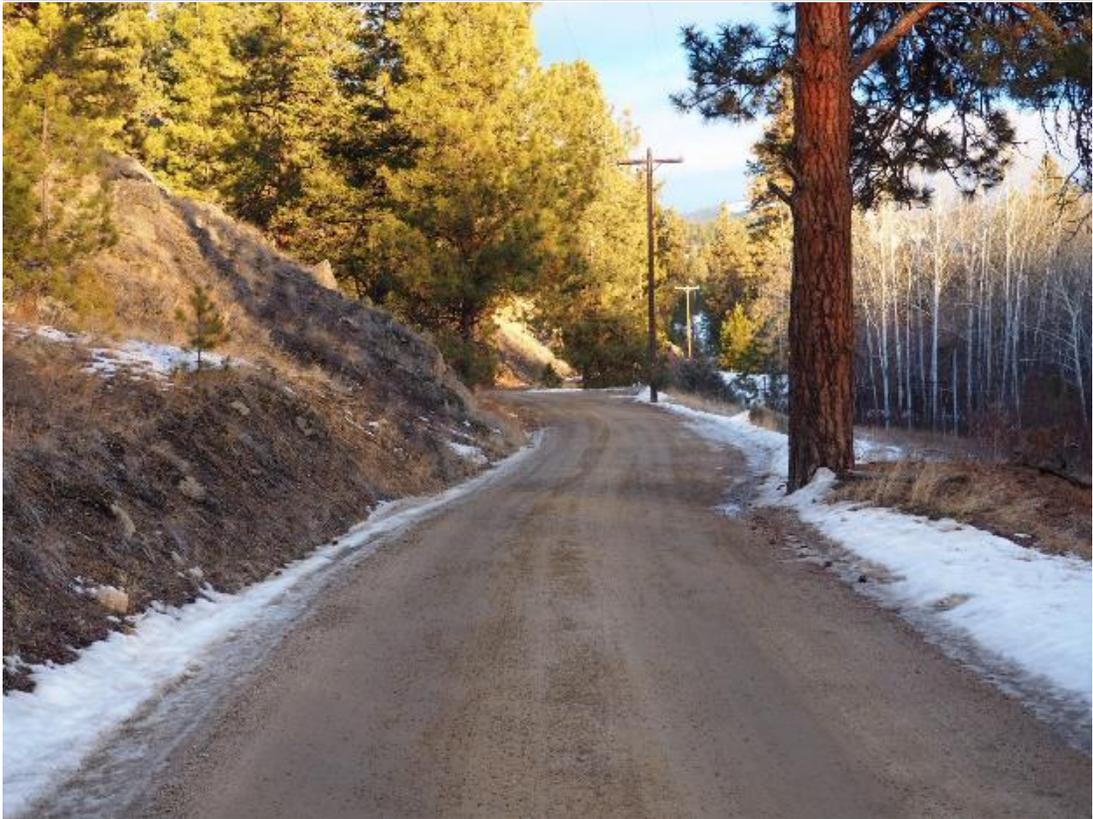
In the original Goheen DEIS Comments to this Project, Comment number 6 addressed “Other Safety Issues” involving the increased traffic along Willow Creek Road associated with the Gold Butterfly Project. These issues included some matters discussed below. Photographs have been added to better help demonstrate the issues.

- Safety issues are of concern for log trucks traveling on areas of Willow Creek Road that are quite narrow and/or have very limited sight distances . These are a Danger to the public. An example of the one of the sight distance problems is on the steep hill where the pavement ends. When traveling in that area it is almost impossible to see any vehicle coming from the opposite direction until the last moment. Photographs taken from both directions on that hill are displayed below.



- Safety issues involving Gold Butterfly traffic increasing the danger at “blind” intersections is also a risk on the Road as it passes through the Goheen property. Public traffic (including that from homeowners along the way and further out) will be on this part of the Road bordering or through private property, even during logging truck haul times. An example of some of the curves and the narrowness of the road (which at points is only about 14 feet wide) are depicted by the following photographs.





