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July 1, 2026

Regional Forester
Objection Reviewing Officer
Pacific Northwest Regional Office
USDA Forest Service
Attn: 1570 Objections
1220 SW 3rd Avenue
Portland, OR 97204

Re: Canyon Forest Restoration Project Objection

Regional Forester Buchanan:

WildEarth Guardians, Olympic Park Advocates, and Center for Sustainable Economy (“Objectors”) file this objection to the Draft Decision Notice (“DN”) and Final Environmental Assessment (“EA”) for the Canyon Forest Restoration Project (“Canyon Project”) on the Hood Canal Ranger District in the Olympic National Forest. The Draft DN would approve the proposed action and allow 1,838 acres of commercial variable density thinning, up to 11.4 miles of temporary road construction, 26 miles of road reconstruction, and 6.55 miles of road reconditioning.

The responsible official for the Canyon Project is Forest Supervisor Kelly Lawrence.¹

Objection 1: Changes between the Preliminary and Final EAs.

The Forest Service made multiple changes between the PEA and FEA that are objectionable. These changes are listed as follows:

¹ The web portal identifies the responsible official as Forest Supervisor Kelly Lawrence. However, on May 7, 2026, the Olympic National Forest announced that Joyce Hamilla became Acting Forest Supervisor upon Kelly Lawrence’s departure. *See* <https://www.fs.usda.gov/r06/olympic/newsroom/releases/usda-forest-service-names-acting-supervisor-olympic-national-forest>. If Kelly Lawrence is no longer with the Olympic National Forest, then Acting Forest Supervisor Joyce Hamilla is the responsible official.

- Proposed Action
 - Example 1
 - Project would “improve **wildlife habitat**” (PEA 4)
 - Project would “improve **habitat diversity**” (FEA 7)
 - Example 2
 - “**reconstructing** roads” (PEA 4)
 - “**repairing** roads” (FEA 7)
 - Example 3
 - “Roads identified for decommissioning in the DWRMP **would be decommissioned.**” (PEA 7)
 - “Decisions made within the DWRMP for road activities, such as decommissioning, **may be implemented** following completion of Canyon FRP activities.” (FEA 11)
 - Example 5
 - “The soil scientist would work directly with layout crews and sale administrators to apply design criteria and would monitor the effectiveness during and after implementation.” (PEA 8)
 - **Deleted in FEA** (see FEA 12)
- Environmental Impacts Review
 - Example 1
 - “**Restriction of hauling or road construction activities during high use periods (weekends and holidays) will help reduce user conflict**, as well as ensuring adequate signage along roadways during operation...” PEA 25
 - “Ensuring adequate signage along roadways during operation ... would help reduce user conflicts.” FEA 30
 - Example 2
 - “the wildlife tree and snag Forest Plan standards **will be** met.” PEA 26
 - “the wildlife tree and snag Forest Plan standards **would be** met.” FEA 31

The only change that the Forest Service explained is the removal of the restriction of hauling or road construction activities during weekends and holidays, which the agency admitted was removed “because of the economic strain on timber sale contractors.”² The other changes seem similarly fashioned to benefit logging or, in the case of the DWRMP, reduce restoration work that would actually improve watershed conditions.

Proposed Resolution: The Forest Service should explain all of these changes and consider reverting to the PEA language for each example provided above.

² Final EA, p. 39.

Objection 2: Lack of Information and Preventing Meaningful Public Participation.

There is insufficient information provided in the EA to support a finding of no significant impact. Commenters raised concerns about the lack of information during the comment period.³ In response to requests for more specific mapping of the project area and proposed activities, the Forest Service simply said that “[a]ll proposed thinning units will be ground-truthed” at some undisclosed point in the future, after the opportunity for public input has long passed. It is important that this information is disclosed before the commencement of public comments so the public actually has an understanding of where specific project activities will occur.

In the Final EA, the Forest Service provided a couple photos forested with “[d]esired conditions showing late-successional forest with large trees, layers, and plants on the forest floor.”⁴ The Forest Service claims that “[a]ny stand or portion of a stand with these characteristics would not be thinned but would be a ‘skip’ and left to keep developing on its own.”⁵

Comments on the PEA indicated that stands G32 and F193 already exhibited these characteristics but there is no indication that they are now identified as skips in the Final EA.⁶ A recent site visit identified even more areas that already exhibit late-successional forest characteristics and should be “left to keep developing on their own.”⁷ These areas should be identified as skips.

Part of the problem is that the Forest Service presented a project in the Final EA that, by its own account, is still very much preliminary. For example, an email from Forest Supervisory Biologist Alison Center explained that “only basic existing conditions are known” about the units proposed for logging and those units “are *still preliminary* and the unit boundaries are not finalized yet.”⁸ Ms. Center continued that “skips for wildlife habitat, sensitive plants and other resources [have not been] mapped and eliminated from thinning units.”⁹ The lack of information and maps prevented the public from meaningfully engaging during the public comment period.

Relatedly, in response to comments raised by WildEarth Guardians, the Forest Service specifically said that “project GIS data is available upon request” without having to file a

³ See WildEarth Guardians Preliminary EA Comments at 10-11; CSE Preliminary EA Comments at 3.

⁴ Final EA, pp. 5, 9.

⁵ *Id.* at 9. Note that even though the Forest Service never says it is using conditions-based management (“CBM”), this statement suggests that it is.

⁶ See **Ex 1** (showing photo location icons in Stands G32 and F193. Note that there may be a couple photos in the skip adjacent to Stand G32 but because this image was georeferenced, the accuracy may be a little off. This is one of the reasons why having the project GIS files would have been useful).

⁷ See **Ex. 2**, pp. 1-10.

⁸ **Ex. 3**. Emails between Ryan Talbott, Alison Center, and Joseph Ford, p. 2 (May 28-June 16, 2026). A subsequent email from Silviculturist and Environmental Coordinator Joseph Ford similarly referred to the project’s “preliminary state.” *Id.* at 1.

