UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF IDAHO

IDAHO RIVERS UNITED and FRIENDS OF THE CLEARWATER, Plaintiffs, v. NEZ PERCE CLEARWATER FOREST SUPERVISOR CHERYL F. PROBERT; UNITED STATES FOREST SERVICE; NOAA FISHERIES; and U.S. FISH AND WILDLIFE SERVICE, Defendants.	Case No. 3:16-cv-00102-CWD **MEMORANDUM DECISION AND ORDER RE: MOTION FOR PRELIMINARY INJUNCTION (DKT. 14)**

INTRODUCTION

Pending before the Court is the Motion for Preliminary Injunction filed by Idaho Rivers United and Friends of the Clearwater (Dkt. 14). Plaintiffs filed their motion against Nez Perce Clearwater Forest Supervisor Cheryl Probert, the United States Forest Service, NOAA Fisheries, and the United States Fish and Wildlife Service,[1] seeking to enjoin the Johnson Bar Timber Salvage Project. Probert approved the Project on February

[1] For ease in resolving this motion, the Court will refer to Defendants interchangeably as "Forest Service Defendants" and "Forest Service" throughout this Memorandum Decision and Order.

17, 2016, to, among other things, build roads and harvest timber within and adjacent to the Lower Selway and Middle Fork Clearwater watersheds.

All parties have consented to the jurisdiction of a United States Magistrate Judge. 28 U.S.C. § 636(c). (Dkt. 10.) The motion has been fully briefed on an expedited schedule and the Court heard oral argument from the parties on April 26, 2016. After review of the record and consideration of the parties' arguments and relevant legal authorities, the Court issues the following Memorandum Decision and Order granting Plaintiffs' motion in part.

FACTUAL BACKGROUND

The center of this litigation is the Johnson Bar Fire Salvage Project ("Project"), a timber harvesting activity on federal land surrounding the Lower Selway and Middle Fork Clearwater watersheds affected by the 2014 Johnson Bar wildfire. Before the Court delves into the details and procedural history of the Project itself, the Court will provide a review of the contextual environmental factors of the Johnson Bar wildfire, the logging events which followed, and the 2015 wildfires that occurred near the Project area.

I. Johnson Bar Wildfire

On August 3, 2014, lightning struck at the Johnson Bar Campground located near the Selway River, igniting the Johnson Bar wildfire. FS1270. The wildfire burned primarily on steep slopes and affected approximately13,300 acres in the Middle Fork Clearwater and Lower Selway watersheds, more specifically along Swiftwater, Elk City,

Goddard, Lodge, Decker, and O'Hara creeks.[2] *Id.* Of the burned acres, 12,910 acres were on National Forest System administered lands; 314 acres on State of Idaho lands; and 76 acres on private lands. *Id.* The sedimentation potential caused by the Johnson Bar wildfire was estimated to be 945 cubic yards per square mile.[3] FS2034.

II. Post Harvesting (Timber Logging)

Following the wake of the Johnson Bar wildfire, state and private landowners began harvesting the burned timber. First, beginning in the fall of 2014 through the fall of 2015, Harrington and Kennedy private land salvage projects harvested approximately 80 acres. FS1393. Next, beginning in the late summer of 2015 through the fall of 2015, the Neil-Walter Private Salvage harvested approximately 121 acres, and the Idaho Department of Lands (IDL) salvaged approximately 167 acres.[4] *Id.* There is no dispute these harvesting activities began before Probert formally approved the Project in the final Record of Decision (ROD) signed on February 17, 2016. FS1899.

[2] These creeks flow through the following three sub watersheds: (1) Big Smith Creek Middle Fork Clearwater River; (2) Goddard Creek-Selway River; and, (3) O'Hara Creek. FS1349. These sub watersheds drain into the Middle Fork Clearwater and Selway Rivers. *Id.* The Court will refer to this area as the "river system." For a visual of the area, see Appendix A, attached hereto.

[3] This estimate was provided in the Johnson Bar Burned Area Emergency Response (BAER) report. FS2034. "BAER is 'first aid'—immediate stabilization that often begins before a fire is fully contained. BAER does not seek to replace what is damaged by fire, but to reduce further damage due to land being temporarily exposed in a fragile condition." NATIONAL INTERAGENCY FIRE CENTER, http://www.nifc.gov/BAER/Page/NIFC_BAER.html (Last visited May 10, 2016) (attached hereto as Appendix B). At the time the sedimentation estimate was provided on August 24, 2014, only 8,498 acres had burned and the fire was not fully contained. It does not appear this report accounts for the sediment the Project's timber harvesting events would deliver, as the report was generated before the Project was proposed. The sedimentation estimates appear to refer only to the impact from the fire itself.

[4] Though not in the record, the parties clarified the timeline at the hearing as to when these other post-fire harvesting activities took place.

III. 2015 Wildfires

Not quite one year after the Johnson Bar wildfire, in mid-summer to fall of 2015, additional wildfires burned near the Project area—two of which are of particular concern here.[5] FS4518. First, the Wash wildfire, approximately 12 air miles east of the Project area, burned 36,555 acres. FS663. The Wash wildfire burned across numerous face drainages on the south side of the Selway River from O'Hara Creek upriver to Meadow Creek. *Id.* The Forest Service estimated the potential sedimentation caused the Wash wildfire could range from 9,135 to 12,786 cubic yards per square mile.[6] FS2021. Second, the Slide wildfire, located approximately 9 air miles northeast of the Project area, burned 10,200 acres. FS662. The Slide wildfire burned across numerous face drainages of the Selway River, portions of which affect the analysis area of the Project. *Id.* Although the Slide wildfire did not burn within the Project area, portions of the Slide wildfire fall within the Project's cumulative effects analysis area. *Id.* The Forest Service estimated the potential sedimentation caused by the Slide wildfire could range from 1,773 to 7,974 cubic yards per square mile.[7] FS21690.

PROCEDURAL HISTORY

On October 7, 2014, after the Johnson Bar wildfire was contained, the Forest Service published a Notice of Intent to prepare an environmental impact statement (EIS)

[5] Two additional fires occurred also—Baldy and Woodrat. *See* FS662-663. However, neither party presently raises concerns regarding the effect of these two specific wildfires on the Project.
[6] At the time of the publication of the BAER report, the Wash wildfire was 0% contained. FS2021.
[7] At the time of the publication of the BAER report, the Slide wildfire was 30% contained. FS21690.

for the Johnson Bar Fire Salvage Project.[8] FS2413. The Project seeks to utilize ground based (tractor and skyline[9]) and helicopter logging systems to harvest trees killed by the Johnson Bar wildfire. FS2403. The Forest Service distributed a scoping memorandum to the public to solicit comments and concerns regarding the Project and issues to address in the EIS. FS2414-2417.

In March of 2015, the Forest Service released a draft EIS (DEIS). FS325. The purpose of the Project is stated in the DEIS:

> The purpose of the proposal would be to salvage timber before it loses its economic value, which would assist in supporting the economic structure of local communities and to provide for regional and national needs; reduce potential sediment inputs into the aquatic ecosystem from decommissioning approximately 20 miles of roads.

FS344. To accomplish the stated purpose, four action alternatives were identified, with the three alternatives other than "Alternative 1-No Action," evolving somewhat until the final ROD. FS481.

After making the DEIS available for public comment, the Forest Service published a final EIS (FEIS) and draft Record of Decision (ROD) on October 7, 2015, on the Forest Service's website. During the time between the release of the DEIS in March of 2015, and the publication of the FEIS in October of 2015, the other post-Johnson Bar wildfire

[8] A Notice of Intent advertising the scoping period was originally published in the Federal Register on October 16, 2014. FS346. A corrected Notice of Intent was published on October 24, 2014. FS2428. The public comment period ended on December 8, 2014. *Id.*

[9] Skyline logging consists of "a system using cables to transport material from the woods to the landing." FOREST OPERATIONS EQUIPMENT LOG, https://www.forestsandrangelands.gov/catalog/equipment/cable.shtml (Last visited May 11, 2016) (attached hereto as Appendix C).

timber harvesting activities on state and private lands had occurred or were underway, and additional wildfires had burned, while others continued to burn, near the Project area.

The FEIS includes references to the state and private post-Johnson Bar wildfire harvesting activities. Specifically, qualitative analyses of the potential sedimentation these activities add to the overall sediment delivery when combined with the Project are included in the Hydrology and Fisheries sections of the FEIS. *See* FS778; FS805-06; FS808. However, the FEIS does not include a quantitative analysis of the cumulative effects of the landslides, mass erosion, and sedimentation delivery from the other state and private post-fire harvesting activities. FS773-74.

The FEIS also references the visual cumulative impacts of the state and private post-Johnson Bar wildfire harvesting activities when combined with the Project's visual impacts to the surrounding environment. FS902. The conclusion is made that these and other past, present, and foreseeable activities:

> [W]ould have no significant effect on the visual condition of the area of interest because they do not create large enough man-made openings to alter the inherent landscape character to the degree that it would become a dominate visual element within the viewshed.

FS903.

Next, with regard to the 2015 wildfires, in a memorandum dated October 26, 2015, Probert considered whether the wildfires constituted "significant or changed circumstances," which would warrant the Forest Service's duty under NEPA to issue a supplemental FEIS. FS662. Probert ultimately concluded the 2015 wildfires did not qualify as "significant changed circumstances." FS668. Her memo states in relevant part:

> I have carefully reexamined the Johnson Bar FEIS in light of the above 2015 wildfire impacts. I have incorporated current on ground reviews of the fires and the BAER evaluations. The Wash Fire located in the O'Hara watershed had minor impacts on some local wildlife habitats and the equivalent clearcut acres, but both are well below wildlife and watershed impact thresholds. The Slide and Wash Fires both combined to increase the ECA in the Lower Selway River. None of these impacts would cumulatively change the effects analysis of the Johnson Bar FEIS, including the biological calls for threatened endangered species (TES), nor is there a need to offset the fire impacts by deferring the Johnson Bar proposed management activities. Based on my review, I find the wildfire impacts do not significantly change the environmental effects of this proposal nor do they change the basis or nature of considerations and rationale for reaching a decision on this project. Therefore, reanalyzing the FEIS is not necessary.

Id.

As part of the administrative appeals process, Plaintiffs (and others) timely filed objections to the FEIS. While Plaintiffs made twenty-one objections in total, those most pertinent to the present motion include:[10]

- Issue 1: Failure to address cumulative impacts of sediment delivery into the Selway and Middle Fork Rivers.
- Issue 2: The Project is not consistent with the Wild and Scenic Rivers Act (WSRA) because no valid River Plan is in place.
- Issue 4: There is no "upward trend" in the watersheds not meeting habitat objectives and standards, as required in the Forest Plan.
- Issue 9: The FEIS violates NEPA because it is not based on the best available science regarding post-fire logging and fire ecology.
- Issue 14: The FEIS analyses failed to consider significantly changed conditions as a result of the 2015 Slide and Wash wildfires. The analyses failed also to consider the cumulative effects as a result of the wildfires on non-Forest lands, and salvage sales on state lands as a result of the 2015 wildfire season.

[10] These issues are summarized from the Objection Resolution Officer's final decision memorandum. FS32984-32996.

- Issue 17: The FEIS's primary emphasis on commercial timber harvest is not in compliance with the WSRA, which requires the Forest Service to place "primary emphasis" on "protecting [the river's] esthetic, scenic, historic, archeological, and scientific features."

- Issue 18: The FEIS relied upon a flawed and improper use of the NEZSED model and failed to use the WEPP model to accurately calculate sediment delivery.

FS32984-32996.

Pursuant to applicable Forest Service Regulations, Plaintiffs participated in an objection resolution meeting on January 4, 2016. The Objection Resolution Officer issued a decision on January 7, 2016, addressing each issue Plaintiffs raised and instructing the Forest Service to add information and analysis to the FEIS before proceeding with the Project. FS32984. On January 15, 2016, following the instructions from the Objection Resolution Officer, the Forest Service published an updated FEIS ("post-objection FEIS").

Forest Supervisor Probert signed the final ROD on February 17, 2016. The final ROD selected a modification of Alternative 4 ("Alternative 4 Modified"), as described in the post-objection FEIS. Alternative 4 Modified added two harvesting units within the Wild and Scenic River corridor that were removed during a prior edification of the action alternatives to address public safety concerns. FS1903. The final action alternatives are articulated in the final ROD as follows:

> **Alternative 1—No Action**
>
> The No Action Alternative would defer all management actions. Management actions currently taking place within the project area would continue and environmental effects from the Johnson Bar Fire would continue to occur. Choosing the

No Action Alternative would not preclude future management proposals.

