



# Logger Engagement and Retention: Surveying what matters in a quality logging operation across the U.S.

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July 2022



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# I. Introduction

Ecological forestry has been described as a management system with three fundamental principles—retention forestry, heterogeneous treatments, and appropriate recovery periods; but at the same time, a discipline that transcends systems, objectives, and settings.<sup>1</sup> Forest management prescriptions based on ecological principles tend to be more complex. Market-based approaches to promote ecological forestry, such as third-party certification programs, have helped expand the practice and adoption of the principles of ecological forestry.

The origins of ecological forestry in the United States can be described as beginning in the 1980's in the Pacific Northwest, although ecological principles in the context of forest management have a much longer history as well.<sup>2</sup> European silviculture practices were present in the early 20th century and instrumental in the evolution of America's forestry practices, and Indigenous, First Nations, and Tribal Nations have practiced forms of ecological forestry for thousands of years.<sup>3</sup> Beyond the United States, many parts of Canada have implemented ecological forestry practices as well. For example, in Nova Scotia, there has been extensive support from the public to implement ecological forestry practices to return the landscape to a pre-European state being that much of the land was cleared for settlements and farming purposes.<sup>4</sup> Ecological forestry is also of interest in Europe<sup>5</sup> and many other parts of the world.<sup>6</sup>

Logging businesses are critical to forestry and the forest products industry for implementing forest management prescriptions and delivering timber and fiber for manufacturing. Without loggers, foresters and landowners can not accomplish their land management objectives. Logging businesses change over time and are adapted to local conditions. There are differences between logging businesses in the Northeast, Midwest, Western, and Southern regions of the United States; however, consolidation, production increases, and increased capital investment are consistent trends nationwide.<sup>7</sup> Additionally, an aging logging community with fewer and fewer youth entering the profession creates labor challenges. The challenges faced by logging businesses can be mitigated by preparing timber sales that consider local logging system capabilities and constraints, and through knowledge transfer and innovation among logging businesses.<sup>2</sup> These challenges and the solutions are a topic of concern in the forestry community, as the success of ecological forestry is dependent on a good plan executed on the ground by a quality logging operation.

The Forest Stewards Guild is a national organization whose membership practices and promotes ecologically based forestry. The Guild provides training, policy analysis, and research to support practicing foresters and allied professionals and to engage a broader community in the challenges of forest conservation and management. Dovetail Partners, a Minnesota-based non-profit organization, partnered with the Guild to conduct a survey of the professional Guild members located throughout the United States regarding the importance of quality logging operations and their understanding of the challenges facing the logging industry. The survey was specifically designed to capture the perspectives of foresters who typically practice ecologically-based forestry, thus the Guild provided a natural partner for the survey. This report highlights the results of the survey, follow-up interviews that were conducted, and related literature.

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<sup>1</sup>Franklin, J. F., Mitchell, R. J., and Palik, B. J. (2007). *Natural Disturbance and Stand Development Principles for Ecological Forestry*. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. doi: 10.2737/NRS-GTR-19

<sup>2</sup>D'Amato, A. W., Palik, B. J., Franklin, J. F., & Foster, D. R. (1970, January 1). Exploring the origins of Ecological Forestry in North America. *Journal of Forestry*. Retrieved June 13, 2022, from <https://www.fs.usda.gov/treearch/pubs/53438>

<sup>3</sup>The intersection of Industrial and Indigenous Forest Management. UC Berkeley Rausser College of Natural Resources. (n.d.). Retrieved June 13, 2022, from <https://nature.berkeley.edu/events/2020/09/intersection-industrial-and-indigenous-forest-management>

<sup>4</sup>Anthony R. Taylor, David A. MacLean, Peter D. Neily, Bruce Stewart, Eugene Quigley, Sean P. Basquill, Celia K. Boone, Derek Gilby, and Mark Pulsifer. A review of natural disturbances to inform implementation of ecological forestry in Nova Scotia, Canada. *Environmental Reviews*.28(4): 387-414. <https://doi.org/10.1139/er-2020-0015>

<sup>5</sup>Gresh James M., Courter Jason R. 2021. In Pursuit of Ecological Forestry: Historical Barriers and Ecosystem Implications. *Frontiers in Forests and Global Change*. Vol. 4 <https://www.frontiersin.org/articles/10.3389/ffgc.2021.571438>

<sup>6</sup>For example, see the Food and Agriculture Organization's (FAO) Forestry Programme: <https://www.fao.org/forests/en>