- Safety issues involving log trucks traveling Gold Butterfly during times when school buses are traveling along Willow Creek Road.
- Another problem relating to the road dust referenced above (as well as its likely impact on the adjacent Willow Creek (and bull trout) can be seen through the photos showing the Creek is VERY close to the Road as it goes through eastern portion of our property (probably 10-15 feet at points).





We asked speed limits to be implemented and monitored by the Forest Service to preserve public safety (also requested relating to areas vulnerable to dust, as explained earlier in these Objections).

The FEIS (Ch. 3.5, p. 105) admits that “Some sections of Willow Creek Road as well as secondary road intersections with Willow Creek Road have limited sight distances due to topography and curves in the road layout.” It notes (*Id.*) that there are 94 intersections with Willow Creek Road along its 8.29 county length (including driveways and others which are secondary roads leading to multiple residences). It acknowledges that there will be decreased sight distance where dust is present (although it focuses on the gravel portion of the road rather than dust that may emanate from the paved portion of the road if it becomes pulverized) (Ch. 3.5, p. 108). It also states (Ch. 3.5, p. 109) that, “Risk to public safety for motorized, non-motorized, and pedestrian traffic along Willow Creek Road will be elevated over background conditions due to the volume of log trucks estimated under Alternative 2 and Alternative 3.” However, it claims (*Id.*) that,

“Log truck operators are still subject to the same traffic safety laws and posted speed limits on Willow Creek Road as all other road users.” The FEIS and the final ROD incorporating it acknowledge that design features and safety precautions can’t eliminate risk altogether [p. 109, Ch 3.5 of FEIS and provision 2.3.2 of DROD, p. 9]. That could be interpreted as “Too bad for those who may be injured or die as a result of this Project, as we certainly wouldn’t want to do anything to slow these logging trucks down.” Nothing seems to have been changed regarding these positions in either the FSEIS or the related DROD.

Unfortunately, the logging trucks and other heavy vehicles required for the Gold Butterfly Project are not capable of stopping or maneuvering as quickly as normal vehicles. This is the reason that on many roads, the speed limit for heavy trucks is lower than the speed limit for normal vehicles. There have also been complaints from residents near other Forest Service projects in Ravalli County that logging trucks (often being under significant economic pressure to quickly deliver their cargo) have regularly traveled at unsafe speeds along narrow, windy gravel roads like Willow Creek Road. The Forest Service to date has been unwilling to require its contractors to travel at safer speeds.

The FEIS also states (Ch. 3.5, p. 109) that, “Other safety precautions will include signage along Willow Creek Road alerting the public to the presence of log trucks.” Although the FEIS (Ch. 2.2.3, p. 33) includes a design feature to close Willow Creek Road’s upper 1.2 miles on weekdays from 12 AM to 5 PM and to provide signage (and other methods) to communicate this, no other design feature mentions signage, despite the claim made on page 109. (This seems to remain unchanged in the FSEIS and related FROD.)

The FEIS does not adequately address the issue of limiting logging traffic during times when school buses are picking up or dropping off children along Willow Creek Road. The issue is raised only in Appendix C, Comment 5e.02 (once again, in the “No Further Response Required” section), which refers to a design feature listed in Chapter 2, Table 2.2-8 of the FEIS restricting log hauling past Corvallis Elementary School during student drop off and pick up times. These times are listed in said table as being from 8:00-8:45 AM and from 3:00-3:45 PM. However, school buses regularly travel along Willow Creek road during times outside of these official drop off and pick up times for the school. This design feature was

present during the DEIS and was acknowledged in our comments last summer. [The added time for school bus delivery/pickup is 7:30 – 8am and from 3:45 – 4:10 pm., all as set forth on p. 9 of our initial Comments to the DEIS (filed in July of 2018) The response listed in the FEIS completely ignores the question of protecting those students who ride the bus rather than being dropped off or picked up directly at the school. No specific changes have been made in the DROD and related FSEIS (except that the Forest Service says its willing to work with school personnel on safety issues). [See p. 11 of Appendix A, attached to the DROD.