Alternative 2—Proposed Action

Alternative 2 proposes to harvest 3,096 acres, as well as 16.9 miles of road reconstruction and utilization of new and existing temporary roads (3.1 miles) and helicopter landings (17).

Alternative 3—Reduced Ground Disturbance

Alternative 3 responds to comments regarding potential sedimentation in the Selway and Middle Fork rivers by removing all harvest activities hydrologically connected to the Lower Selway watershed. Alternative 3 proposes harvesting 2,710 acres, as well as 16.5 miles of road reconstruction and utilization of existing temporary roads (0.3 mile) and helicopter landings (14), in order to reduce the amount of disturbance in the Lower Selway watershed.

Alternative 4—Economic Feasibility

Alternative 4 responds to internal and external comments regarding economic feasibility, harvesting within or seen from the Wild and Scenic River Corridor, and landings that would be located along Highway 12 and the Selway River Road. Alternative 4 proposes harvesting 2,207 acres, as well as 16.9 miles of road reconstruction and utilization of new and existing temporary roads (3.4 miles) and helicopter landings (14).

FS1906.

On March 11, 2016, Plaintiffs filed their Complaint in this action, alleging seven causes of action against the Forest Service Defendants:

1. Violation of the Wild and Scenic Rivers Act Section 1274(d) and the APA for failing to update the 1969 River Plan;

2. Violation of the Wild and Scenic Rivers Act Sections 1281(a) and 1283(a) and the APA for failing to place a primary emphasis on the Selway and Middle Fork Clearwater Rivers' scenic and esthetic values;

3. Violation of the National Forest Management Act (NFMA) and the APA for harvesting timber within the Wild and Scenic corridor;

4. Violation of NEPA and the APA for failing to issue a supplemental FEIS following the 2015 wildfires and objection resolution decision;

5. Violation of NEPA and the APA for failing to consider important aspects of the Project in the FEIS;

6. Violation of the National Forest Management Act because the Project is not consistent with the Forest Plan; and

7. Violation of the Endangered Species Act for failing to base its ESA consultation on the best available science.

The Forest Service moved forward with the timber sales contracts. On-the-ground operations of the Project are set to begin as early as May 16, 2016.[11] The duration of the Project is estimated to take up to five years to complete. FS1328-1329. Plaintiffs filed their motion for preliminary injunction on April 6, 2016.

STANDARD OF REVIEW

I. Standard of Review under the APA

"Challenges to final agency actions are reviewed under the deferential standard of the Administrative Procedure Act ('APA')." *Greater Yellowstone Coal. v. Larson*, 641 F. Supp. 2d 1120, 1129 (D. Idaho 2009), *aff'd*, 403 F. App'x 275 (9th Cir. 2010), and *aff'd sub nom. Greater Yellowstone Coal. v. Lewis*, 628 F.3d 1143 (9th Cir. 2010), *as amended* (Jan. 25, 2011) (citing *Tucson Herpetological Soc. v. Salazar*, 566 F.3d 870, 875 (9th Cir.

[11] Immediately after the hearing, Plaintiffs filed a First Amended Complaint (Dkt. 42), adding an eighth claim for relief—challenging the Forest Service's alleged unlawful failure to act or unreasonable delay in acting to update the 1969 River Plan as required by Section 1274(d) of the WSRA. During the hearing, Plaintiffs informed the Court the amended complaint was forthcoming, but that it should not affect the Court's consideration of the motion for preliminary injunction.

2009). The APA standard dictates that the reviewing court set aside the agency's decision if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). "The party challenging an agency's action as arbitrary and capricious bears the burden of proof." *W. Watersheds Project v. Ashe*, 948 F. Supp. 2d 1166, 1174 (D. Idaho 2013) (citing *WildEarth Guardians v. Salazar*, 741 F.Supp.2d 89, 97 (D.D.C. 2010)).

The Court may reverse the agency's decision as arbitrary and capricious "only if the agency relied on factors Congress did not intend it to consider, entirely failed to consider an important aspect of the problem, or offered an explanation that runs counter to the evidence before the agency or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Cascadia Wildlands v. Bureau of Indian Affairs*, 801 F.3d 1105, 1110 (9th Cir. 2015). While the standard under the APA is narrow, the reviewing court must still conduct a "substantial inquiry" and "a thorough, probing, in-depth review," to determine whether "the agency present[ed] a rational connection between the facts found and the conclusions made." *Siskiyou Reg'l Educ. Project v. U.S. Forest Serv.*, 565 F.3d 545, 554 (9th Cir. 2009) (internal citations omitted).

II. Standard for Preliminary Injunction

To be entitled to injunctive relief, the plaintiff must show each of the following: (1) a likelihood of success on the merits; (2) that irreparable harm is likely, not just possible, if the injunction is not granted; (3) that the balance of equities tips in its favor;

and (4) that an injunction is in the public interest. *Winter v. Natural Resources Defense Council*, 555 U.S. 7 (2008). The Ninth Circuit considers all of the elements, except for irreparable injury, using a sliding scale approach where "the elements of the preliminary injunction test are balanced, so that a stronger showing of one element may offset a weaker showing of another." *Alliance for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1131 (9th Cir. 2011). Irreparable injury is not, however, subject to such balancing. To satisfy the irreparable injury element, the moving party must "demonstrate that irreparable injury is *likely* in the absence of an injunction." *Winter*, 555 U.S. at 22. (emphasis in original).

A preliminary injunction is not a preliminary adjudication on the merits, but a device for preserving the status quo and preventing the irreparable loss of rights before judgment. *Textile Unlimited, Inc. v. A.BMH Co., Inc*., 240 F.3d 781 (9th Cir. 2001) (citing *Sierra On-Line, Inc. v. Phoenix Software, Inc*., 739 F.2d 1415, 1422 (9th Cir. 1984)). While courts are given considerable discretion in deciding whether a preliminary injunction should enter, injunctive relief is not obtained as a matter of right and it is considered to be an extraordinary remedy that should not be granted unless the movant, by a clear showing, carries the burden of persuasion. *See Sampson v. Murray*, 415 U.S. 61 (1974); *Brotherhood of Locomotive Engineers v. Missouri-Kansas-Texas R. Co*., 363 U.S. 528 (1960); and *Stanley v. Univ. of S. California*, 13 F.3d 1313 (9th Cir. 1994).

DISCUSSION

I. Preliminary Consideration

The Forest Service Defendants argue in a footnote the Court should not consider Plaintiffs' declarations in determining the likelihood of success on the merits of Plaintiffs' claims, contending the Court's consideration of the Forest Service Defendants' actions should be limited to review of the administrative record. (Dkt. 29 at 9, n. 5.) Plaintiffs explained in their reply and during the hearing the declarations were submitted to demonstrate Article III standing and irreparable harm. (Dkt. 40 at 13, n. 3.) And, the Forest Service Defendants submitted declarations on the same matters. The Court will therefore consider both Plaintiffs' and the Forest Service Defendants' declarations in its determination of irreparable harm, given the Forest Service Defendants have not challenged standing.

II. Likelihood of Success on the Merits

Plaintiffs assert a likelihood of success on the merits of all seven claims for relief alleged in their Complaint. Because the Plaintiffs have established a likelihood of success on the merits on their second WSRA and both NEPA claims (claims two, four and five)[12] the Court will defer full assessment and determination of the ESA and NFMA claims (claims three, six, and seven)[13] to a more appropriate time when all issues have been fully

[12] *See supra* pp. 9-10.
[13] *See supra* pp. 9-10.

briefed and presented to the Court by the parties.[14] *See Kootenai Tribe of Idaho v. Veneman*, 142 F. Supp. 2d 1231, 1247 n. 29 (D. Idaho 2001). However, the Court will address both WSRA claims (claims one and two) and the two NEPA claims (claims four and five) separately below.

A. Wild and Scenic Rivers Act Claims

In 1968, the United States Congress designated the Middle Fork Clearwater and Selway Rivers as protected areas under the Wild and Scenic Rivers Act.[15] The WSRA establishes a system where "certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations." 16 U.S.C. § 1271. The WSRA imposes procedural and substantive requirements on the agencies responsible for administering the Wild and Scenic areas (here, the Forest Service, as an agency of the

[14] Plaintiffs indicated during the hearing that the amended complaint would add a claim under the WSRA and also that they intended to expand their argument as to the best available science at the summary judgment stage.

[15] Specifically, this area includes:

> The Middle Fork from the town of Kooskia upstream to the town of Lowell; the Lochsa River from its junction with the Selway at Lowell forming the Middle Fork, upstream to the Powell Ranger Station; and the Selway River from Lowell upstream to its origin; to be administered by the Secretary of Agriculture.

16 U.S.C. § 1274(a)(1) (These were the first Rivers to be included for protection in the Wild and Scenic River System).

United States Department of Agriculture) to ensure the very values integral to selection and designation under the Act are protected.

Relevant here, one of the procedural protections in the Act requires the agency to prepare a comprehensive management plan for the designated river segment. 16 U.S.C. 1274(d)(1). In 1986, Congress amended this requirement to include specific considerations that an agency must address in a river plan. Specifically, Section 1274(d)(1) states: "[t]he plan shall address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this chapter." 16 U.S.C. § 1274(d)(1). For rivers designated before the 1986 amendment, like the Middle Fork Clearwater and Selway Rivers, Congress mandated existing river plans be reviewed to conform to the amended requirements by January 1, 1996. 16 U.S.C. § 1274(d)(2).

Substantively, the WSRA requirements provide the agency with substantial discretion in its management of a Wild and Scenic River. The WSRA requires the agency "to protect and enhance" Wild and Scenic values, and specifically requires that "[i]n such administration primary emphasis shall be given to its esthetic, scenic, historic, and scientific features." 16 U.S.C. §1281(a). The Forest Service ,"having jurisdiction over any lands which include, border upon, or are adjacent to, any river within the National Wild and Scenic Rivers System…shall take such action respecting management policies, regulations, contracts, plans, affecting such lands…as may be necessary to protect such rivers in accordance with the purpose of this [Act]." 16 U.S.C. § 1283(a).

Plaintiffs assert two claims in their Complaint and upon which they filed their motion for preliminary injunction under the WSRA. First, they assert the Forest Service violated the procedural requirements in Section 1274(d)(2) by approving and moving forward with the Project without first ensuring the 1969 River Plan was updated and consistent with the 1986 amendments. Second, they contend the Forest Service violated the substantive provisions under Sections 1281(a) and 1283(a) by not considering or placing a primary emphasis on the Wild and Scenic values within the Selway and Middle Fork Clearwater Wild and Scenic corridor and the adjacent area before approving the Project. For the reasons that follow, the Court finds Plaintiffs have met their burden of demonstrating a likelihood of success on the merits of their second WSRA claim.

1. Claim One: Failure to Update the 1969 River Plan

Plaintiffs contend the Forest Service violated their procedural duty under the WSRA by failing to update the 1969 River Plan prior to approval of the Project. Plaintiffs criticize the Forest Service for approving the Project while, at the same time, acknowledging in its 2014 Nez Perce Forest Plan Assessment the current River Plan created in 1969 does not meet the requirements set forth in Section 1274(d)(1). FS32417. In response, the Forest Service argues Plaintiffs' claim is legally unsound as nothing in the WSRA authorizes the Court to impose procedural requirements—i.e., to order the agency to amend the outdated 1969 River Plan—before the Forest Service can proceed

with land management activities. In support of their argument, the Forest Service cites *Wilderness Soc. v. Tyrrel*, 918 F.2d 813, 815 (9th Cir. 1990).[16]

It is undisputed the Forest Service is two decades past the statutory deadline to review the 1969 River Plan to ensure its conformity with the 1986 amendments to Section 1274(d)(1). However, Plaintiffs acknowledged during the hearing they may not have adequately requested in their Complaint the appropriate relief for the Forest Service's failure to fulfill its procedural duty to update the plan, claiming they intended to make the more appropriate request in an amended complaint. Specifically, Plaintiffs did not originally request in their Complaint relief under 5 U.S.C. §706(1) of the APA, which authorizes the Court to "compel agency action unlawfully withheld or unreasonably delayed," i.e., review of the 1969 River Plan. In other words, the parties disagree regarding their interpretations of *Tyrell* and whether the case precludes Plaintiffs from bringing this type of claim under Section 1274(d) of the WSRA.