⁹ *Id.*

Freedom of Information Act (“FOIA”) request.¹⁰ The following provides a timeline for requesting those GIS files:

- May 22, 2026 – Guardians sent an email to Silviculturist and Environmental Coordinator Joseph Ford requesting GIS files.¹¹
- May 28, 2026 – Not hearing from Mr. Ford, Guardians sent an email to Forest Supervisory Biologist Alison Center requesting GIS files.¹²
- May 28, 2026 – Later that day, Mr. Ford responded stating that he had forwarded my request and “will let you know as soon as I get anything back or a response.” He also noted that “there’s a lot going on these days as I’m sure you know but I’m doing my best to keep up.”¹³
- May 29, 2026 – Ms. Center responded stating she would “find out what we are able to provide and get back to you early next week.”¹⁴
- June 5, 2026 – Not hearing from either Mr. Ford or Ms. Center, Guardians sent a follow-up email to Ms. Center asking about status of sharing GIS files.¹⁵
- June 10, 2026 – After another five days of no response, Guardians sent a second follow-up email to Ms. Center about status of sharing GIS files.¹⁶
- June 11, 2026 – Ms. Center responds stating that “we are unable to provide individual shapefiles.”¹⁷
- June 11, 2026 – Guardians responded to Ms. Center (and cc’d Mr. Ford and Alex Weinberg) asking why the shapefiles cannot be provided when the Forest Service had previously stated the “project GIS data is available upon request.”¹⁸
- June 16, 2026 – Mr. Ford responded that “some of the GIS data includes sensitive resource information, so it cannot be widely shared with the general public. In addition, the treatment unit data is still in a preliminary state and will change as it is refined. Sharing it broadly at this stage could lead to confusion.” Mr. Ford continued that the GIS data is available by “submitting a FOIA request.”¹⁹

To say the least, this was extraordinarily frustrating and almost seemed designed to stifle meaningful public input. In the Response to Comments, the Forest Service clearly stated that GIS files were “available upon request” *without* a FOIA request. After weeks of obfuscation, and with less than two weeks left in the objection period, the Forest Service completely contradicts itself and says these files are *only available* with a FOIA request.²⁰

¹⁰ Response to Comments, p. 34.

¹¹ **Ex. 4**, p. 1.

¹² **Ex. 3**, p. 3.

¹³ **Ex. 4**, p. 1.

¹⁴ **Ex. 3**, p. 3.

¹⁵ *Id.*

¹⁶ *Id.* at p. 2.

¹⁷ *Id.* at p. 1.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ Guardians submitted a FOIA request for the project GIS files on June 23, 2026 but has not received any responsive documents as of this filing.

Moreover, the Forest Service's rationale for not providing the GIS data strains credulity. The fact that "*some* of the GIS data includes sensitive resource information" does not mean that the data that does not contain such information cannot be shared. And the notion that the "preliminary state" of the data could "lead to confusion at this stage" essentially announces a policy that the Forest Service will only provide GIS data *after* the opportunity to comment or object has passed.

Proposed Resolution: the Forest Service should revise the Final EA when it has data that has advanced beyond the "preliminary state" so the public can meaningfully respond to what the Forest Service is actually proposing. The Forest Service should not rely on CBM to postpone much of the environmental analysis until some undefined future point.

Objection 3: The Forest Service must reconsider the significant impacts to soils that will occur if the Canyon Project is approved.

Objectors raised several concerns about the impacts to soils if the Canyon Project is approved.²¹ In response, the Forest Service claims that impacts to soils would be sufficiently mitigated during project implementation and that detrimental soil conditions would not exceed the 20 percent threshold in the Forest Plan.²² Even assuming that is the case, it does not mean that the degree of soil disturbance resulting from project implementation is insignificant.²³

Indeed, the Soils Report indicates that the impacts to soils will almost certainly be significant even if the Forest Service stays within the Forest Plan's 20 percent threshold. For example, the Soils Report acknowledges that the "majority of soils within the Canyon Forest Restoration Project area are *particularly susceptible* to compaction, displacement, and rutting from ground disturbing activities."²⁴ These soils "are *highly sensitive* to heavy equipment" and "vulnerable to detrimental soil impacts due to landscape position, wet climate, fine soil textures (clay or silt), permeability restrictive layers, low rock fragment content, high seasonal water tables, and other factors."²⁵

Moreover, "[d]ue to the *high degree of stream density* throughout the proposed project area, the *vast majority* of underlying parent material poses a *high degree of risk of disturbance*, which could be in the form of harvest activities or road building or other maintenance/storage activities."²⁶ This raises additional concerns since "[e]xisting disturbance associated with legacy roads" already "may exacerbate some of these potential landslide issues through changes in belowground and aboveground hydrology."²⁷ In fact, "[a]pproximately 90% of the proposed

²¹ See WildEarth Guardians Draft EA Comments at 8-10.

²² Response to Comments, p. 34.

²³ It is also unclear how the Forest Service can claim with certainty that the 20% threshold will not be exceeded when elsewhere it acknowledges that "only basic existing conditions are known" throughout the "still preliminary" project units.

²⁴ Soils Report, p. 6 (emphasis added).

²⁵ *Id.* (emphasis added).

²⁶ *Id.* at 10 (emphasis added).

²⁷ *Id.*

project area has landforms with a *heightened risk for geological instability* within sloped areas or disturbed gentler sloped areas due to the underlying glacial materials (relict proglacial lakes and glacial till).”²⁸

These admissions indicate that there can be significant impacts to soils even if those impacts do not exceed the Forest Plan’s 20 percent threshold for detrimental soil impacts. This issue is particularly important since soil is a “*nonrenewable* resource” that “develop[s] at a *very slow rate*, about *one inch per thousand years*.”²⁹ Once disturbed by logging activities, “soils often take on the magnitude of *hundreds to thousands of years to recover*” and, “if impacts are severe enough, there may be no recovery to pre-harvest productivity without external intervention and restoration activities.”³⁰ And even though the Forest Service claims that it will stay within the 20 percent threshold for detrimental soil conditions, the implementation would nevertheless *triple* detrimental soil conditions in the project area.³¹ A tripling of detrimental soil conditions in an area with such sensitive soils is a significant impact that must be more carefully considered in the context of an EIS.

Another concern related to soil impacts is the Forest Service’s ability to monitor project implementation to ensure that project design criteria (PDC) are followed. The Forest Service insisted that the effectiveness of soils-related PDCs hinged on the agency’s monitoring:

- “The PDCs created for roads and soils provide sufficient mitigation measures to address the legacy impacts related to logging, and the proportion of the landscape that remains in detrimental soil conditions following harvest is well within Regional Standards and Guidelines *if administered and monitored appropriately*.”³²
- “Monitoring *will be critical* for the proposed action, as the majority of soils in the area are highly sensitive to compaction and erosion...”³³

This raises the question, of course, of what will happen to soils throughout the project area if implementation is *not* “administered and monitored appropriately.” And there are serious concerns about the Forest Service’s ability to appropriately monitor activities on national forests in the Pacific Northwest, including Olympic National Forest.

Comments on the PEA revealed that the Forest Service is basically an absentee landlord on the Olympic National Forest.³⁴ The Forest Service itself acknowledges that “[t]he Olympic National Forest is currently experiencing a shortage in frontline staff.”³⁵ That absence has persisted for years and allowed rampant illegal activities to proliferate throughout the national forest, including the Canyon Forest Restoration Project area.

²⁸ *Id.* at 11 (emphasis added).

²⁹ *Id.* at 10 (emphasis added).