The FEIS, DROD, and final ROD, indicate that the Forest Service has endeavored to find other haul routes for this massive project (instead of just utilizing one narrow road (14 feet at times on curves as it passes through our property) as the only available solution. They have chosen to avoid other alternatives (such as temporary condemnation of easements for log hauling purposes, even though that remedy is authorized under Montana law. *See* 70-30-102 (42) and 70-30-109 MCA [Document O of the Goheen Objection to the original DROD]. The Forest Service position remains unchanged in the ROD/FSEIS (*see* p. 7 of the DROD).

As noted above, given the proximity of Willow Creek to Willow Creek Road, there would certainly seem to be some risk to bull trout in the stream. Even the current DROD at p. 2 notes the difficulties with sediment levels in Willow Creek which are higher than historic conditions (mentioning that the stream is “sediment impaired” by the state of Montana). The DROD goes on to mention that the Road 364 (in the Forest Service land) parallels the creek for several miles. It also indicates that it is the lower part of the Forest Service (that would presumably be nearer the boundary of the Forest Service property which is the primary source of sedimentation. Along those same lines, as shown in the above photos reflecting the stream proximity, it would seem that the stream is even closer to the Road on our property than it is on Forest Service land. It is unclear whether any of the “BMP’s” being planned are on the Willow Creek Road after it exists to the west from the Forest Service boundary. It would certainly seem, however, that this is especially important. Finally relating to the trout, the “Biological Opinion for Effects to Bull Trout from the Gold butterfly Project Bitterroot National Forest” which is part of the Supplemental record on the Forest Service website is of special interest. It mentions SO MANY factors which would seem to make bull

trout which at extreme risk along Willow Creek. While the USFWS has given the go-ahead for this Project, based on the “Biological Opinion...” referenced above, it would seem like the Forest Service will have to thread the needle perfectly for the bull trout to actually survive. (Even the Forest determined that the Gold-Butterfly Project “*may affect, and is likely to adversely affect*” bull trout as noted on p. 4 of the Biological Opinion.) To actually not lose this species it is very important that it comply with the terms and conditions and recommendations set out in the Biological Opinion, including those listed on pp. 33-37. These will take considerable attention as well as money for follow through. In fact most of the issues that these Objections raise will require the same thing, as has been noted. That brings us to the “economic concerns” that the Objectors express in the next section....namely, **that there is not adequate funding from this project to do what the forest service has committed to do in terms of environmental safety and restoration activities.....and that doesn’t even count the public health and safety issues that we have raised.**

Remedy: To meet the other public health and safety issues set forth in this part 5.), the following should occur:

- **Speed limits (15 mph on gravel portions of the Willow Creek road, and portions of the currently paved section that become significantly degraded as a result of the logging traffic) should be required. On adequately treated chip-seal, and paved sections of the road, the logging traffic should be limited to 25 miles per hour.**
- **Log haul traffic should not be allowed when school buses are picking up and delivering children, as set forth above, and these times should be added to the 8 am to 8:45 am and 3 pm -3:45 pm already committed to in the DEIS.**
- **Bull trout BMP management should be required not only on forest within the Project area, but also outside of it where there County road is adjacent to Willow Creek.**

6.) THE GOLD BUTTERFLY PROJECT IS FATALLY FLAWED IN THAT IT RELIES ON AN ECONOMIC ANALYSIS WHICH BY ITS OWN TERMS INDICATES THE PROJECT ENVIRONMENTAL COMMITMENTS CANNOT MET, AND IN ADDITION, REQUIREMENTS RELATING TO PUBLIC HEALTH AND SAFETY WILL ALSO FAIL.

A.) The Project Income Will Not Be Able to Meet Projected Expenses, and Hence Restoration Commitments are Unlikely to be Met.