Almost immediately after the hearing, Plaintiffs filed their First Amended Complaint, asking in claim eight for relief under Section 1274(d) for failure to update the River Plan. (Dkt. 42.) Because claim one in the Complaint is so intertwined with the new claim and request for relief, and because the Court finds other grounds to enjoin the

[16] In *Wilderness Soc. v. Tyrrel*, 918 F.2d 813, 815 (9th Cir. 1990), the Ninth Circuit considered a similar issue whether to enjoin the Forest Service from implementing a proposal to harvest timber adjacent to designated Wild and Scenic rivers on the basis of the Forest Service's failure to fulfill its procedural duty to prepare a comprehensive river management plan under Section 1274(d)(1). The Ninth Circuit carefully considered the language of Section 1274(d)(2) and found that because it "did not expressly require a federal agency to prepare a management plan for a river designated by the Secretary of the Interior before January 1, 1986, in order to conduct land management activities on federal land adjacent to or within the protected river area, we cannot properly read such a requirement into the statute." *Id.* at 818. The application of *Tyrrel* to the present case is not so black and white, however, as there are significant factual differences between *Tyrrel* and this case.

Project until the issues regarding the outdated 1969 River Plan are more fully presented to the Court, the Court will defer further consideration of Plaintiffs' procedural WSRA claim at this time.

2. Claim Two: Failure to Consider Wild and Scenic Values

Plaintiffs contend the Forest Service Defendants violated substantive Sections 1281(a) and 1283(a) of the WSRA by failing to place a primary emphasis on the Wild and Scenic values within the Selway and Middle Fork Clearwater Rivers corridor and adjacent area in the post-objection FEIS and ROD. Plaintiffs argue the Forest Service allowed economic factors to drive their decision making process without giving due consideration to the scenic and esthetic integrity of the Wild and Scenic corridor and adjacent area. The Forest Service does not deny the economic advantages of the Project, but contends it thoroughly analyzed the Project's impact on visual and scenic values prior to approving the Project, and, did not violate the substantive requirements of the WSRA.

The United States District Court for the Eastern District of California addressed a similar issue in *Sierra Club v. Babbitt*, 69 F. Supp. 2d 1202, 1256 (E.D. Cal. 1999). There, the court explained an agency's "persistent and protracted failure to develop a comprehensive management plan" in compliance with Section 1274(d) of the WSRA is an important factor in determining whether the agency acted in an arbitrary and capricious manner in the planning and execution of land management activities in Wild and Scenic areas. *Id.* at 1257.

In *Babbitt*, no river management plan had been adopted. *Id.* at 1250. The National Parks Service (NPS) planned and executed aspects of the El Portal Road Project—which affected portions of a river corridor within the Wild and Scenic System. *Id.* at 1207. Plaintiffs alleged the NPS failed to consider Wild and Scenic values in its approval of that road project. *Id.* NPS argued it did take Wild and Scenic values into consideration and urged the court to defer to its judgment since "agencies have substantial discretion to manage protected rivers," and "can manage a river with 'varying degrees of intensity for its protection and development at[sic] allow for uses that do not substantially interfere with public enjoyment of [the river's] values.'" *Id.* at 1255 (quoting 16 U.S.C. §1281(a)).

Despite the NPS's assertions that the intrusion of its road project into the river corridor would be "*de minimus* or are justified by the overall good accomplished or that, on the balance, the project enhances the river's ORVs [outstanding remarkable values]," the court found the NPS violated Section 1281(a), because no comprehensive river management plan had been adopted. *Id.* at 1256.

The court explained: "absent some objective, pre-determined criteria for describing and assessing such impacts, [NPS's] assertions [are] merely a post hoc justification for project outcomes." *Id.* Thus, without reference to a qualifying river plan that took into consideration how to protect the river's ORVs and the other Section 1274(d) requirements prescribed by Congress in the 1986 amendment to preserve the Wild and Scenic values of the river, the court explained NPS could not make adequate informed decisions about whether the road project and its construction activities "were an

allowable degradation of values" for which the river was included in the Wild and Scenic River system.[17] *Id.* at 1257.

Here, the administrative record indicates some of the Project's timber harvesting units can be seen from the Wild and Scenic corridor, including from U.S. Highway 12 which runs parallel to the Selway River. FS1284. The post-objection FEIS indicates the Forest Service considered the Project's impact on the visual and scenic values within and adjacent to the Wild and Scenic area protected by the WSRA and identifies the Middle Fork Clearwater and Selway Rivers' ORVs were considered in its analysis.[18] However, despite references in the post-objection FEIS that the Project is "consistent" with the 1969 River Plan, the Forest Service acknowledged in the 2014 Nez Perce Forest Plan Assessment that the 1969 River Plan is inadequate:

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[17] Pursuant to the decision in *Babbitt*, the NPS published a river management plan in August of 2000. A new case was filed challenging the Plan's compliance with the WSRA requirements of Section 1274(d). *Friends of Yosemite Valley v. Norton*, 194 F. Supp. 2d 1066, 1071 (E.D. Cal. 2002), *aff'd in part, rev'd in part*, 348 F.3d 789 (9th Cir. 2003), *opinion clarified*, 366 F.3d 731 (9th Cir. 2004). The Ninth Circuit concluded the Plan insufficiently addressed user capacities—a requirement of river management plans—and directed the NPS to prepare a new or revised Plan which adequately addressed the Wild and Scenic requirements. *Friends of Yosemite Valley v. Norton*, 366 F.3d 731 (9th Cir. 2004). In Plaintiffs' reply brief, they cite *Norton* for the proposition an injunction may be proper on the basis of an invalid river plan. Defendants disagree with this interpretation and argue *Norton* does not say the Forest Service is precluded from performing site specific activities (such as the Johnson Bar Project) without a plan; rather, the Forest Service cannot use an invalid plan as a basis for its analysis of a proposed project.

[18] The Forest Service Defendants assessed and analyzed the Projects' impacts on critical viewpoints (major roads, trail access corridors, campgrounds, and concentrated use areas). FS888-889; FS890; FS894. After visual analysis, the Forest Service reduced or eliminated Project activities where the visual quality objective was high. Specifically, they eliminated four harvest areas within the U.S. Highway 12 viewshed and one harvest area in the Selway River viewshed. FS898-902. They included design criteria that would reduce the visual effects on the harvested areas. These design criteria include: maintaining the vertical structure and "feathered edge" to emulate natural openings that would remain after a mixed severity wildfire; designing harvesting units to emulate the natural edge patterns by minimizing geometric lines; locating skyline corridors and skid trails to minimize visual effects; and, protecting vegetation that provides foreground screening along Swiftwater Road. FS725-726; FS1915-1916. Further, the Forest Service indicates in the ROD that visibility of the harvested units from Highway 12 is limited due to the speed at which people travel the on the highway. FS1907.

> The existing river management plan is aged and does not meet the criteria established in Section 3 of the Wild and Scenic Rivers Act as amended in 1986. The plan lacks sufficient detail in several areas including monitoring, user capacities, and development plans.

FS1515; FS32417.

Further, when questioned by the Court during the hearing regarding what part of the administrative record includes support for a conclusion that the Project is consistent with the values outlined by the 1986 amendments to the WSRA, the Forest Service Defendants stated: the Scenic Quality Report (the first visual analysis that the Forest Service conducted). FS18251. Upon the Court's review of this report, however, the Court finds the report took into account only whether the Project meets the 1987 Forest Plan's visual quality objectives (VQOs). This is problematic, as the Court cannot discern from the report, or otherwise, whether VQOs to be protected pursuant to the Forest Plan are the same objectives that should be included in an updated River Plan consistent with the 1986 amendments to the WSRA.[19]

The Forest Service cannot effectively analyze, nor can the public and Court cross-check, the Forest Service's analysis, without a River Plan that delineates objective standards, or predetermined criteria, for describing, assessing, and protecting the Wild and Scenic values of the Rivers. Without objective, predetermined criteria, the public is left to trust the Forest Service's "word" that it considered all relevant factors necessary to

[19] Defendants' counsel stated during the hearing the River Plan was updated vis-a-vis the publication of the 1987 Nez Perce Forest Plan. However, this argument carries little support that Wild and Scenic values were adequately considered in preparation of the Project, as the Forest Service acknowledged, as explained above, the 1969 River Plan "does not meet the criteria established in Section 2 of the Wild and Scenic Rivers Act." FS32417.

protecting the Middle Fork Clearwater and Selway Rivers' Wild and Scenic values and that the Project will not affect or have minimal impact upon the Wild and Scenic values. Stating generally that the Project is "consistent" with the 1969 River plan—which the Forest Service admits fails to consider the requirements set forth in Section 1274(d)—is likely legally insufficient, arbitrary and capricious. Accordingly, the Court finds Plaintiffs are likely to succeed on the merits of this claim under the WSRA.

B. NEPA Claims

Plaintiffs assert two claims in their Complaint and upon which they filed their motion for preliminary injunction that allege the Forest Service Defendants failed to meet their statutory duties under NEPA. First, Plaintiffs contend the Forest Service violated NEPA by approving the Project based on an inadequate and scientifically inaccurate environmental impact statement (EIS). Second, Plaintiffs assert the Forest Service violated NEPA when Probert approved the Project in the final Record of Decision (ROD), without first issuing a supplemental EIS for public comment following the 2015 wildfires and objection resolution decision. For the reasons that follow, the Court finds Plaintiffs have demonstrated a likelihood of success on the merits of these two claims.

1. Claim Five: Inadequate and Scientifically Inaccurate FEIS

Plaintiffs' claim that the FEIS is inadequate and scientifically inaccurate is supported by two arguments. First, Plaintiffs contend the Forest Service failed to adequately analyze the cumulative effects of the state and private post-fire harvesting activities on sediment delivery to the river system and on the overall visual impact to the

Wild and Scenic corridor and adjacent area. Second, they contend the Forest Service failed to accurately estimate or measure the sedimentation and sediment delivery to the river system in light of the science used. The Court will address each argument below.

a. Cumulative Effects

Plaintiffs contend the post-objection FEIS lacks an accurate and candid analysis of the cumulative or incremental impacts that could have been expected or that actually took place from the nearby state and private post-fire timber harvesting projects that occurred after the 2014 and 2015 wildfires, and also the foreseeable future logging activities. Plaintiffs contend these harvesting projects (which include construction of new roads, reconstruction of existing roads, and construction of helicopter landings to facilitate access to and removal of the harvested timber) generate mass erosion in the watersheds and cause sediment to deposit in the river system. Plaintiffs contend also the cumulative impacts of these activities impair the scenic, esthetic, and other values of the Wild and Scenic corridor and adjacent area. The Forest Service Defendants respond by arguing the post-objection FEIS does account for the cumulative effects of mass sedimentation from the state and private post-fire harvesting activities, as well as the cumulative visual impacts on the Wild and Scenic corridor and adjacent area.

NEPA regulations require an EIS to include an analysis of the cumulative effects of any proposed federal project, which analysis addresses the cumulative impact of the proposed action on the environment "when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person

undertakes such other actions." 40 C.F.R. § 1508.7; *see Lands Council v. Powell*, 395 F.3d 1019, 1027 (9th Cir. 2005). "A proper consideration of the cumulative impacts of a project requires some quantified or detailed information; ... [g]eneral statements about possible effects and some risk do not constitute a hard look absent a justification regarding why more definitive information could not be provided." *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 993 (9th Cir. 2004) (internal quotations omitted).

Cumulative impacts of multiple projects, such as various timber harvests in close proximity to one another, can be significant to the environment in various ways. The United States Court of Appeals for the Ninth Circuit in *Klamath-Siskiyou Wildlands* illustrated the potential impact as follows:

> The most obvious way is that the greater total magnitude of the environmental effects—such as the total number of acres affected or the total amount of sediment to be added to streams within a watershed—may demonstrate by itself that the environmental impact will be significant. Sometimes the total impact from a set of actions may be greater than the sum of the parts. For example, the addition of a small amount of sediment to a creek may have only a limited impact on salmon survival, or perhaps no impact at all. But the addition of a small amount here, a small amount there, and still more at another point could add up to something with a much greater impact, until there comes a point where even a marginal increase will mean that *no* salmon survive.

Id. at 994.

Here, the post-objection FEIS contains a lengthy "Affected Environment and Environmental Effects" chapter, which includes detailed cumulative effects subsections

of various components of the project.[20] FS1314-1538. Upon close review of these subsections, however, the references to and analyses of the erosion and sediment delivery into the river system from post-fire harvesting activities on the state and private land neighboring the Project area is scant or lacking almost entirely.