³⁰ *Id.* at 15 (emphasis added).

³¹ *Id.* at 14.

³² Soils Report, p. 16.

³³ *Id.*

³⁴ See WildEarth Guardians’ PEA Comments, p. 7.

³⁵ U.S. Forest Service, Olympic National Forest, Offices, <https://www.fs.usda.gov/r06/olympic/offices> (accessed June 29, 2026) (Ex. 5).

A recent site visit revealed extensive illegal activity, including garbage dumping and timber theft, continues to plague the project area.³⁶ In fact, the problem is so bad that the Clallam County Sheriff's Office recently organized at least two cleanups to remove garbage from the national forest. According to the Clallam County Sheriff's Office, its work crews recently removed 4,620 pounds of trash over two days *at a single trailhead*.³⁷

The staffing shortage on the Olympic National Forest is unlikely to get better any time soon; in fact, it is likely to get worse as the current administration pushes forward with agency-wide restructuring.³⁸ If the Forest Service presence on the Olympic National Forest is so sparse that it cannot enforce laws against illegal garbage dumping and timber theft, how is the public supposed to have any confidence in the agency's ability to ensure implementation of the Canyon Forest Restoration Project is properly administered and monitored?

This concern is compounded by the fact that individual timber sales will be administered through either "designation by prescription" (DxP) or "designation by description" (DxD), which have been deemed the default methods for timber sales by Forest Service leadership.³⁹ Unlike individual tree marking, where the Forest Service marks which trees to cut or leave, DxP and DxD shift the responsibility for deciding which trees to cut in a timber sale to the logging companies contracted to implement approved projects. This increases the risk that the wrong trees are cut, too many trees are cut, and even outright timber theft.

Multiple timber program audits in the Pacific Northwest have warned about the risks of relying on DxP and DxD. According to a 2016 audit of the Wallowa-Whitman National Forest's timber program, while the use of DxP "reduces the cost of sale preparation (less staff time and no marking paint)," there are multiple other factors that far outweigh this perceived benefit. The auditors explained that in order to use DxP:

. . . the forest has to have *clearly understood prescriptions* ***since the purchaser will be selecting the trees to be cut or left***. The desired conditions have to be *clearly articulated so the end result produced by the purchaser is what the Forest Service intended*. The use of DxP increases the contract administration workload over other forms of designating timber, particularly in monitoring the actual cutting of the purchaser-selected trees and the end results. It requires personnel and skills to accomplish scaling, such as surveillance of haul routes, accounting and auditing scale receipts, and developing alternate scaling agreements. In order to use DxP, the Forest Supervisor *has to ensure that staff with the necessary skills and certifications are available to administer timber sales and*

³⁶ See Ex. 2, pp. 11-13.

³⁷ Clallam County Sheriff's Office, Facebook (June 25, 2026, 12:27 PM), <https://www.facebook.com/clallamcountysheriff/posts/pfbid02dnStVeSoGSQFt5CovZmAuadKYkY7LqcyXWzGNpFUpqGvBf63wfUj5hAdrt7KD53Ll>.

³⁸ See PBS News Hour, U.S. Forest Service cuts raise concerns on protecting public lands and fighting wildfires, May 4, 2026, <https://www.pbs.org/newshour/show/u-s-forest-service-cuts-raise-concerns-on-protecting-public-lands-and-fighting-wildfires>.

³⁹ Acting Associate Chief Christopher French, Implementation of Secretarial Memo 1078-006, p. 2 (Apr. 3, 2025).

stewardship contracts. If the forest's timber theft plan does not include scaled sales, the plan must be updated before this method is utilized.⁴⁰

In a 2017 audit of the Fremont-Winema's timber program, regional staff explained how multiple timber sales had "very complex prescriptions" that make it "difficult to assure credibility cruise and volume determination, and proper administration to achieve desired end results."⁴¹ The auditors continued that "[i]t was apparent through discussion with Forest personnel there are different interpretations of the prescription which may or may not comply with NEPA."⁴² That is an admission that project implementation using DxD increases the likelihood of non-compliance. But there is no remedy for putting trees back on stumps.

Elsewhere in the Fremont-Winema audit, regional staff documented that "[t]imber accountability requirements are not being met by the Contractors and are *not being enforced by FS personnel*."⁴³ Regarding mandatory truck checks, auditors noted that Forest Service staff in charge of monitoring timber sale implementation should have conducted between 75-85 truck checks but instead the auditors found that "the Forest has not completed *any* documented truck checks."⁴⁴

Similarly, the last audit of the Olympic National Forest's timber program, completed in 2016, revealed significant concerns about the Forest's ability to effectively monitor timber sale implementation. For example, in reviewing the KOCC timber sale, which was implemented through DxD, regional staff found an "alarming number of undesignated trees cut."⁴⁵ Inspectors documented over 160 undesignated trees, with 53 undesignated cut trees documented on a single day.⁴⁶ The regional staff bluntly directed Olympic National Forest staff to "immediately gain control over the situation on the KOCC Timber Sale," including using breach of contract and suspension of operations against the contractor.⁴⁷

The 2016 Olympic audit also found the following:

- "No documentation regarding check cruising" in violation of Handbook requirements.⁴⁸

⁴⁰ Regional Product Accountability Audit and Timber Program Review, Wallowa-Whitman National Forest, p. 153 (Apr. 11-15, 2016) (**Ex. 6**) (emphasis added).

⁴¹ Regional Product Accountability Audit and Timber Program Review, Fremont-Winema National Forest, p. 30 (Apr. 24-28, 2017). (**Ex. 7**). A 2017 audit of the Malheur National Forest's timber program expressed similar concerns. *See* Regional Product Accountability Audit and Timber Program Review, Malheur National Forest, p. 69 (May 8-12, 2017) (**Ex. 8**).

⁴² Fremont-Winema, p. 30.

⁴³ *Id.* at 28-29 (emphasis added).

⁴⁴ *Id.* at 29 (emphasis added).

⁴⁵ Regional Product Accountability Audit and Timber Program Review, Olympic National Forest, p. 11 (Apr. 25-29, 2016) (**Ex. 9**).

⁴⁶ *Id.*

⁴⁷ *Id.* at 12.

⁴⁸ *Id.* at 6.