<sup>7</sup>Joseph L Conrad, IV, W Dale Greene, Patrick Hiesl, A Review of Changes in US Logging Businesses 1980s–Present, *Journal of Forestry*, Volume 116, Issue 3, May 2018, Pages 291–303, <https://doi.org/10.1093/jofore/fvx014>

Logging operations have changed significantly over the last several decades. Several factors are taken into account when assessing the logistics of quality logging operations (QLOs). In this report, we define quality logging operations as timber harvests that meet three criteria. The three criteria for Quality Logging Operations (QLOs):

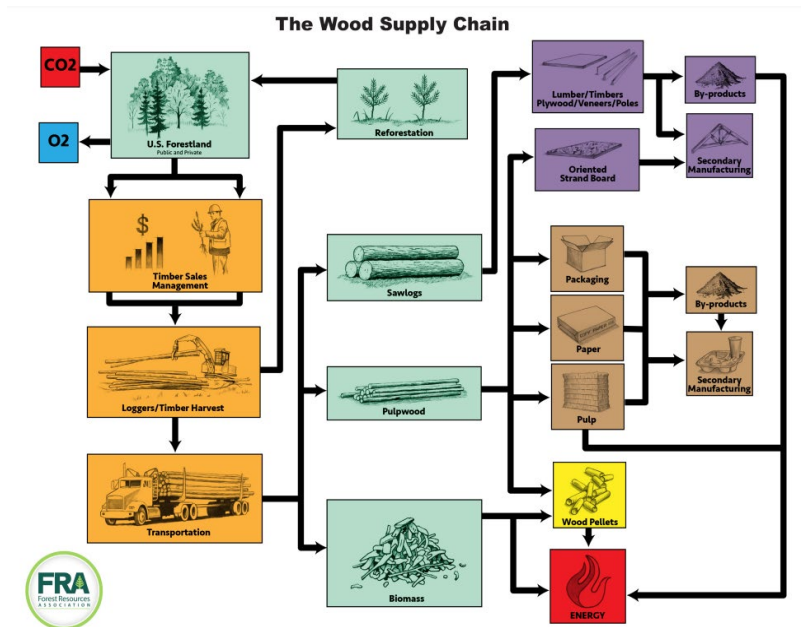
1. The harvest is executed in a manner that minimizes the negative environmental externalities that can occur during a harvest.
2. The loggers and landowners have communicated and developed a plan for what the harvest will look like.
3. A QLO maximizes the utility of the logger and landowner given the constraints they face (environmental, capital, third party and legal restrictions).<sup>8</sup>

The expanded attention to characteristics of quality logging operations can create barriers between harvesters and forest managers. For QLOs to persist for decades to come, a dialogue between timber harvesters and forest managers is necessary. This project's larger purpose is to support a dialogue between these groups to bolster recruitment of QLOs and limit attrition of those capable of performing quality logging operations.

## II. Background Information

The forestry industry in the United States has a complex supply chain and is responsible for the employment of millions of people. Across the country, forests support at least 2.5 million jobs, \$109 billion in payroll, and \$288 billion in sales and manufacturing.<sup>9</sup> In the complex wood supply chain (Figure 1), there are two groups of people responsible for bringing trees out of the forest and into the hands of consumers and those are loggers and truckers. For loggers in particular, a combination of higher operating costs, heightened inflation risks, and labor shortages have placed tremendous stress on logging operations.<sup>10</sup>

**Figure 1. The Wood Supply Chain** (Source: [Forest Resources Association \(FRA\)](https://www.fra.org/), 2021))



<sup>8</sup>Evans, A. M., Lynch, M., Clark, F., Mickel, G. M., Chapman, K., Haynes, M., & Mahaffey, A. (2016). Economic and Ecological Effects of Forest Practices and Harvesting Constraints on Wisconsin's Forest Resources and Economy.

<sup>9</sup>National Alliance of Forest Owners (NAFO) <https://nafoalliance.org/in-your-state/> Also see the report: The Economic Impact of Privately-Owned Forests in the 32 Major Forested States, Forest2Market (2019).