At the beginning of the chapter, the FEIS includes a general overview of the Project's cumulative effects. Specifically, 40 C.F.R. § 1508.8 is cited which, as quoted directly above, acknowledges a cumulative effects analysis must take into consideration actions on federal, state, and private land. FS1314. Immediately after this reference, in a table labeled: "Past, Present, and Reasonably Foreseeable Future Projects within the Middle Fork and Selway Drainages," two private timber harvests and one state timber harvest are listed. FS1315. There is no question the Forest Service was aware of these state and private harvesting activities.[21]

The Forest Service Defendants quantified the estimated baseline sediment delivery from the Project to the river system using the WEPP model. However, the quantified baseline estimate does not include, and was not updated to include, the cumulative sediment impacts from the neighboring state and private post-fire harvesting activities. The cumulative effects of erosion and sediment delivery resulting from the state and private post-fire harvesting activities are briefly discussed within the Hydrology and

[20] The various components considered include: Cultural, Economics, Fire and Fuels, Hydrology, Fisheries, Native American Tribes, Rare Plants, Recreation and Trails, Soils, Vegetation, Visuals, Weeds, Wild and Scenic Rivers, Wildlife, and Wilderness/Unroaded Areas. FS1314-1538.

[21] On May 19, 2015, a complaint was filed in this Court challenging the allowance of a state logging project that included hauling on a private road and through private property. *See Idaho Rivers United v. Hudson*, Case No. 3:15-cv-00169-BLW (Dkt. 1.) The state harvesting project was well underway during the planning of this Project.

Fisheries sections of the post-objection FEIS. [22] However, the quantitative and qualitative analyses (or lack thereof) in the Hydrology section raise considerable concern that the cumulative effects of the state and private post-fire harvesting activities with respect to sediment delivery were not adequately or fully addressed.

The Hydrology section explains a quantitative analysis of the sediment delivery to the river system from the state and private post-fire harvesting activities was not conducted, despite indicating: "[p]ast harvest and associated road construction have likely had the most affect[sic] to water and sediment yields." FS1347. The justification stated in the FEIS for forgoing a quantitative analysis follows:

> [T]he project activities in total were predicted to result in net reductions in erosion, sediment delivery to streams, and improvement to the general watershed condition, a quantitative evaluation of past, existing and foreseeable effects was not done—these effects are discussed qualitatively in this section.

FS1361.

General statements, like these, referencing the potential environmental effects and risks of other activities, likely do not constitute a "hard look" absent further justification regarding why a more definitive analysis regarding the state and private harvesting activities could not or should not be provided. *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 973 (9th Cir. 2006) (finding vague and conclusory statements, without supporting data, did not constitute a "hard look" under NEPA). One of the stated purposes of the Project is to "reduce potential sediment inputs into the aquatic

[22] Although the post-objection FEIS briefly mentions the state and private post-fire harvesting activities in the Soils section, it does not provide a detailed discussion.

ecosystem." FS1267. Because cumulative sediment inputs from the lower watersheds add to the overall sediment delivery into the river system, Plaintiffs are, therefore, likely to succeed on their claim that the failure to quantify this data (despite its ability to do so), or offering a more through explanation why it was not necessary to do so, was arbitrary and capricious.

Relevant also to the quantitative assessment of the cumulative effects from the state and private post-fire harvesting activities, Plaintiffs allege the mitigation efforts proposed by decommissioning roads to reduce erosion and sedimentation otherwise caused by the Project activities and other state and private post-fire harvesting activities is significantly flawed. The post-objection FEIS indicates 21.3 miles of roads will be decommissioned to offset the negative effects of sediment delivery into the river system. FS1358. However, the administrative record indicates the majority of the roads to be decommissioned are not sediment sources to the river system presently as they are not open to public access and are overgrown with trees, and thus, inaccessible.[23] FS17382. And, the post-objection FEIS indicates "sediment delivery from these road segments was not quantified." FS1358.

[23] Plaintiffs allege the Forest Service plans to use "natural recovery"—i.e., do nothing—to claim watershed improvements from decommissioning roads. (Dkt. 40 at 3.) Plaintiffs suggested also at the hearing that the total Project area was overdrawn to compensate for and include these decommissioned roads, as many of the decommissioned roads are a considerable distance from the harvesting units. (Dkt. 40-2 at 2.) Further, Defendants disclosed during the hearing that the majority of roads to be decommissioned are not funded by the proceeds of the Project. Rather, they are separately funded. Defendants further acknowledged, despite the separate funding, the roads will not be decommissioned if the Project is enjoined.

There is little support or explanation in the administrative record that decommissioning these roads will in fact reduce erosion, sedimentation, and sediment delivery to the river system. This lack of explanation or inconsistency between the facts and the conclusion—that decommissioning roads will result in reduced sediment delivery—lends further support to the likelihood the Forest Service did not adequately or fully consider an important aspect of the problem, i.e. sediment delivery into the river system.

Turning to the qualitative analysis within the Hydrology section of the FEIS, it discusses the possible qualitative cumulative impacts of the state and private post-fire harvesting activities upon the overall sediment delivery into the river system. Specifically:

> Cumulative effects arise from the incremental effect of an action when added to other past, present, and reasonably foreseeable future actions. Based on the analysis, the Johnson Bar Fire Salvage Project was not predicted to incrementally add to cumulative effects to water resources in the analysis area, because net effects to each management indicator were predicted to be neutral or positive. Management indicators of sediment delivery from roads and from treatment units and road density all showed short and long-term improvements as a result of project activities.

FS1360-61. These qualitative findings of "neutral or positive" effects in the Hydrology section, however, are inconsistent with the qualitative findings in the Fisheries section with regard to sediment delivery to the river system.

The Fisheries section of the post-objection FEIS includes a qualitative consideration of the cumulative effects of the state and two private post-fire harvesting activities. FS1393-94. For each harvest activity, the FEIS indicates in Table 3-24, that

there will be measureable negative and positive cumulative effects, in part due to the additional sediment delivery to the streams, creeks, drainages and Rivers resulting from these state and private harvest activities. *Id.*

In an email dated September 9, 2015, Forest Service Fish Biologist Allison Johnson, who drafted and analyzed the state and private harvesting activities' effects on Fisheries (albeit, for ESA purposes), and who appears to have created the Fisheries cumulative effects table cited immediately above, indicated her concerns that a similar analysis was not performed under NEPA regarding the same state and private harvesting activities. Specifically, she states:

> I have analyzed these actions in my cumulative effects, they are proposed within the project area and there are effects to ESA listed species i.e. as noted in my analysis measureable indirect effects (short and long term negative) caused by these harvest and road improvements activities unrelated to the action under consultation. These were considered in formulating my LAA [Likely to Adversely Affect] determination for this project so, *I don't believe you can have a separate NEPA decision within the project area with a No Effect?*
>
> ***
>
> *It is almost like you have two completely different calls for the same action thus, I could see some issues with this.*

FS2366 (emphasis added). The Court could not locate any response to Johnson's email. Nevertheless, there is no explanation in the post-objection FEIS addressing these inconsistent qualitative findings regarding erosion and sedimentation effects from the state and private post-fire harvesting activities in relation to (or in addition to) the anticipated effects from the Project activities. This inconsistency between the Hydrology and Fisheries sections, without any explanation, strengthens the likelihood Plaintiffs will

be successful in proving their claim that the Forest Service failed to conduct an accurate and candid cumulative effects analysis regarding sedimentation as required by NEPA.

Plaintiffs also claim the Forest Service failed to sufficiently consider the cumulative effects to the scenic, esthetic, and other Wild and Scenic values from the neighboring state and private post-fire harvesting activities. Defendants did not respond to this argument in their brief in opposition to Plaintiffs' motion, but responded to the Court's questioning regarding this issue during the hearing on Plaintiffs' motion. The Forest Service Defendants explained, as set forth in the FEIS, a visual analysis of the Project area before the other state and private post-fire harvesting activities began or were barely underway was conducted, along with a visual projection of how the harvesting units in the Project would appear post-harvesting.[24] They also stated an "after-the-fact" visual analysis was conducted after harvesting activities occurred on the state and private lands near the Project area. However, this after-the-fact analysis was neither documented nor included in the post-objection FEIS or otherwise in the administrative record.

The Forest Service Defendants argued during the hearing that their failure to disclose the after-the-fact analysis was harmless error, as the design criteria in the Project

[24] The FEIS specifically concludes:

> Other past, present and future activities including …private land activities would have no significant effect on the visual condition of the area of interest because they do not create large enough man-made openings to alter the inherent landscape character to the degree it would become a dominate visual element within the viewshed.

FS1499. As discussed in more detail in the WSRA section above, generalized conclusions and findings like this one, without objective criteria delineating the allowed degradation of the Wild and Scenic values, leave the public and the Court to trust the Forest Service's "word" that it considered all relevant factors to protecting the Wild and Scenic corridor and areas adjacent thereto.

minimizes the Project's visual impact. At this point, the Court is unable, given the lack of documentation of the purported after-the-fact visual analysis by the Forest Service, to conclude whether the error was indeed harmless. No explanation was offered or provided in the administrative record as to when specifically, or why, this after-the-fact visual analysis was conducted, and of most significant concern, the results of the analysis appear nowhere in the record.[25]

Omission of the after-the-fact analysis (both the fact that is was conducted and the results) from the post-objection FEIS, without explanation, supports Plaintiffs' claim that the Forest Service failed to sufficiently conduct a cumulative effects analysis under NEPA regarding the Wild and Scenic values. As such, it is likely Plaintiffs will succeed on the merits of this claim.

b. Use of Available Science

Plaintiffs assert neither the FEIS nor ROD accurately addresses the sedimentation risks posed by the Project in light of the available science as used by the Forest Service.[26] "NEPA requires that the Environmental Impact Statement contain high-quality information and accurate scientific analysis." *Lands Council v. Powell*, 395 F.3d 1019, 1031 (9th Cir. 2005);40 C.F.R. § 1500.1(b). If there is incomplete or unavailable relevant

[25] An inference could be drawn that the results from the after-the-fact visual analysis were not disclosed because the results were not beneficial to the Forest Service Defendants and with proceeding with the Project.

[26] Plaintiffs initially argued in their motion for preliminary injunction the WEPP and NEZSED models used by the Forest Service were not the best models to predict landslide and mass erosion risks and argued the Forest Service should have used the GRAIP model instead. Plaintiffs clarified in their reply brief and during the hearing they are not asking the Court to decide in connection with this motion which model was more appropriate, at least at this stage in the litigation. (Dkt. 40 at 8-9.) Rather, they encouraged the Court to focus its inquiry as to whether the FEIS or ROD fully addressed the sedimentation risks of the Project in light of the best available science. *Id.*

data, the environmental impact statement must disclose this fact. 40 C.F.R. § 1502.22. When this aspect of the FEIS is called into question, "NEPA does not require the reviewing Court to decide whether an [EIS] is based on the best scientific methodology available;" rather, the Court must consider whether "the FEIS adequately disclosed the model's potential weaknesses." *Oregon Nat. Res. Council Fund v. Goodman*, 505 F.3d 884, 897 (9th Cir. 2007) (internal quotations omitted).

Plaintiffs have carried their burden of proving the likelihood of success on the merits of this claim because the sediment delivery estimates, irrespective of the model used, do not appear to accurately represent the Project's overall sedimentation delivery to the river system. As confirmed during the hearing, the post-objection FEIS did not include a quantitative measurement of the additional erosion risks and related sediment delivery caused by the state and private harvesting activities. And, as discussed above, the Forest Service used the WEPP model to estimate the baseline sedimentation risks caused by the Project, but provided no explanation or reason in the post-objection FEIS for not considering and measuring these after-the-fact activities, known to the Forest Service, before the DEIS was updated, the FEIS prepared, and the Project approved. Without considering the sum of all the parts—i.e., the estimated landslide, mass erosion, and sedimentation risks from the Project activities in addition to the effects from, or expected from, the other state and private post-fire harvesting activities—the sedimentation estimate is likely incomplete. Because the Court, and the public for NEPA purposes, are not adequately informed of the Project's overall impact and environmental

consequences, the Court finds Plaintiffs are likely to succeed on the merits of this NEPA claim, in part.[27]

2. Claim Four: Supplemental Environmental Impact Statement

Plaintiffs contend the Forest Service Defendants violated NEPA when they approved the Project final ROD based upon the post-objection FEIS without first issuing a supplemental EIS for public comment following the 2015 wildfires and the objection resolution decision.

"An agency that has prepared an EIS cannot simply rest on the original document." *Friends of the Clearwater v. Dombeck*, 222 F.3d 552, 557 (9th Cir. 2000). But, an "agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made." *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 374(1989). The general rule under NEPA is that an EIS "shall" be supplemented whenever there are "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c)(1)(ii).

[27] In their reply, Plaintiffs raise other issues which they contend contribute to the misrepresentation or alleged inaccuracy of the Project's sedimentation impact as reflected in the FEIS and ROD. Specifically, Plaintiffs assert climate change effects were not, but should have been, considered in detail; and, they contend the Forest Service Defendants did not adequately discuss contrary science (i.e. the 1995/2004 Beschta reports) as presented by the Plaintiffs during the objection period. The Court finds that while these arguments may be integral to the final adjudication on the merits of Plaintiffs' NEPA claim, Defendants have not had a full opportunity to respond to these arguments. These issues will be deferred for full consideration by the Court during further proceedings.