- “No inspection reports or notes to verify the quality and accuracy of cruising” in the timber sale contract folder.⁴⁹
- Failure in “tracking the load count, volume, and value in one place for each sale.”⁵⁰
- Failure to accomplish Trust Fund monitoring and management.⁵¹
- Failure to meet Handbook requirements for District-level accountability audits.⁵²
- Failure to conduct “[a]fter hour inspections on operational sales” despite this being an “R6 Emphasis Item for 2015.”⁵³
- Failure to meet minimum frequency for monitoring port activity for any evidence of illegal export of federal timber.⁵⁴
- Multiple contract modifications without required the cost analysis, including modifications that resulted in a “windfall for the purchaser.”⁵⁵
- Misuse of a “Letter of Agreement” to allow Purchaser to “cut trees that are not Included Timber on the KOCC and Grouse Timber Sales for operational or safety reasons,” which the auditors found “excessive” and not in conformance with the Forest’s timber theft prevention plan.⁵⁶
- Failure to timely enforce erosion control and slash disposal requirements such that it “could be considered implied acceptance by the Forest Service” that the requirements are waived.⁵⁷
- Failing to meet the 2 percent minimum for unannounced checks of loaded log trucks.⁵⁸
- Noting that “illegal wood cutting not associated with a timber sale is a fairly common occurrence” in one law enforcement officer’s patrol area and that the Forest is “understaffed to handle that workload,” which “puts a strain on the Forest’s ability to detect and respond to incidents promptly.”⁵⁹

In short, the 2016 audit of the Olympic National Forest’s timber program revealed significant failures that call into question the Forest’s ability to effectively administer and monitor sale implementation.

Proposed Resolution: The Forest Service has not demonstrated that the project will not have significant impacts on soils, particularly in the absence of appropriate sale administration and monitoring. The Forest Service should prepare an EIS to more fully analyze the impacts to soils, including the impacts that are likely to occur without appropriate sale administration and monitoring, for which there is a documented history.

⁴⁹ *Id.*

⁵⁰ *Id.* at 8.

⁵¹ *Id.*

⁵² *Id.* at 9.

⁵³ *Id.* at 10.

⁵⁴ *Id.*

⁵⁵ *Id.* at 10-11, 14.

⁵⁶ *Id.* at 11.

⁵⁷ *Id.* at 12.

⁵⁸ *Id.*

⁵⁹ *Id.*

Objection 4: Impacts to Watersheds, Wildlife, and Fish.

For many of the same reasons above, there is not enough information in the Final EA for the Forest Service to conclude there will not be significant impacts to watersheds. The recovering Dungeness Watershed is a rich and productive habitat for fish and wildlife. A Tier 1 Key Watershed under the Aquatic Conservation Strategy of the Northwest Forest Plan, the Dungeness Watershed is also a municipal water source for the City of Sequim.⁶⁰ As noted in the Dungeness Watershed Action Plan, the Dungeness River serves as crucial refugia for maintaining and recovering four species of fish listed under the Federal Endangered Species Act:

- Puget Sound Chinook
- Puget Sound steelhead
- Hood Canal summer chum
- Coastal Puget Sound bull trout⁶¹

Parts of the watershed are also Federally Designated Critical Habitat for Puget Sound Chinook and Coastal Puget Sound bull trout.⁶² The watershed provides habitat for fall chum, pink salmon, Puget Sound Coastal cutthroat trout and resident fish.⁶³ Because the Forest Service has acknowledged that proposed units are still “preliminary,” it cannot claim the project will not have significant impacts on these species, particularly if “appropriate administration and monitoring” do not occur.

Similarly, the Forest Service cannot claim the project will not have significant impacts on northern spotted owl or marbled murrelet. The Forest Service claims that forests that exhibit the characteristics favored by these species will be included as skips in any finalized units. But commenters pointed out such forests in two units in comments on the PEA yet neither of those units (nor any portion of them) are not identified as skips in the Final EA.

Moreover, while the programmatic consultation allows thinning in northern spotted owl foraging habitat, such thinning is only allowed if the foraging habitat is considered “lower quality” and the treatments would maintain a trajectory toward developing moderate to high quality habitat in the future.”⁶⁴ The Forest Service has not made any showing as to where it believes “lower quality” foraging habitat is.

Proposed Resolution: The Forest Service has not demonstrated that the project will not have significant impacts on watersheds (including a municipal watershed) and fish and wildlife (including species protected under the Endangered Species Act). The Forest Service should prepare an EIS to more fully analyze the impacts to watersheds, fish, and wildlife, including the

⁶⁰ See Watershed Action Plan for Olympic National Forest Lands within the Dungeness River Watershed, pp. 2, 8 (Sept. 22, 2016) (“Dungeness Watershed Action Plan”).

⁶¹ *Id.* at 2.

⁶² *Id.*

⁶³ *Id.*

⁶⁴ Wildlife Report, p. 5 (last updated Mar. 2025).

impacts that are likely to occur without appropriate sale administration and monitoring, for which there is a documented history.

Objection 5: The Forest Service failed to disclose or mitigate adverse climate impacts.⁶⁵

1. Evaluating and mitigating climate impacts is required by NEPA and essential for achieving international, national, and state-level goals for climate resiliency.

At COP 26 in Glasgow, the United States and 140 other nations pledged to eliminate deforestation and forest degradation by 2030 as an essential strategy for avoiding the worst effects of climate change.⁶⁶ The State of Washington has also made commitments to slowing and reversing the pace of deforestation and forest degradation and scaling up climate smart alternatives to industrial-scale logging that can increase carbon sequestration, storage, and overall ecosystem integrity.⁶⁷

Unfortunately, the Canyon timber sale runs counter to the goals and objectives of these historic agreement and commitments. This sale will deforest and degrade mature, naturally regenerated forests that are among the most carbon dense forests in the world, generate significant quantities of greenhouse gas (GHG) emissions, degrade carbon sequestration capacity, which is now approaching its maximum in the Canyon timber sale area, and make the land more susceptible to a wide range of climate stressors, such as water shortages, thermal pollution of coldwater fisheries, wildfires, heat waves, landslides, flooding, invasive species, and harmful algae blooms.

Consideration of climate impacts is recognized as an important component of NEPA review.⁶⁸ Two Superior Courts in western Washington⁶⁹ have ruled that excluding consideration of these climate impacts runs afoul of the State Environmental Policy Act (SEPA), which is a mirror image of NEPA, by design. Despite this, disclosure of climate impacts has been entirely

⁶⁵ CSE raised these issues in their previous public comments. *See* CSE PEA Comments, pp. 1-10.

⁶⁶ A copy of the pledge and current signatories can be found online at: <https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>.

⁶⁷ For example, Washington's Climate Commitment Act, Natural Solutions Account seeks to increase forests' carbon pollution reduction capacity through "sequestration, storage, and overall system integrity" (RCW 70A.65.270). As another, the Board of Natural Resources Commissioner's Order on Carbon Sequestration and Storage (No. 202202) recognizes that forests, "as high-carbon ecosystems, play a vital role in climate change mitigation."