The DROD and the FSEIS set out a myriad of plans for restoration activities of the Forest from the logging and related operations it plans to conduct, such as non-harvest fuel treatments including prescribed burning; decommissioning work on roads no longer needed for future management (22.3 miles); work on roads needed for future management of forest resources (21.3 miles); decommissioning non-system roads (16.5 miles); adding 16.5 miles of roads (already existing [unclear how much they are really overgrown], but put into intermittent storage after timber sale) for current and future use; construction of 6.4 miles of permanent road and 17.3 miles of temporary road for product removal; application of Best Management Practices [BMP] on 32.4 miles of haul road to reduce potential sediment runoff and improve water quality; watershed and other road work not associated with road storage or decommissioning; extensive work on trails in Burnt Fork and Willow Creek (including converting 2.4 miles of road to trail system); etc. [See *e.g.*, pp. 4-5 of DROD]. The above activities appear to be entirely within the Project area, as opposed to on private property or other Ravalli County roads (which, if properly done, as referenced in these objections would potentially significantly enhance expenses.)

The cost of the above activities within the Project boundaries, as well as expenses relating to non-commercial thinning; brush disposal; erosion control: meadow and roadside herbicides and biocontrol; maintenance and restoration burns; “Unusual Condition Adjustment”; tree planting; sale preparation; and sale preparation and administration, are encompassed in Tables 2, 6, and 7 of the Economic Analysis [contained in the Project File]. In balancing the projected FS expenses against the predicted revenue for the Project (after discounting to present “net value”), **the Economic Analysis anticipated a Forest Service net loss**

of \$1,646,915 [rounded \$1.645 million] for the Gold Butterfly Project (Table 7, p. 10 of the Economic Analysis.⁹

The Economic Analysis tried to argue that the economic impact was really not a “loss” because it was going to be offset with economic benefit by job creation (pp. 10-11). Such a “hocus pocus” transition of the real economic loss to the people and government in Ravalli County—much less the Forest Service—is not credible. The economic benefit would primarily be to employees of mills likely to be north of Missoula, Montana (there are none in Ravalli County). It would be foolish to think that these employees would be using the income they make from this work to pay for restoration activities which the Forest Service has said will be done on the Project. Furthermore, as noted hereafter, this doesn’t include the road and health related expenses relating to use of Willow Creek Road (as the only haul road out of the forest), for the citizens and government of Ravalli County. As mentioned later in these objections, these are likely to be VERY SIGNIFICANT.

How will the shortfall in Project expenses be met? The Economic Analysis effectively says that it won’t be:

Implementation of the project will occur within the bounds of the agency budget set by congress. Congress is unlikely to increase the agency budget or public taxes, based on the present net value of the project. [P. 3 of Economic Analysis.]

Bottom line, this Project and the restoration activities promised in it to comply with NEPA, HFRA, the Clean Air Act, and other legal requirements are not feasible given the Forest Service’s own studies, plans, and financial projections. In the end, this will likely mean that the work which is necessary to make this Project environmentally sound and within the law (as promised in the DROD and FSEIS), simply won’t happen. The Project should therefore not be allowed to go forward, as it will effectively become literally a “cut and run” job.

⁹ The “Economic Analysis” was actually prepared on March 2, 2018 (using 2017 dollars, as indicated on p. 10 of the Anaysis), but has not been since revised (based on Project documents available. A discount to present value calculation was done regarding likely income and expenses, however according to the Analysis, and the Forest Service apparently maintains, that therefore these numbers have considered inflationary factors [See “Letter #14, Comment #11 FS Response on p. 75 of Appendix C to the FSEIS.

B.) Willow Creek County Road Maintenance and Dust Mitigation and Monitoring Expenses Should be Expenses Assumed by the Forest Service; the Project Should Not be Allowed to go Forward Without Such Funds Actually Being Available to and Committed by the Forest Service to be Used for Such Purposes.