"When new information emerges after the circulation and public comment period of the DEIS, it may be validly included in the FEIS without recirculation." *Westlands Water Dist. v. U.S. Dept. of interior*, 376 F.3d 853, 873 (9th Cir. 2004). "[I]t is not uncommon for changes to be made in a FEIS after receipt of comments on a DEIS and further concurrent study." *Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1118 (9th Cir. 2002), *abrogated on other grounds by Wilderness Soc. v. U.S. Forest Serv.*, 630 F.3d 1173, 1178 (9th Cir. 2011). "When an agency takes the requisite 'hard look' and 'determines that the new impacts will not be significant (or not significantly different from those already considered), then the agency is in full compliance with NEPA.'" *Summit Lake Paiute Tribe of Nevada v. U.S. Bureau of Land Mgmt.*, 496 F. App'x 712, 715-16 (9th Cir. 2012) (quoting *N. Idaho Cmty. Action Network v. U.S. Dept. of Transp.*, 545 F.3d 1147, 1154–55 (9th Cir. 2008). Such determinations will only be set aside if they are "arbitrary and capricious." *Id.*

To illustrate, in *Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d 853, 874 (9th Cir. 2004), the Ninth Circuit addressed whether an event occurring after the publication of a DEIS and public comment period constituted a "significant new circumstance" mandating the publication of a supplemental EIS rather than an FEIS. There, the U.S. Department of the Interior circulated a DEIS which included a "significant discussion of the effects of different alternatives on the power supply in California." *Id.* at 875. In the DEIS, there was no consideration of the California energy crisis as the crisis had not yet occurred at the time of the publication of the DEIS. *Id.*

"Neither the EIS nor the ROD fully discussed the energy crisis in their additional reviews of the alternatives' impacts on the power resources." *Id.*

The Interior determined the impact of the selected alternative on California's power reliability was insignificant, because the power generation losses resulting from the selected alternative constituted but a fraction of California's overall power generation. *Id.* This information led the Interior to conclude the California energy crisis did not present a significant new circumstance. *Id.* The Ninth Circuit found the Interior's conclusion was supported by the record, and therefore, the decision not to prepare and release a supplemental EIS for more discussion on the potential consequences of the selected alternative on California's power generation was not arbitrary or capricious. *Id.*

Plaintiffs contend the 2015 wildfires constituted "significant new circumstances or information," which triggered the Forest Service's statutory duty under NEPA to prepare a supplemental EIS. The post-objection FEIS included twenty-five new pages of information, which Plaintiffs' contend included: "substantive discussions of the impacts and changes resulting from the 2015 wildfires and subsequent salvage logging on non-Forest lands, as well as changes to the selected alternative."[28] Compl., ¶ 114. (Dkt. 1 at 28.) As a result, Plaintiffs assert they and the public were denied the opportunity to comment on the newly added information and analysis disclosed late in the NEPA process.

[28] Though Plaintiffs contend the post-objection FEIS included "substantive discussions" of the post-fire harvesting activities, it is likely, as explained above, that these discussions were not adequate, or did not fully disclose all information and analysis necessary, for NEPA purposes.

The Forest Service Defendants respond by arguing they fully considered whether the 2015 wildfires presented new information and potentially changed circumstances requiring supplementation of the FEIS. In support of their argument, Defendants point to the memorandum dated October 26, 2015, written by Probert after publication of the FEIS, which addresses the potential impact of the 2015 wildfires on the Project. In her memo, Probert concludes:

> I have carefully reexamined the Johnson Bar FEIS in light of the above 2015 wildfire impacts. I have incorporated current on ground reviews of the fires and the BAER evaluations. The Wash Fire located in the O'Hara watershed had minor impacts on some local wildlife habitats and the equivalent clearcut acres, but both are well below wildlife and watershed impact thresholds. The Slide and Wash Fires both combined to increased[sic] the ECA in the Lower Selway River. None of these impacts would cumulatively change the effects analysis of the Johnson Bar FEIS, including the biological calls for TES species, nor is there a need to offset the fire impacts by deferring the Johnson Bar proposed management activities. Based on my review, *I find the wildfire impacts do not significantly change the environmental effects of this proposal nor do they change the basis or nature of considerations and rationale for reaching a decision on this project.* Therefore, reanalyzing the FEIS is not necessary.

FS662 (emphasis added). The Forest Service claims this generalized response to new information and changed circumstances brought upon by the 2015 wildfires is sufficient to demonstrate the Forest Service gave a "hard look" to these 2015 wildfires in its determination that the wildfires did not constitute significant changes, as required by NEPA.

However, Probert in her memorandum generally asserts: "none of these impacts would cumulatively change the effects analysis of the Johnson Bar FEIS," without providing evidentiary support for the assertion. *Id.* There is no linear explanation

provided to determine how Probert reached this overall conclusion despite finding in the very same conclusion that "ECA [equivalent clear-cut area] will increase within drainage due to Wash and Slide Fires."[29] FS665. Because the general and conclusory statement does not support the conclusion the Forest Service took a "hard look" in its determination of whether the 2015 wildfires constituted a "significant change," as required by NEPA, Plaintiffs are likely to succeed on the merits of this claim.

III. Irreparable Harm

A party may not obtain a preliminary injunction unless they can show irreparable harm is likely to result in the absence of the injunction. *Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008). While "[e]nvironmental injury, by its nature, can seldom be adequately remedied by money damages and is often permanent or at least of long duration, *i.e.*, irreparable," *Amoco Prod. Co. v. Vill. of Gambell, AK*, 480 U.S. 531, 545 (1987), "this does not mean that any potential environmental injury warrants an injunction." *Alliance for the Wild Rockies v. Cottrell*, 632 F.3d 1127, 1135 (9th Cir. 2011) (internal quotations omitted). "But actual and irreparable injury…satisfies the likelihood of irreparable injury requirement articulated in *Winter*." *Id.* (internal quotations omitted).

Irreparable harm is likely here. Without due consideration under NEPA of the cumulative effects of the state and private land harvesting (and related) activities and the additional sedimentation risks those activities add to the river system, irreparable harm is

[29] Probert's memorandum includes a chart, which analyzes how the 2015 wildfires impacted the baseline condition of the existing Project and other action alternatives. FS663. However, Probert does not articulate how she quantified these results.

likely to result. *See High Sierra Hikers Ass'n v. Blackwell*, 390 F.3d 630, 642 (9th Cir. 2004) ("In the NEPA content, irreparable injury flows from the failure to evaluate the environmental impact of a major federal action.").

Furthermore, irreparable harm to the Middle Fork Clearwater and Selway Rivers' Wild and Scenic values is likely if the Project is not enjoined. If timber harvesting begins with construction and reconstruction of roads and helicopter landings, coupled with the actual harvesting, it may take years to restore the precious Wild and Scenic values—the scenic and esthetic values which are the essence of the Rivers' inclusion in the Wild and Scenic System. Despite the Forest Service Defendants' argument that the project will incorporate design criteria to protect these values, a striking illustration of what could result if the Project is not enjoined is contained in the photographs of the nearby state and private harvest timber salvages, commonly referred to as "clearcutting."[30] (Dkt. 14-8.)

IV. Balance of the Equities and Public Interest

With regard to balancing of the hardships, there will be delay in the timber salvage operation that will cause at least temporary harm to the Forest Service and local

[30] Defendants stated during the hearing the term "clearcutting" was being used loosely in the FEIS and by the Plaintiffs. Defendants clarified that "clearcutting" in this Project is different than the type of clearcutting performed in the state and private areas. In state and private clearcutting, typically all timber is removed. In contrast, it is the Forest Service's standard that, when clearcutting, certain design criteria is incorporated including feathering and leaving a certain amount of trees (dead or alive) in a harvesting unit, to lessen the visual impact. Although clearcutting may be different according to private versus Forest Service standards, there are no objective criteria to guide the public and the Court to determine whether the type of clearcutting sought to be performed by the Forest Service in this Project is consistent with Wild and Scenic values.

community.[31] The Forest Service Defendants assert the timber must be salvaged immediately before it loses economic value; but, the record indicates also the Project is predicted to span up to a five year period. The Plaintiffs and the Court are committed to move this case forward in an expedited fashion. Therefore, the Court finds that the potential harm to the Wild and Scenic corridor and adjacent area, as well as the potential harm to the river system from the erosion and increased sedimentation, outweighs the hardships caused by the delay to timber harvesting.

Considering the public interest, the Court recognizes that violations by federal agencies of NEPA's protections, as established by Congress, harm the public and the environment. *Lands Council v. Cottrell*, 731 F. Supp. 2d 1074, 1092 (D. Idaho 2010). Additionally, in a case such as this, where several acres of timber are sought to be harvested within and next to land protected by the WSRA, the public's use and enjoyment of these lands and their Wild and Scenic values may be irreparably harmed. On the other hand, the public and local communities also have an economic interest in the timber and related work produced by the Project. In this case, the Court finds the balance clearly tips in favor of the public interest in preserving the environment and maintaining the status quo, given the potential for environmental harm versus the short term economic benefits to the community.

[31] The Forest Service indicated in the post-objection FEIS that current market conditions in the Clearwater Basin remain high. FS 1329. They indicate also that other sold or foreseeable local timber sales will contribute to the long-term timber flow of the local community. *Id.*

CONCLUSION

Plaintiffs have met their burden of showing that they are entitled to injunctive relief on the basis of the likelihood of success on the merits on claims two, four, and five of their Complaint. Plaintiffs also have established the likelihood of irreparable harm if the Project is allowed to proceed. Finally, Plaintiffs have established the balance of hardships weighs in their favor. Therefore, the Court will grant Plaintiffs' motion for preliminary injunction.

ORDER

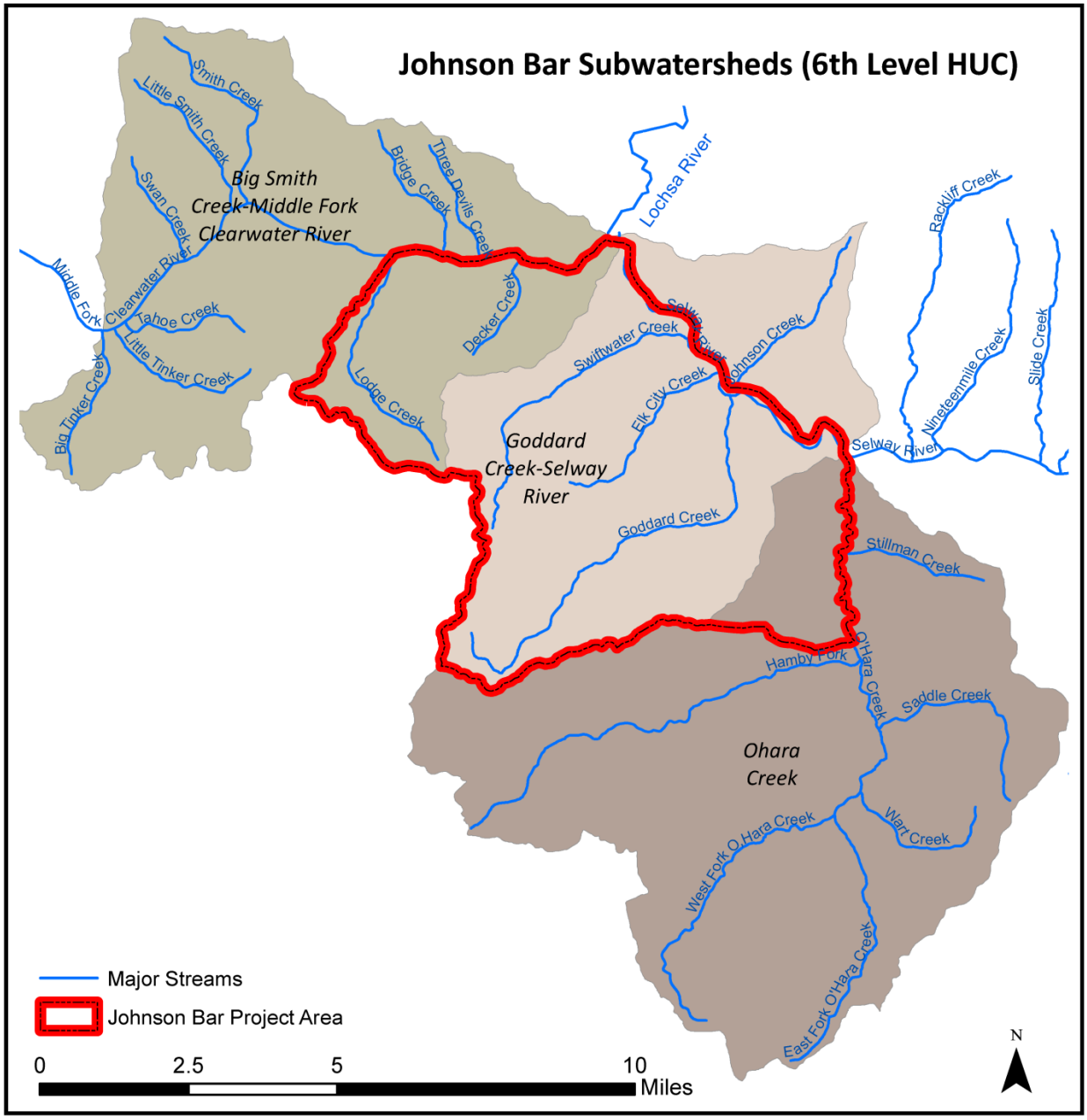
1. Plaintiff's motion for Preliminary Injunction (Dkt. 14) is **GRANTED.** The Forest Service and any and all persons or entities operating on its behalf are hereby enjoined from proceeding with the on-the-ground operations or other activities associated with the Johnson Bar Fire Salvage Project;
2. A **telephonic scheduling conference** is set for **May 26, 2016, at 3:00 P.M.** mountain time. Plaintiffs shall initiate the conference by placing it to (208) 334-9954 and must have all appropriate parties on the line; and
3. Prior to the telephonic scheduling conference, the parties shall meet and confer to prepare an expedited schedule for adjudication on the merits of all claims in Plaintiffs' First Amended Complaint. ***On or before*** **May 23, 2016**, the parties must file with the Court a joint litigation plan.