⁶⁸ 40 CFR 1500 et seq., the NEPA Bipartisan Permitting Reform Implementation Rule established procedures for incorporating climate change and climate impacts into NEPA analysis and consideration of alternatives that reduce such impacts. In addition, in 2023, CEQ issued more detailed guidance on incorporating climate change impacts under NEPA (Federal Register / Vol. 88, No. 5 / Monday, January 9, 2023, at 1196 to 1212). While these regulations have been rescinded by the Trump Administration, they nevertheless represent the gold standard for NEPA compliance under the Forest Service's own NEPA regulations.

⁶⁹ For details of both cases, see: <https://www.sustainable-economy.org/court-slaps-dnr-again-for-climate-impacts-of-mature-forest-logging>.

excluded from the FEA except for a cursory set of paragraphs included in a climate change supplement which attempt to minimize concerns by comparing carbon removed by the Canyon timber sale with carbon storage across the entirety of the Olympic National Forest – a comparison that is analogous to an analyst from the Bureau of Ocean Energy Management finding that the GHG emissions from new oil platforms are insignificant because they are trivial compared to what is being captured by the oceans.⁷⁰ Nor has the Forest Service made any effort to identify mitigation measures that will reduce these climate impacts or consider alternatives that retain carbon storage and sequestration functions while implementing activities that are purely restorative.

Because of the controversial nature of the project as well as its size, we believe a full EIS is required. More detail on these issues and concerns is provided below.

2. The Canyon timber sale will have long-term harmful effects on climate change and climate resiliency.

With respect to climate impacts, there are three general categories that will be associated with the Canyon timber sale: (a) releases of both biogenic and fossil-fuel related greenhouse gas (GHG) emissions; (b) loss and degradation of carbon sequestration capacity and (c) increased vulnerability to climate stressors.

(i) GHG emissions

GHG emissions associated with Forest Service logging projects – including the Canyon timber sale – are easy to understand and quantifiable using published sources, yet no mention of such emissions are included in the FEA.⁷¹ Trees are half carbon by weight, and when they are cut down and turned into wood products most of the carbon contained in those trees is eventually returned to the atmosphere through the decay of slash, stumps, needles, and other debris left over after logging, mill waste, and end use products. Multiple investigations in Washington, in other states, and nationally indicate that on average roughly 80% of the original carbon stored in trees is released into the atmosphere and landfills over a 100-year period through these processes, with much of that released within one or two years of logging. This contrasts with older forests and soils that draw down and store carbon for centuries.

In addition, carbon dioxide, methane, and nitrous oxide are released from disturbed and eroded soils, and carbon dioxide is emitted from fossil fuels combusted by machinery during road

⁷⁰ Canyon Climate Change Section February 2026, final PDF.

⁷¹ See, e.g. Talberth, J. Carlson, E. 2024. Forest carbon tax and reward. regulating greenhouse gas emissions from industrial logging and deforestation in the US. Environment, Development and Sustainability Volume 27, pages 14913–14934 (Ex. 10); Law, B., Hudiburg, T.W., Berner, L.T., Kent, J.J., Buotte, P.C., Harmon, M.E., 2018. Land use strategies to mitigate climate change in carbon dense temperate forests. *PNAS* April 3, 2018 115 (14) 3663-3668; Hudiburg, T., Law, B.E., Moomaw, W.R., Harmon, M.E., Stenzel, J.E., 2019. Meeting GHG reduction targets requires accounting for all forest sector emissions. *Env. Res. Ltrs.* 14(2019): 095005 (Ex. 11).

building, logging, application of chemicals and fertilizers, slash burning, transportation of logs to mills, manufacturing at mills, and transportation of finished wood products.

Life cycle analysis (LCA) is the gold standard for quantifying all these logging related releases of greenhouse gases. Talberth and Carlson (2024) and Hudiburg et al. (2019) have provided one of the most comprehensive inventories of such GHG emissions associated with Washington's timber harvest activities, and concluded that annual GHG emissions attributable to timber harvest activities average 32 – 46 million metric tons CO₂ per year, making the logging and wood products sector the second greatest source of GHG emissions in the state, even after deducting the fossil fuel related emissions included in other sector inventories.⁷² The variation between the studies is attributable to the inclusion of forgone and land use conversion activities in the former (Talberth and Carlson, 2024).

Dividing these emissions by the volume of statewide timber harvests during the periods analyzed in each study yields emissions factors of 10.27 and 16.74 tCO₂-e/mbf.⁷³ Applying these emissions factors to the volume removed by the Canyon timber sale (19,299 mbf) results in a preliminary GHG estimate of 198,200 – 323,065 tCO₂-e. This range is many times the threshold for facility GHG reporting at both the state and federal levels (25,000 tCO₂-e/yr) and the threshold for project-level reporting (10,000 tCO₂-e/yr) under Washington's draft GHG reporting rule for projects.⁷⁴ Because of the significance of these GHG emissions, a full EIS and not an EA is required.

(ii) *Loss of carbon sequestration capacity*

Every new logging unit and segment of logging road constructed on Olympic National Forest lands puts some of the most productive carbon capturing land in the world out of commission for decades, if not permanently. The proposed roadwork associated with the Canyon timber sale will add over 11 miles of temporary, reconditioned, or reconstructed roads, eliminating carbon sequestration capacity for many decades, or permanently if the roads are left open.

In addition, commercial logging activities will degrade over 1,900 acres, causing these lands to emit more carbon than they release for 10-15 years after logging. On these acres, the land becomes a carbon emissions source and not a sink. Net ecosystem productivity – the best measure of carbon sequestration – goes negative during this time.⁷⁵ These post-harvest releases

⁷² Talberth and Carlson (2024) and Hudiburg et al. (2019), note 7.

⁷³ Statewide timber harvest volume for each study was drawn from Bureau of Business and Economic Research, University of Montana, 2022. Washington Timber Harvest. Available online at: <https://www.bber.umt.edu/FIR/HarvestWA.aspx>.

⁷⁴ Washington Department of Ecology. 2021. Greenhouse Gas Assessment for Projects (GAP) Rule Washington Administrative Code (WAC) 173-445. Available online at: https://ecology.wa.gov/getattachment/36bdb605-225d-4a74-9edd-8bc600714977/WAC173_445_GAP_Rule_Framework_Informal_Review.pdf.

⁷⁵ See, e.g. Grant, R. F., Black, T. A., Humphreys, E. R., & Morgenstern, K. (2007). Changes in net ecosystem productivity with forest age following clearcutting of a coastal Douglas-fir forest: Testing a mathematical model with eddy covariance measurements along a forest

as well as the carbon sequestration that is being sacrificed can be calculated with relative ease using methods and sources of information available to the Forest Service. By reducing carbon sequestration capacity, the Olympic National Forest logging program, including the Canyon timber sale, is helping to further increase GHG concentrations in the atmosphere and associated radiative forcing.