The Objectors incorporate for the purposes of this topic, all of the issues we have raised above (and in other documents we have filed), which demonstrate that the Project is probably short well over another million dollars (above the \$1.645 million shortfall referenced above in part A. of this topic). The take-away is that the restoration and environmental commitments by the Forest Service are likely to fail (on top of the public health and safety issues which the Forest Service also needs to do regarding this Project).

Remedy: The Project should not go forward, and certainly not until all funding necessary for the Forest Service to meet its obligations and commitments regarding the Project are fully secured.

7.) THE CHANGE IN THE DEFINITION OF “OLD GROWTH” IN THE FSEIS AND RELATED DROD AND THE JUSTIFICATIONS FOR THE SAME, RESULT IN THE REMOVAL OF MORE OLD/LARGE TREES, WHICH NOT ONLY AFFECT SPECIES SURVIVAL, BUT ARE CONTRARY TO CLIMATE CHANGE CONCERNS AS WELL AS ENHANCING DANGERS FROM LARGE FIRES.

With regard to this topic, the Objectors, incorporate all of the content and attachments referenced in the Comments to the DSEIS filed by us on August 9, 2021, as well as any other documents we have filed or referenced relating to this Project (including those attached to these Objections). As noted in the initial paragraph of this action, we also incorporate all filings relating to the Project submitted by “Friends of the Bitterroot” and “Alliance for the Wild Rockies.”

Remedy: We request the Gold Butterfly Project, in particular as it relates to the logging of commercial “old growth” (especially as defined by Green et al.) be withdrawn.

8.) THE CHANGE PROPOSED IN THE DSEIS REVEALS ATTEMPTS TO SIDESTEP NECESSARY PROCESSES FOR UPDATING THE BITTERROOT NATIONAL FORESTPLAN AND THE UTILIZATION OF “AMENDMENTS” TO LIMIT LEGALLY REQUIRED PUBLIC INVOLVEMENT.

With regard to this topic, the Objectors, incorporate all of the content and attachments referenced in the Comments to the DSEIS filed by us on August 9, 2021, as well as any other documents we have filed or referenced relating to this Project (including those attached to these Objections). As noted in the initial paragraph of this action, we also incorporate all arguments and filings relating to the Project submitted by “Friends of the Bitterroot” and “Alliance for the Wild Rockies.”

In addition we request that a new document (namely the decision in Alliance for the Wild Rockies vs. Marten, dated 12/13/21, in cause # CV20-179-M-DWM (Mont. U.S. Dist Court, Missoula Division) **[see attachment]** be incorporated as with this filing. Without additional plan review, that decision rejected as “arbitrary and capricious,” the successive site-specific amendments” utilized by the Forest Service for the Stonewall Project. That is precisely what the Bitterroot National Forest has done regarding multiple projects over the years in this Forest, as pointed to in the Objections filed to the DSEIS and DROD relating to the Gold Butterfly Project. Likewise, the Bitterroot Forest Service has also stated its intention to utilize similar project-specific amendments for the Mud Creek and Bitterroot Front Projects—totaling almost another 200,000 acres--of Bitterroot Forest land (see reference in our Comments to the DSEIS, pp. 6-7).

Remedy: The Forest Service should withdraw its DSEIS and DROD on the Gold Butterfly Project, inasmuch as it too is a violation of the law as set forth in AWR vs Marten, referenced above.

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CONCLUSION

Thank you for your time and consideration. If you need any further information or documentation (including any of the articles referenced herein), please advise and we will endeavor to provide the same.

For the reasons stated herein, as well as those in the earlier Goheen document filed relating this Project (including the DSEIS Comments) and all Objections and Comments relating to this Project filed on behalf of Alliance for the Wild Rockies and Friends of the Bitterroot , we respectfully request that the Forest Service withdraw the Gold Butterfly Project until and unless said issues can be resolved.



Stephen S. Goheen



Gail H. Goheen

[Redacted]

[Redacted]

Jim Miller, President
Friends of the Bitterroot

[Redacted]

Mike Garrity, Director
Alliance for the Wild Rockies

[Redacted]