Dated: May 12, 2016

Honorable Candy W. Dale
United States Magistrate Judge

Appendix A

Figure 5– Johnson Bar Fire Salvage project Area Subwatersheds



Appendix B

BAER
BURNED AREA EMERGENCY RESPONSE

While many wildfires cause little damage to the land and pose few threats to fish, wildlife and people downstream, some fires create situations that require special efforts to prevent further catastrophic damage after the fire. Loss of vegetation exposes soil to erosion; runoff may increase and cause flash flooding; sediments may move downstream and damage houses or fill reservoirs; and put endangered species and community water supplies may be at risk.

The Burned Area Emergency Response (BAER) program addresses these situations with the goal of protecting life, property, water quality, and deteriorated ecosystems from further damage after the fire is out. Concern for possible post-fire effects on fish, wildlife, archeological sites and endangered species is often a primary consideration in the development of a BAER plan.

BAER objectives are to:

1. Determine if an emergency condition exists after the fire.
2. Alleviate emergency conditions to help stabilize soil; control water, sediment and debris movement; prevent impairment of ecosystems; mitigate significant threats to health, safety, life property and downstream values at risk.
3. Monitor the implementation and effectiveness of emergency treatments.

BAER is “first aid” – immediate stabilization that often begins before a fire is fully contained. BAER does not seek to replace

Bureau of Land Management

-Wildland Fire Management Directives

Bureau of Indian Affairs

-Wildland Fire Management Directives
-ES & BAR

National Park Service

-Wildland Fire Management Directives
-ES & BAR

U.S. Fish and Wildlife

-Wildland Fire Management Directives
-ES & BAR

U.S.D.A. Forest Service

-Burned Area Emergency Response

what is damaged by fire, but to reduce further damage due to the land being temporarily exposed in a fragile condition.

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Woody Biomass Utilization »

Rangeland Management

Rangeland Fire Prevention, Management, and Restoration »

Forest Operations Equipment Catalog

Cable Logging Operations

Description

Cable yarding consists of a system that uses cables to transport material from the woods to the landing. Material may be fully or partially suspended for all or a portion of the yarding distance. The cables are strung in corridors through the stand. No yarding equipment other than the cables and a carriage are operated within the stand itself. There are number of different rigging configurations that can be used in cable logging.

Rigging Configurations

There are many different rigging configurations, but they are typically broken down into four distinct types, highlead, standing, running, and live. The highlead system is not a skyline system. The standing, running, and live systems are skyline systems, meaning that they all have a skyline cable.

Standing Skyline

There are many different ways to rig a standing skyline. The main feature of a standing configuration is the fact that the skyline remains fixed, its length does not change during operation. The type of carriage used and whether a haulback is required determines the number of lines used in a standing skyline. It is capable of operating with a manual, mechanical or motorized slack pulling carriage. Without special rigging, this system is not capable of using a non slackpulling carriage.

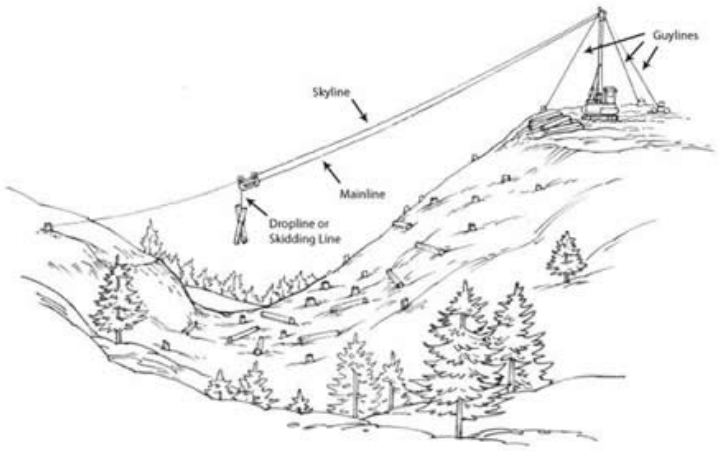

Figure 1. - Standing Skyline Configuration.

When operating with a manual or motorized slackpulling carriage, this system requires a two-drum yarder. It will have a skyline and a mainline. When operating with a mechanical slackpulling carriage, this system requires a three-drum yarder. It will have a skyline, a mainline, and a slackpulling line.

When yarding downhill or on a line slope of less than 20% a haulback line is

More Information

RitchieWiki - *Everything about Equipment*

necessary and the number of drums for each carriage configuration needs to be increased by one.

Running Skyline

In a running skyline system, the skyline runs through a block at the tailspar and back to the carriage, so that it effectively acts as both the skyline and the haulback line. Two lines with this setup support the carriage. It has a separate mainline that runs from the yarder to the carriage. In addition to the slackpulling carriages, this system can operate with non-slackpulling carriages since the skyline can be raised and lowered by varying the tension between the skyline and the mainline. This system typically uses interlocking yarding drums. This system is not used with a manual slackpulling carriage. When operating with a mechanical slackpulling carriage, three drums are required, a mainline, skyline, and slackpulling line. With other carriages there are only two drums required, a mainline and skyline. This system does not require a haulback since the skyline acts in that capacity.

Running skylines cannot be operated with intermediate supports.

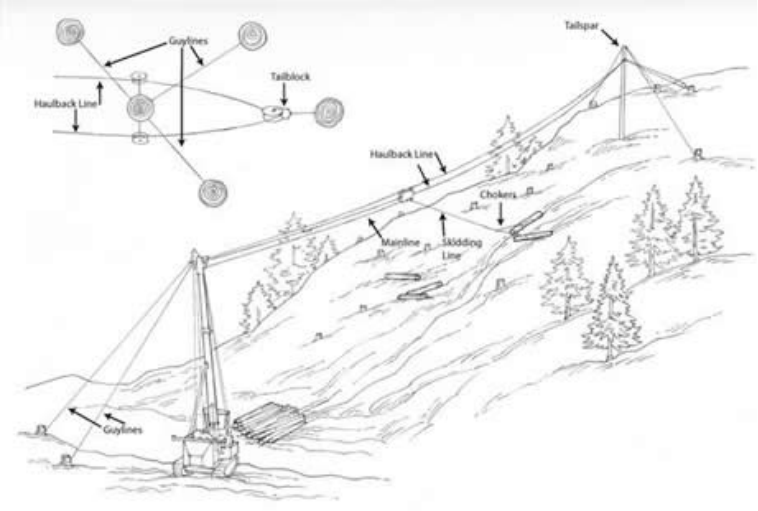

Figure 2. - Running Skyline Configuration.

Live Skyline

A live skyline is a system in which the skyline itself is raised and lowered to position the carriage. This is similar to the running skyline except the skyline is not also used as the haulback and the carriage is supported by only one cable. This system is operated with non-slackpulling carriages. This system only requires a two-drum yarder when operating uphill. A third drum for a haulback is required for downhill yarding and slopes less than 20%.

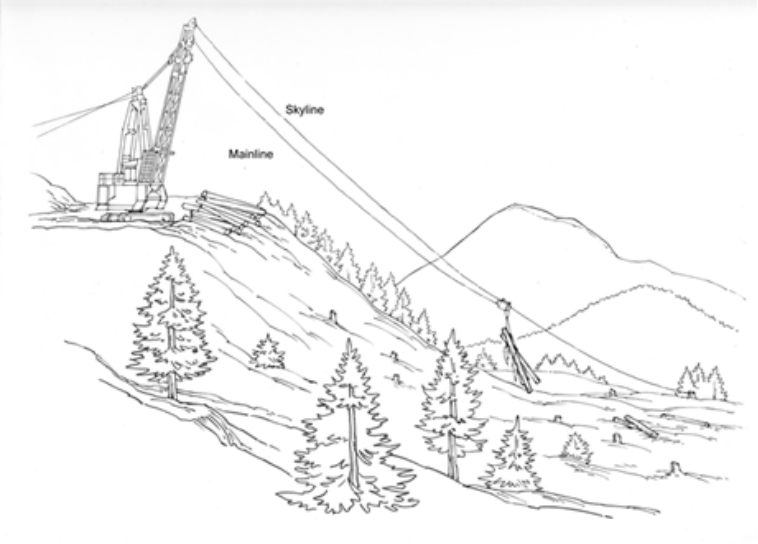

Figure 3. - Live Skyline Configuration.

Highlead

A highlead system is not a skyline and consists of a mainline and a haulback cable. It requires a minimum of two drums on the yarder. The only carriage a highlead system is capable of operating with is a grapple, otherwise it usually is configured with a butt rigging and chokers. It is a ground lead system except that lift is provided to the turn of logs by the height of the tower as the logs approach the landing. This system is limited to operating in clearcuts due to the nature of its setup. It may be operated in either an uphill or downhill yarding configuration.

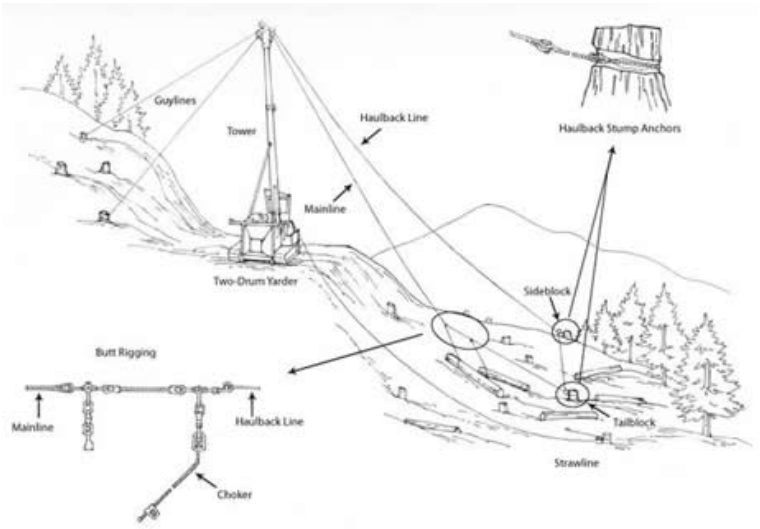

Figure 4. - Haulback System.

Jammer or Tong Thrower

This is not a skyline system and consists of only one line, a mainline. The line either is pulled into the stand manually or is thrown by the yarder. It can operate with either chokers or a grapple. Yarding distances are usually limited to 300 feet or less. The prescription is either a clearcut or a heavy thinning. This is a ground lead system.