(iii) *Loss of climate change resiliency*

In addition to generating significant quantities of GHG emissions, the Canyon timber sale, by degrading over 1,900 acres through commercial thinning, patch clearcuts, and other intensive practices, building or restoring over 11 miles of logging roads, and implementing harmful post-harvest regeneration activities (burning, spraying, etc.) will amplify the deleterious effects of climate change by making the land more susceptible to its effects. In particular, the Canyon timber sale in combination with similar logging projects on federal, state, and private lands in the region can be expected to amplify risks associated with:

- Depleted water supplies. Dry season stream flows are today dramatically depleted across the Pacific Northwest as a consequence of extensive logging and the rapid regrowth of water-hungry young vegetation after logging.⁷⁶ For example, long-term experiments in Coastal Oregon indicate that the conversion of mature and old growth conifer forests to homogenous plantations of Douglas fir produced a persistent summer streamflow deficit of 50 percent in plantations aged 25 to 45 years relative to intact, older forests.⁷⁷ Climate change will make matters worse by further reducing dry season flows thereby straining “the ability of existing infrastructure and operations to meet many and varied water needs.”⁷⁸
- Warming waters. As the climate warms and dries in the summer, Washington waterways will also warm. This thermal pollution is intensified by intensive logging. In Oregon, Department of Forestry modeling concludes that a typical logging operation compliant with the Oregon Forest Practices Act on average, boosts water temperatures by 2.6

chronosequence. *Tree Physiology*, 27, 115–131; Turner, D. P., Guzy, M., Lefsy, M. A., Ritts, W. D., Van Tuyl, S., & Law, B. E. (2004). Monitoring forest carbon sequestration with remote sensing and carbon cycle modeling. *Environmental Management*, 33(4), 457–466. <https://doi.org/10.1007/s00267-003-9103-8>.

⁷⁶ Perry, T. D., Jones, J.A., 2016. Summer streamflow deficits from regenerating Douglas-fir forest in the Pacific Northwest, USA. *Ecohydrology*. 1-13.

⁷⁷ Segura, C., Bladon, K., Hatten, J., Jones, J., Hale, C., Ice, G., 2020. Long-term effects of forest harvesting on summer low flow deficits in the Coast Range of Oregon, *Journal of Hydrology*, Volume 585, article id. 124749.

⁷⁸ Dalton, M.M., K.D. Dello, L. Hawkins, P.W. Mote, and D.E. Rupp, 2017 *The Third Oregon Climate Assessment Report*, Oregon Climate Change Research Institute, College of Earth, Ocean and Atmospheric Sciences, Oregon State University, Winston, OR, page 18.

degrees Fahrenheit on top of any background increase due to climate change.⁷⁹ According to multiple federal agencies, “the evidence is . . . overwhelming that forest practices contribute to widespread stream temperature problems.”⁸⁰ Warmer water, in turn, will cause “harmful algal blooms to occur more often, in more waterbodies and to be more intense.”⁸¹

- Increased wildfire risk. Timber plantations and other intensively managed forestlands burn hotter and faster than natural forests. This is because they lack the moisture content and structural complexity needed to keep wildfires in check. Decades of monitoring by firefighters and researchers show that fires burning in complex natural forests create a mosaic of intensely burned and relatively untouched areas. On the other hand, fires burning in homogenous tree plantations are more likely to be uniformly severe.⁸² New research that examined burn severity after Oregon’s historic wildfires in 2020 concluded that “[e]arly-seral forests primarily concentrated on private lands, burned more severely than their older and taller counterparts, over the entire megafire event regardless of topography.”⁸³ This should be a wakeup call to the Forest Service that the practice of replacing structurally complex, mature forests, such as those in the Canyon timber sale with monoculture plantations or heavily thinned stands is a practice that exposes nearby communities to increased wildfire risk. Two recent court decisions have flagged the connections between clearcut-style logging and increased fire hazard and further underscored the need for re-consideration of industrial logging practices in watersheds important for irrigation, drinking water, and fish.⁸⁴
- Heat waves. Mature forests in the Canyon timber sale area now act as temperature refuges, helping to keep the land and waters within and adjacent to the sale area cool during both routine and extreme heat wave events. During heatwaves, which are becoming more frequent and extreme, surface temperatures in open clearcuts or heavily

⁷⁹ Oregon Department of Forestry (ODF), 2015. Detailed analysis: predicted temperature change results. Agenda Item 7, Attachment 3 to the meeting packet prepared for the Board of Forestry, June 3rd, 2015. Salem, OR: ODF.

⁸⁰ EPA-FWS-NMFS, 2/28/01 Stream Temperature Sufficiency Analysis Letter to ODF and ODEQ.

⁸¹ US Environmental Protection Agency, “Climate change and harmful algae blooms,” available online at: <https://www.epa.gov/nutrientpollution/climate-change-and-harmful-algal-blooms>.

⁸² See, e.g., Stone, C., Hudak, A., Morgan, P., 2008. Forest harvest can increase subsequent forest fire severity. In Proceedings of the Second International Symposium on Fire Economics, Planning and Policy: A Global View. Armando González-Cabán, ed. Riverside, CA: USDA Forest Service, Pacific Southwest Research Station.

⁸³ Evers, C., Holz, A., Busby, S., Nielsen-Pincus, M., 2022. Burn severity in seasonal temperate rainforests under record fuel aridity. *Fire* 5(2), 41. <https://doi.org/10.3390/fire5020041>.

⁸⁴ *Cascadia Wildlands; and Oregon Wild v. Bureau of Land Management; and Seneca Sawmill Company* 6:19-cv-00247-MC. United States District Court of Oregon. 2019; and *Bark; et al. v. United States Forest Service; and High Cascade Inc.* No. 19-35665 D.C. No. 3:18-cv-01645-MO. United States Court of Appeals, Ninth Circuit. 2020.

thinned units can exceed 130 degrees Fahrenheit while under the shaded forest canopy temperatures are often 40 to 50 degrees cooler.⁸⁵ A recent analysis by CSE and OSU researcher Christopher Still reviewed data from NEON tower sites in plantations and undisturbed old growth forests in southwest Washington and found that the degraded plantation site was hotter (+4.5 °C), lost more water, was less efficient at photosynthesis, and experienced a more dramatic impact to carbon cycling, flipping from a sink to a source during the heat dome event.⁸⁶ All of these impacts can be expected as a result of the Canyon timber sale.