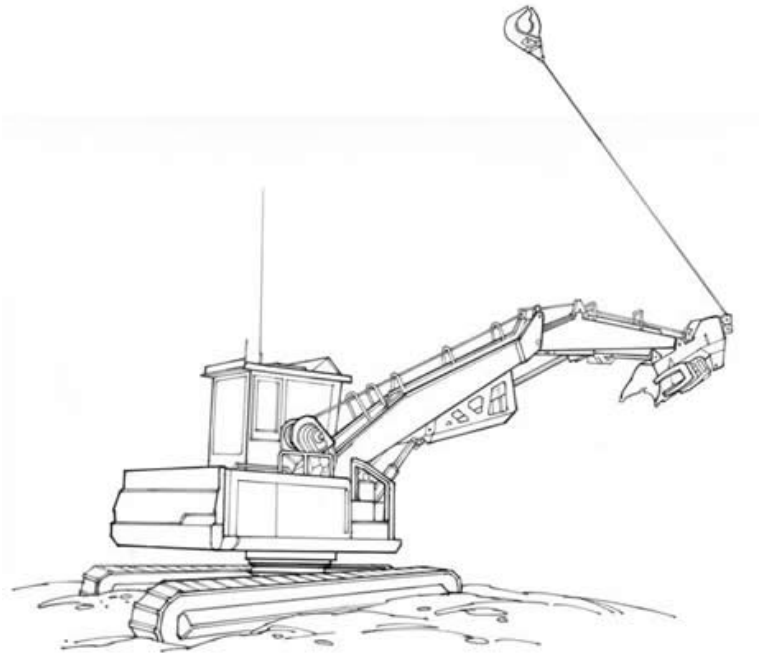

Figure 5. - Tong Thrower.

Mechanical Configurations

Cable yarding consists of many components that affect the planning and design of an operation. The basic components are the yarder and the carriage. The type of yarder and carriage available will determine the type of cable system that can be used.

Yarders

A rudimentary appreciation of yarder operation is of assistance in understanding the problems a yarding engineer has in running a yarder to operate the various cable yarding systems. This is of special concern when a skyline payload is marginal. There may be a difference between theoretical maximum payload and the actual maximum pay load as governed by yarder and logging system limitations. Some yarding systems are very demanding and require a very skilled yarding engineer to operate them effectively.

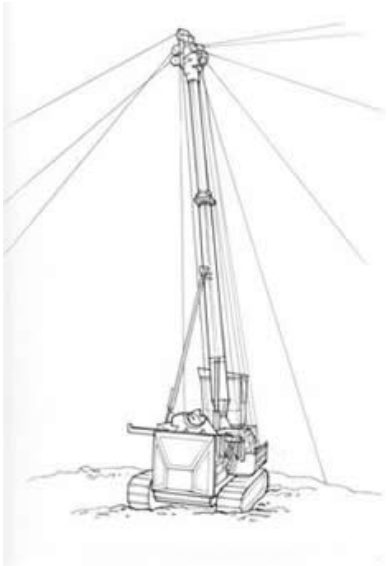

Figure 6. - Tower (Fixed Boom) Yarder.

Yarders come with either a swinging boom or a fixed boom. Most swinging booms have a limited height of 30 feet to 60 feet. Fixed boom yarders can have towers as tall as 100 feet.

Swinging booms permit a wider skyline corridor and thereby

Figure 7. - Swing Boom Yarder.

reduce the number of yarder moves. This is a big advantage when grapple yarding.

A swing boom yarder will provide more deflection for uphill yarding than is available to a fixed tower of the same height if the fixed tower has to set a log length back of the fill slope. On the other hand, fixed towers are usually taller than the booms on swing boom yarders.

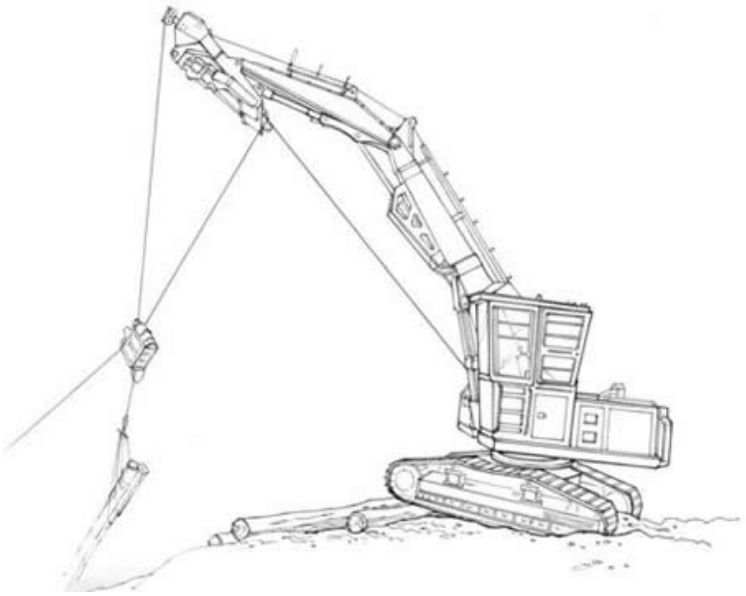

Figure 8. - Swing Machine Based Swing Yarder.

The carrier is the chassis of the yarder. Its function is to support the yarder equipment and allow transportation. The carrier can be categorized in four ways:

1. What it moves on:
    a. Tracked
    b. Wheeled
    c. Skid – this type either is mounted on skids, or has a flat bottom, that allows the yarder to slide along the ground. This type often moves through the woods by winching themselves through the stand. This is the modern equivalent of the donkey engine.
2. How it moves:
    a. Self-propelled – this is called a mobile yarder.
    b. Towed – this is a yarder mounted on a trailer that is pulled by another vehicle.
    c. Carried – this is typical of a skid mounted yarder that must be placed on a trailer for transport over long distances.
3. Mounting for power-train- some yarders are run from the power take off

of a separate tractor, while others have their own power source mounted on the chassis.

4. The ability to swing – a swing yarder is capable of rotating on its base allowing it to swing the load out of the way on the landing or to place the load onto a log deck.

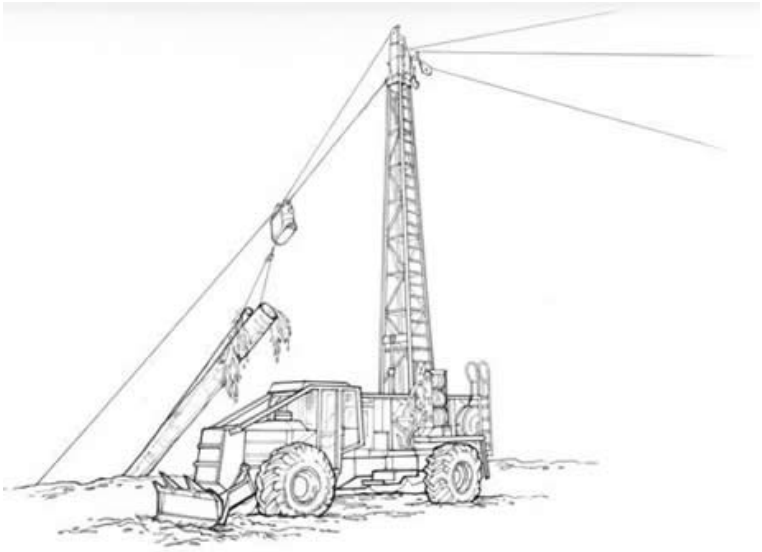

Figure 9. - Skidder Mounted Yarder.

Tower

The functions of the tower are to keep the cable off the ground and provide lift to the stems, especially near the landing. Towers can be categorized by the following

1. Tower Mounting
    a. Integrated – This is the typical tower mounted directly to the chassis of the yarder.
    b. Independent - Independent spars are typically trees that had been topped and rigged. These are most often used as tailspars or intermediate spars.
2. Size
    a. Small (<30ft)
    b. Medium (~60ft)
    c. Large (>90ft)
3. Tower Structure
    a. Wooden spar
    b. Steel (tubular) tower – this is by far the most common.
    c. Lattice tower –Lattice towers are lighter but can be more easily damaged.
4. Tower Assembly
    a. One-piece
    b. Folding
    c. Telescoping - for on-road transportation, larger towers are either folding or telescoping.

Towers are designed for a given cable size which should not be exceeded.

Smaller cables can be used but they aren't as well supported in the fairlead

sheave grooves and will experience wear.

Truck road alignment may limit movement of large yarder-towers because of yarder length and tower overhang.

Guyline drums are considered part of the tower and the guylines and raising or hoisting lines are generally provided with the tower.

Undercarriages

Undercarriages for steel towers are designed for efficiency in yarding but they also have to be designed to meet highway load limits and to traverse steep, narrow, winding logging roads. The larger the yarder and tower the more complicated the design. Some of the largest machines have to be equipped with jeeps and pups, or must be disassembled to meet highway load limits and to traverse winding roads. A loader or crane is needed to disassemble a large yarder tower.

Trailer Mounted Undercarriage (TRLM)

These undercarriages are relatively inexpensive but require a log truck or highway tractor to move them any distance. They can be moved short distances by a crawler tractor if they are properly equipped.

Self Propelled Crawler Mounted Undercarriage (SPCM)

These machines are a little less expensive than SPRM but more than TRLM undercarriages. However, a lowboy is needed to make long moves. They are designed to facilitate short moves.

Self Propelled Rubber Mounted Undercarriage (SPRM)

These undercarriages speed up moves to new landings, units or sales. They eliminate the need for a log truck or highway tractor to make the move. However, they cost more than TRLM or SPCM undercarriages.
On long highway moves SPRM yarders can be pulled by a highway tractor to speed up the move.
Grade ability in the SPRM carriers is normally considered to be 25 percent and the minimum turning radius is approximately 50 feet. They have been moved on slopes up to 35 percent on occasion. A smooth grade with very little side slope is needed when moving a SPRM yarder tower off regular truck roads

Winches/Drums

The function of the winch sets on a yarder is to transfers the power from the power-train to the cables to do the work. A yarder can have 1 - 12 working winches. The more winches on the yarder the more versatile it is. The drum on the winch set stores the cable. While older yarders typically used mechanical drives to power the winches, modern yarders are all hydraulic for smoother and more continuous transfer of power. In many instances a cable needs to be held, or if gravity is pulling a cable off the drum then it needs to be slowed, hence the need for good brakes. When slowing a drum, the brake must dissipate a large amount of energy as heat. The older brakes were typically air cooled, but most modern yarders have water cooled brakes. Interlocked drums are drums which act together to maintain the tension between two or more lines. They are used in running skylines to maintain the tension when moving the carriage.

Cab/Controls

The function of the cab and controls is to safely ‘house’ the operator and control the operation of the yarder. For older and/or smaller yarders, the operator may be standing next to the yarder during operation. On modern mobile yarders the cab is mounted high on the chassis to provide the best possible visibility for the operator.

Cable/Wire Rope

The cable used will determine the load capacity of the system and the maintenance schedule. Cable, or wire rope, is made up of wires that are wound into strands. The strands are then wound into the finished wire rope. There are many different configurations of wire rope. The direction in which the wires are wound into strands, the number of wires in each strand, the direction the strands are wound, the number of strands in the rope, and the material the rope is made of classify wire rope.

- A **wire** is a single metallic wire that is either round or shaped.
- A **strand** is a group of wires helically laid around a center in one or more layers.
- The **core** is an axial member around which strands are laid to form a wire rope. It may be either steel, natural fibers, polypropylene, or even a small-diameter wire rope.
- A **rope** is a group of strands helically laid around a core.

The number of strands and the number of wires per strand classify wire rope. For example, a 6x19 IWRC rope that has six strands, each of which is made up of 19 wires. It also has an independent wire rope core, IWRC. The number of wires per strand directly affects the flexibility and resistance to abrasion, the more wires per strand the more flexible and the higher abrasion resistance.

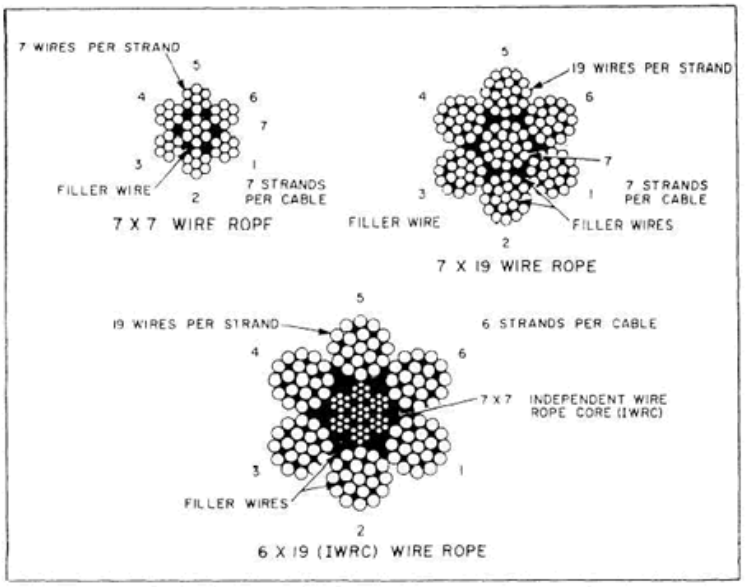

Figure 10. - Cross Sections of Wire Rope, Courtesy of Integrated Publishing.