- Increased incidence and severity of landslides. The vast network of clearcuts and logging roads permeating industrial timber plantations and heavily logged Forest Service lands present a significant risk of landslides, especially during extreme precipitation events, such as the 1996 floods. Under almost all climate change scenarios for the Northwest, the frequency of these events will increase. Maintenance of strong root systems is an important factor in stabilizing soils during these events. Clearcutting (including areas within variable retention harvest units) reduces the strength of root systems dramatically, and thus is a major factor in increased landslide risk.⁸⁷ Logging roads channel water runoff and cause debris torrents that can travel many miles downstream, pick up momentum, and become heavily destructive.⁸⁸ Studies indicate that clearcuts exhibit landslide rates up to 20 times higher than background rates. Near logging roads, landslide rates are up to 300 times higher than in forested areas.⁸⁹
- Increased risk of flooding. Research has demonstrated that heavily logged watersheds are at a much higher risk of flooding than those maintained in natural forest conditions. For example, Jones and Grant found that logging increased peak discharges by as much as 50% in small basins and 100% in large basins over a 50-year study period.⁹⁰ A 2008

⁸⁵ Hungerford, R.D., Babbitt, R.E. (1987). Overstory Removal and Residue Treatments Affect Soil Surface, Air, and Soil Temperature: Implications for Seedling Survival. Research Paper INT-377. Ogden, UT: USDA Forest Service Intermountain Research Station.

⁸⁶ Still, C., Talberth, J., 2022. Deforestation, forest degradation, heat waves and drought. Evidence from the Pacific Northwest heat dome of 2021. Port Townsend, WA: Center for Sustainable Economy. Available online at: <https://www.sustainable-economy.org/deforestation-and-forest-degradation-are-making-heat-waves-and-drought-more-intense-evidence-from-the-pacific-northwest-heat-dome>.

⁸⁷ Schmidt, K.M, J. J. Roering, J.D. Stock, W.E. Dietrich, D.R. Montgomery, Schaub, T. 2001. The variability of root cohesion as an influence on shallow landslide susceptibility in the Oregon Coast Range. *Can. Geotech. J* (38): 995-1024.

⁸⁸ Swanson, F. J., J. L. Clayton, W. F. Megahan, Bush, G., 1989. Erosional processes and long-term site productivity, pp. 67-81 in *Maintaining the Long-Term Productivity of Pacific Northwest Forest Ecosystems*. D. A. Perry, R. Meurisse, B. Thomas, R. Miller, J. Boyle, J. Means, C.R. Perry, R. F. Powers, eds. Portland, Oregon: Timber Press.

⁸⁹ Heiken, D., 2007. Landslides and Clearcuts: What Does the Science Really Say? Eugene, OR: Oregon Wild.

⁹⁰ Jones, J., Grant, G.E., 1996. Peak flow responses to clearcutting and roadbuilding in small and large basins, western Cascades, Oregon. *Water Resources Research* 32(4): 959 – 974.

Forest Service science synthesis confirmed the detrimental impacts of logging and logging roads on peak flows across western Oregon and Washington.⁹¹

- Enhanced habitat for invasive species and organisms that put public health at risk. Invasive species find few barriers in monoculture tree plantations and other heavily logged sites since key natural processes that keep such species in check have been removed. As succinctly stated by Norse, “in monocultures, without barriers to dispersal, insects and pathogens find unlimited resources in all directions.”⁹² As Washington’s climate changes, a wide variety of non-native plants, insects, and disease-causing organisms, such as viruses, bacteria, prions, fungi, protozoans, and internal (roundworms, tapeworms) and external (lice, ticks) parasites will spread, adversely affecting the health of humans, livestock, and pets in addition to fish and wildlife. A recent Forest Service assessment concluded “[e]vidence suggests that future climate change will further increase the likelihood of invasion of forests and rangelands by nonnative plant species that do not normally occur there (invasive plants), and that the consequences of those invasions may be magnified.”⁹³
- Elevated risk of harmful algae blooms. Harmful algal blooms (HAB) are an urgent concern statewide as climate change unfolds. Industrial forest practices greatly amplify this risk through three channels: (a) by warming waters; (b) by decreasing natural flow rates, and (c) by contaminating water supplies with glyphosate and urea, along with other chemicals and fertilizers that enhance HAB growth. With the presence of glyphosate and urea in streams, nontoxic algae growth is inhibited and HABs dominate without competition.⁹⁴ Modern drinking water treatment costs increase significantly when more rigorous treatment is needed to cleanse contaminated source water. Managing land to prevent source water contamination may be more cost-effective and may better protect human health than treating water after it has been contaminated.⁹⁵

Proposed Resolution: The Forest Service should prepare an EIS that fully discloses adverse climate impacts and mitigates those impacts.

⁹¹ Grant, G.E., Lewis, S.L., Swanson, F.J., Cissel, J.H., McDonnell, J.J. 2008. Effect of Forest Practices on Peak Flows and Consequent Channel Response: A State-of-Science Report for Western Oregon and Washington. PNW-GTR-760. Portland, OR: USDA Forest Service, Pacific Northwest Research Station.

⁹² Norse, E., 1990. Ancient Forests of the Pacific Northwest. Washington, DC: The Wilderness Society.

⁹³ Kerns, B., Guo, Q., 2012. Climate Change and Invasive Plants in Forests and Rangelands. U.S. Department of Agriculture, Forest Service, Climate Change Resource Center. Available online at: <https://www.fs.usda.gov/ccrc/topics/climate-change-and-invasive-plants-forests-and-rangelands>.

⁹⁴ Glibert, P. M., Harrison, J., Heil, C., & Seitzinger, S., 2006. Escalating worldwide use of urea—a global change contributing to coastal eutrophication. Biogeochemistry, 77(3): 441-463.

⁹⁵ Dissmeyer, George E., ed. 2000. Drinking water from forests and grasslands, a synthesis of the scientific literature. USDA Forest Service. Southern Research Station, General Technical Report SRS-39.

Objection 6: The Canyon timber sale fails to disclose or mitigate adverse economic impacts.⁹⁶

1. NEPA requires presenting and comparing economic impacts in project decisions.

One of the key analytical requirements of NEPA is to present the economic impacts of proposed actions and compare those impacts across alternatives. The FEA does neither, despite clearly stating that one of the key purposes of the Canyon timber sale is to contribute to the “economic viability of local communities.”⁹⁷

Economic analysis is a vital component of NEPA to help ensure that the allocation of scarce federal resources to programs and projects is economically justifiable. As such, the Forest Service manual section implementing NEPA requires use of a “systematic, interdisciplinary approach to fully consider the impacts of Forest Service proposed actions on the physical, biological, social, and economic aspects of the human environment.”⁹⁸ In addition, economic effects are explicitly required in the new NEPA regulations adopted by the US Department of Agriculture.⁹⁹ Economic effects include both market effects – such as the value of timber or minerals extracted – as well as non-market effects that include benefits or costs to ecosystem services such as gathering of non-timber forest products, recreation, climate regulation and water quality control.¹⁰⁰

Economic analysis is also a cornerstone of good governance and the U.S. Forest Service’s (USFS) mission. One of the key priorities of the USFS is to make the agency “more efficient, fiscally responsible, and focused on delivering maximum value for every taxpayer dollar.”¹⁰¹ This cannot be accomplished without understanding the economic consequences of major projects like the Canyon timber sale.