The direction in which the strands are laid is the lay. A regular lay aligns the wires along the length of the rope for improved abrasion resistance. A lang lay aligns the wires at an angle to the length of the rope.

Much of the wire rope used today is swaged. Swaging compresses the wire rope axially which improves the life of the rope and increases the load capacity. The advantages of swaged rope are:

- increased strength
- increased drum capacity
- improved resilience to crushing and abrasion
- improved resistance to rotation on sheaves
- smoother surface improves spooling on drums with less vibration

Manufacturers provide tables with breaking strengths for their ropes. The safe working load, SWL, is a fraction of the breaking strength, usually one third. This is referred to as having a factor of safety of 3. As an example, a wire

rope with a breaking strength of 103400 lbs has a SWL of 34500 lbs when the factor of safety is 3.

Damage to wire ropes can occur from:

- rubbing over rocks
- rubbing against each other
- crushing on the drum
- rubbing at the top of the tower
- overloading
- lack of lubrication

It is important to have good ropes and maintain those ropes to provide for the safety of the crew and prevent damage to equipment.

Carriage

A skyline carriage is a wheeled device that rides back and forth on the skyline for yarding. Carriages are described as either slackpulling or non slackpulling. Slackpulling refers to the ability to pull slack in the skidding line or have the skidding line pulled through the carriage, by hand or mechanically. A non-slackpulling carriage has no means of allowing the skidding line to be contained in or pass through it. Without special rigging, this prevents lateral yarding. A slackpulling carriage either permits the mainline to be used as a skid line and pulled through the carriage, or it has its own drum with a skid line that can be pulled out of the carriage to permit lateral yarding.

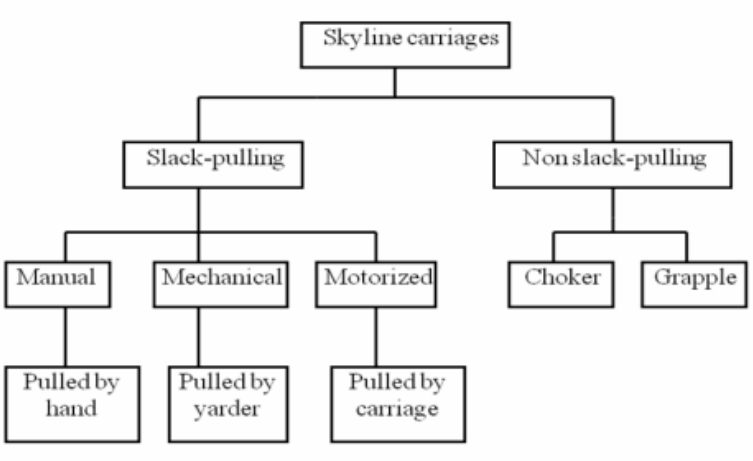

Figure 11. - Chart to Characterize Carriages.

Non-Slackpulling

This type of carriage has no means of allowing a skidding line to be contained in or pass through it. It may be moved laterally with a Dutchman line or by sideblocking. The chokers usually are shackled directly to the carriage or to a short line attached to the carriage.

Non-slackpulling carriages, because of their inability to laterally yard without damaging leave trees, should only be used on clearcuts. Attempts to use these carriages in partial cuts in the past have had dismal results.

Fall block systems do yard laterally, however, the carriage isn't held in position on the skyline. As a result, fall block systems may damage leave trees in a partial cut when the turn is laterally yarded to the skyline.

Grapple Carriage

A unique option for a carriage type is the grapple – shown in the chart as being a non-slack-pulling carriage. Using a grapple carriage eliminates the need for a choker setter and can save a lot of time. However there are quite a few limitations associated with the grapple – you can only pick up

trees/logs directly under the skyline, and in most cases you are limited to picking up one tree/log at a time.

The design of a grapple carriage is similar to some of the mechanical slackpulling carriages in that they must provide a means to open or close the grapple. This can be done with a line from the yarder or by using an engine or power device in the carriage. The grapple carriage cannot yard laterally unless it is sideblocked.

Slackpulling

This type of carriage can have a self-contained skidding line or a mechanism to permit the skidding line to be pulled through it by hand or mechanically. The carriage may be further classified as to how the slack is actually pulled.

Slackpulled by Hand

This type of carriage uses a two drum yarder. The mainline passes through the carriage and becomes the skidding line. The carriage, after it is clamped to the skyline, acts as a block through which the mainline is pulled by the choker setter. A slack kicker may be used on the yarder to assist the choker setter in pulling slack.

This type of carriage is generally limited to uphill yarding (using a gravity outhaul) so that the choker setter can pull slack downhill with the assistance of gravity.

Slackpulled by Yarder

This type of carriage is designed so that a slackpulling line from the yarder pulls the skidding line out of the carriage. The skiddingline may be contained on a drum in the carriage, or it may be attached to the mainline from the yarder. The carriage may have a radio controlled clamp or be held in position by the haulback.

Slackpulled by Carriage

This type of carriage uses some type of power device in the carriage for pulling slack. The power may be in the form of mechanical springs, hydraulic motors, or diesel or propane-fueled engines. The carriage will clamp to the skyline and is remotely controlled by radio or by mechanical springs.

If mechanical springs or a propane engine is used, yarding is limited to level or uphill, due to the difficulty in pulling the mainline uphill.

Line Nomenclature

There are many names for the lines used in the different cable configurations. The basic terms are mainline, skyline, haulback, slackpulling, and dropline or skidding line. The skyline is the cable on which the carriage rides. All skyline systems contain a skyline. The mainline is the line that runs from the tower to the carriage. This cable pulls the carriage back to the landing. The haulback is used in downhill operations and where the line slope is less than 20% and the carriage requires assistance to get into the unit. A slackpulling line is used with mechanical slackpulling carriages that require a separate line to raise and lower the dropline. The dropline, or skidding line, is the line to which the grapple or chokers are attached. It may be attached to the mainline, as in a mechanical slackpulling carriage, or it may be mounted on a drum in the carriage.

The haywire or strawline is used when rigging a cable road, which is a small, light cable that can be more easily pulled into the unit. It is then attached to the larger operating lines to pull them into position.

Guylines are used to support the tower and any tail trees, tail spars, or intermediate supports. Yarders are equipped with drums holding the guylines necessary to support the tower.

The number of lines used in the system will dictate the number of drums

required on the yarder. The most basic setup requires just a mainline and one drum on the yarder. The most drums used are four and will contain a skyline, mainline, haulback, and slackpulling line.

Cable Operation Crew

There are many crew positions in cable yarding operations. Typical titles and descriptions are included here.

- Side Rod – the supervisor of the logging operation.
- Hooktender – the person responsible for cable road changes and helps with supervision.
- Rigging Slinger – The person that supervises the choker setting operation, selecting logs to be choked and sending radio signals to the yarder operator.
- Choker Setters – Attaches the choker cables to the logs.
- Chaser – Unhooks the choker cables from the logs at the landing.
- Yarder operator – runs the yarder.
- Loader Operator – runs the loader.

Operational Considerations

Physical Limitations

Cable yarding systems are typically used where steep slopes do not allow ground based extraction equipment to operate safely or where ground conditions do not permit travel by ground based extraction equipment.

Deflection

Skyline configurations require adequate deflection in order to carry a load. Deflection refers to the amount of sag in the skyline. Tension is required to suspend the skyline over its length. The more tension required to achieve suspension over obstacles, the lower the payload that can be carried by the line. Higher tensions also require stronger anchors. Deflection is affected by the lay of the ground under the skyline and slope over which the skyline is run. A convex slope will limit the amount of deflection that can be achieved and will often require intermediate supports.

Anchors

Cable operations, other than tong throwers, are limited by the availability of suitable anchors. Anchors are necessary to support the yarder, intermediate supports, and tailholds. Standing trees or stumps are often used as anchors. Suitable trees are determined by tree size, soil holding capacity, and their locations in respect to the equipment being anchored. Where suitable stump or tree anchors are not present, deadman anchors or equipment may be used. Deadman anchors are logs buried in the ground to provide an anchor. Equipment, such as a heavy crawler tractor, may be used as a mobile anchor where available and necessary.

Treatment Options

Highlead cable operations are used in clearcut treatments due to the rigging requirements. Skyline configurations can be used in either clearcutting or thinning operations. Corridors, normally 8 to 12 feet wide, must be cut in the stand to allow free passage of the logs. In visually sensitive areas, parallel corridors should be used. Radial parallels result in clearcut areas where the corridors converge at the landing.

Safety Concerns

There are a number of safety issues when working around cable operations. Anchor failure can be mitigated using solid anchors and proper anchor building techniques. Cable failures can result from inadequate deflection,

poorly maintained cables, trying to haul loads larger than the safe working load of the cables, and numerous other factors.

Workers should never work in the bight of the line. Systems must be designed and laid out to avoid this possibility.

Downhill yarding landings should be designed with adequate runout space to prevent logs and debris from rolling downhill into the landing area where people and equipment are working.

System Interactions

Manual felling is often used with cable extraction due to the inability to operate mechanical equipment in the stand. In some cases, mechanical felling and processing may be used where soil conditions and terrain permit. Mechanized felling equipment may not have the same restrictions as extraction equipment since ground disturbance can be minimized using slash mats and fewer passes over the same ground. Mechanized equipment has the advantage of locating turns of logs in one place, decreasing the amount of time required to choke a turn. Mechanized felling does increase the number of corridors required to yard the stand.

Research

The following is a selection of representative research studies and reports done on harvest systems that include cable extraction. These reports may be used to get an idea of productivity and impacts of different systems and uses of cable extraction as well as some of their limitations. When reading these reports, keep in mind that they describe specific systems and stand treatments. Trying to apply the lessons learned from these reports to systems and treatments outside of the studies' scope may have unintended or unforeseen consequences.

This is not a complete listing of research on the use of cable systems. Additional information can be found at the USDA Forest Service Treesearch website. This site provides reports on research performed by Forest Service Research and Development scientists and their collaborators.

- **Title:** Yarding cost for the Koller K300 cable yarder: results from field trials and simulations
  Authors: Huyler, Neil K.; LeDoux, Chris B.
  Date: 1997
  Source: The Northern Journal of Applied Forestry. 14(1): 5-9.
  Station ID: JRNL-NRS-14
  Description: This paper describes results from field studies and simulation that can be used to estimate the yarding cost for the Koller K300 cable yarder. Yarding costs can be estimated for clearcuts and light and heavy thinnings in eastern hardwoods. Yarding costs can be estimated with a handheld calculator, or the data can be incorporated into stump-to-mill desktop PC and mainframe computer programs. The results can be a valuable tool for loggers, managers, and planners considering the use of small- to medium-size cable yarders to extract timber from eastern hardwood stands.
- **Title:** Environmentally Sound Timber Extracting Techniques for Small Tree Harvesting
  Author: Wang, Lihai
  Date: 1999
  Source: 199 ASAE Annual International Meeting, Paper No. 995053, Toronto, Ontario, Canada, July 18-21, 1999
  Description: Due to large area disturbed and great deal of energy cost during-its operations, introducing or applying the appropriate timber extracting techniques could significantly reduce the impact of timber extraction operations to forest environment while pursuing the reasonable operation costs. Four environmentally sound timber extraction techniques

for small tree harvesting, particularly for thinning operations, were presented and introduced in this paper. These techniques included animal skidding and animal-machine, single circulating cable yarding system, small farming tractor, and mini forwarder. The results of evaluation, test or practices indicated that these timber extracting techniques are feasible, applicable and reasonable in small tree harvesting with a relatively low impact to environment and a moderate operation cost.

- **Title:** Economics of hardwood silviculture using skyline and conventional logging
  Authors: Baumgras, John E.; Miller, Gary W.; LeDoux, Chris B.
  Date: 1995
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  Description: Managing Appalachian hardwood forests to satisfy the growing and diverse demands on this resource will require alternatives to traditional silvicultural methods and harvesting systems. Determining the relative economic efficiency of these alternative methods and systems with respect to harvest cash flows is essential. The effects of silvicultural methods and roundwood prices on harvesting revenue are presented for skyline and conventional skidder logging. Silvicultural methods evaluated include single-tree selection, group selection, even-age management, two-age management, diameter-limit cutting, and commercial thinning. Results indicate that harvesting systems had less impact on harvesting revenue than silvicultural methods or roundwood prices, and that hardwood markets can significantly affect economic trade-offs associated with forest management alternatives.