- a. The USFS has both the methods and the sources of information needed to conduct an economic impact analysis for the Canyon timber sale.

USDA’s National Environmental Policy Act (NEPA) economic analysis evaluates how proposed projects and programs impact local, regional, and human environments. It measures direct, indirect, and induced effects—such as job creation, labor income, business-to-business spending, and changes to property or ecosystem services. The Forest Service has developed detailed methods and sources of information to conduct economic analysis in support of agency decision-making. Specific tools include economic impact and contribution analysis, economic efficiency

⁹⁶ CSE raised these issues in their previously submitted comments. *See* CSE PEA Comments, p. 10.

⁹⁷ FEA at 6.

⁹⁸ FSM 1950.2(2).

⁹⁹ 7 CFR 1b.2(f)(3)i(D)).

¹⁰⁰ USDA Forest Service, 2017. An Overview of Ecosystem Services in Forest Planning: A 2012 Planning Rule Requirement. (Ex. 12).

¹⁰¹ USDA Forest Service, Forest Service Priorities: Back to Basics—Delivering Results for America’s Forests. Available online at: <https://www.fs.usda.gov/about-agency/priorities>.

analysis, ecosystem services analysis, and social and economic sustainability and vulnerability analysis.¹⁰² The Canyon timber sale FEA utilizes none of these methods.

b. Net economic impacts are likely to be adverse, and significant.

As planned, the Canyon timber sale is likely to generate more economic harm than good. From a financial standpoint, USFS timber sales like Canyon are heavily subsidized. The agency spends more planning and repairing damage from timber sales than is collected in revenues for taxpayer benefit. A 2019 analysis found that subsidies range between \$500 and \$600 per thousand board feet logged, meaning that the Canyon timber sale is likely to generate a net financial cost to taxpayers of \$9.7 to \$11.6 million.¹⁰³

But a more significant source of economic harm is the loss of forest ecosystem service values, which according to the Federal Emergency Management Agency (FEMA) include aesthetic value, air quality, biological control, climate regulation, erosion control, existence value, flood and storm hazard reduction, food provision, habitat, pollination, recreation, tourism, research, education, water filtration and water supply.¹⁰⁴ FEMA estimates that these services are worth at least \$15,472 per acre per year.¹⁰⁵ If left unlogged, this means the Canyon timber sale area (~1,900 acres) is generating over \$29 million in value every year. In contrast, recent stumpage data suggests that the sale of timber from the Canyon timber sale would generate about \$6.8 million in one-time revenues.

Another source of economic harm from the Canyon timber sale is not only the reduction in ecosystem service values but other costs externalized onto property owners, businesses, county and state government agencies such as increased road repair costs from heavy log truck traffic, costs of filter out sediments from drinking water, and costs associated with climate change, which is being amplified by logging emissions. The social cost of carbon is a metric developed to capture the value of this externality. Its current value is \$262 per ton (in \$2026) at a 3% discount rate.¹⁰⁶ If applied to the expected life-cycle GHG emissions generated by the Canyon timber sale (minimum of 198,200 tCO₂-e) it suggests an external cost of over \$52 million from climate damages alone, again, far beyond the value of timber sold.

¹⁰² USDA Forest Service, Economic, Social and Ecosystem Services Analysis. Available online at: <https://www.fs.usda.gov/about-agency/policy/analysis>.

¹⁰³ Talberth, J. and E. Niemi, 2019. Environmentally Harmful Subsidies in the US: Issue #1: the federal logging program. Portland, OR: Center for Sustainable Economy. Available online at: <https://irp.cdn-website.com/0358d1eb/files/uploaded/CSE-Federal-logging-report-May-2019.pdf>. (Ex. 13).

¹⁰⁴ Federal Emergency Management Agency (FEMA), 2022. FEMA Ecosystem Service Value Updates. Washington, DC: FEMA (Ex. 14).

¹⁰⁵ This is FEMA's 2021 per acre figure of \$12,589 updated to \$2026.

¹⁰⁶ This is a 2026 update to the figures reported by the National Center for Environmental Economics, Office of Policy & Climate Change Division, Office of Air and Radiation, 2023, Table A.5.1.

A sufficient NEPA analysis of economic effects should discuss the value of ecosystem services, the reduction in such values as a result of logging and road building, other externalized costs, and a comparison to the value of timber sold to evaluate whether or not the project makes sense from an economic perspective.

Proposed Resolution: The Forest Service should prepare an EIS that fully discloses adverse economic impacts and mitigates those impacts.

Conclusion

The Canyon Forest Restoration Project is a major federal action that will have significant impacts on the environment. The Forest Service essentially admits that impacts to soils would be significant without the project design criteria. But there is a demonstrated history on the Olympic National Forest of such criteria not being enforced. In fact, the failure to appropriately administer and monitor timber sales was “alarming” to regional staff who conducted the last available timber program audit for the Olympic National Forest.

Nothing over the last decade gives us any confidence that the situation has improved since that audit. In fact, the situation has likely deteriorated further with recent significant policy changes, including an executive order directing the “immediate expansion” of logging in national forests, a directive to utilize DXP and DXD for all timber sales, the loss of at least 16 percent¹⁰⁷ of the agency’s workforce in 2025, and an agency-wide reorganization that is likely to lead to even more staffing shortages.

The Forest Service has not demonstrated that the project’s impacts, either individually or cumulatively, will not have significant impacts on soils, watersheds, fish, or wildlife. The Forest Service also failed to properly disclose or mitigate adverse climate and economic impacts. We respectfully request that the Forest Service prepare an EIS and take into account and respond to the objection points raised above.

Sincerely,



Ryan Talbott
Pacific Northwest Conservation Advocate
WildEarth Guardians
213 SW Ash Street, Suite 202
Portland, OR 97204
503-329-9162
rtalbott@wildearthguardians.org
Lead Objector

¹⁰⁷ See USDA-OIG, U.S. Department of Agriculture Staffing Levels, OAI Rep. 25-064-01 (Dec. 17, 2025), available at https://www.oig.usda.gov/sites/default/files/reports/2025-12/USDA%20Staffing%20Levels%20Final%20Report%20-%20Dec%202017_508-signed.pdf.

Tim McNulty
Vice President
Olympic Park Advocates
PO Box 27560
Seattle WA 98165

John Talberth
President and Senior Economist
Center for Sustainable Economy
1322 Washington Street Box 705
Port Townsend, WA 98368
jtalberth@sustainable-economy.org