Available at: [https://nafoalliance.org/wp-content/uploads/2018/11/Forest2Market\\_Economic\\_Impact\\_of\\_Privately-Owned\\_Forests\\_April2019.pdf](https://nafoalliance.org/wp-content/uploads/2018/11/Forest2Market_Economic_Impact_of_Privately-Owned_Forests_April2019.pdf)

<sup>10</sup>Kingsley, E. (2022, March 3). We need to worry about the logging sector. Forest2M\_RW\_rgb. Retrieved June 11, 2022, from <https://www.forest2market.com/blog/we-need-to-worry-about-the-logging-sector>

<sup>11</sup>Kingsley, E. (2022, March 3). We need to worry about the logging sector. Forest2M\_RW\_rgb. Retrieved June 11, 2022, from <https://www.forest2market.com/blog/we-need-to-worry-about-the-logging-sector>



The increase in these three factors is not unique to this industry since much of the world is facing global supply chain issues and worker shortages. However, few industries have experienced such a pronounced bottleneck like the forestry and forest products industry. Loggers are skilled workers who perform complex and often dangerous tasks to bring the raw materials they harvest out of the woods and into the hands of individuals further down the supply chain. Wage limitations, concerns over safety, accessibility to adequate training, and lack of market knowledge are only a few of the barriers to entry into this field and provide explanation for the attrition observed in this sector.

The wood supply chain has changed in recent decades. Fully mechanized, whole-tree harvesting systems are now widespread and have become productive systems for many operations across North America.<sup>2</sup> That is not to say whole-tree harvesting systems are the only systems in use. Various environmental factors and smaller logging operations may limit the effectiveness of whole-tree harvesting and other means of harvest may be preferable.



Photo Courtesy of Mark Jacobs

A trend towards whole-tree harvesting systems has caused operations to shift from being labor intensive to capital intensive. Machinery has increased the efficiency of logging and allowed for large operations to make investments in equipment and expand their production without the use of as many workers. The shift towards more capital-intensive logging operations has had negative implications for the logging workforce in the sense that many of the smaller operations across the United States are those exiting the market because of competition. Annual attrition from the logging workforce has fluctuated between 2% and 2.6% nationally, with more severe attrition rates observed in times of recession.<sup>12</sup> As loggers exit from the workforce, the industry faces an expanding void and many wonder if the situation will continue to worsen and what solutions exist to bridge this gap. For example, the Bureau of Labor Statistics (BLS) projected chainsaw fellers would decrease by 17% from 2014 to 2024 while the number of operators of heavy logging equipment is projected to remain constant.<sup>13</sup> More recent estimates suggest potential general growth opportunities even as specific types of logging operations may vary. The BLS currently reports, *Overall employment of logging workers is projected to grow 7 percent from 2020 to 2030, about as fast as the average for all occupations.*<sup>14</sup> This data and these projections illustrate the dynamic and changing nature of the current forestry industry in the United States.

A survey conducted by Gc, et al. focusing on the Michigan, Wisconsin and Minnesota logging industry revealed several threats to logging operations in the Great Lakes region.<sup>15</sup> One threat that is of great concern to the future of many logging operations is the ever-increasing age of the owners. With a sample size of 550, Gc, et al. found the owner's average age to be between 53 and 54. While this number is not especially old or out of the ordinary, it gives great cause for concern because many of these individuals will be exiting the workforce around the same time. Not only does having an owner in this age cohort give cause for concern in the sense of retirement and worker turnover, it also points to questionable future leadership. Of the sample, only 5% of owners were under the age of 35. The low representation of young leaders in the Great Lakes logging sector highlights a succession problem and points to an uncertain future for many operations across the region.

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<sup>12</sup>Joseph L Conrad, IV, W Dale Greene, Patrick Hiesl, A Review of Changes in US Logging Businesses 1980s–Present, *Journal of Forestry*, Volume 116, Issue 3, May 2018, Pages 291–303, <https://doi.org/10.1093/jofore/fvx014>

<sup>13</sup>Bureau of Labor Statistics (BLS). 2017. Occupational outlook handbook: Logging workers.

<sup>14</sup>The BLS also reports, "About 7,400 openings for logging workers are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire." See: <https://www.bls.gov/ooh/farming-fishing-and-forestry/logging-workers.htm>

<sup>15</sup>Shivan Gc, PhD, Karen Potter-Witter, Charles R Blinn, Mark Rickenbach, The Logging Sector in the Lake States of Michigan, Minnesota, and Wisconsin: Status, Issues, and Opportunities, *Journal of Forestry*, Volume 118, Issue 5, September 2020, Pages 501–514, <https://doi.org/10.1093/jofore/fvaa021>



In conjunction with the issues outlined in Gc, et al., Vaughn et al. conducted a similar study looking at forestry contractors in Colorado, New Mexico, and Arizona.<sup>16</sup> Similar to the Great Lakes region, most business owners were over the age of 50. These operations had owners over the age of 50 but with a workforce predominantly composed of individuals under the age of 40. This skilled workforce that works under physically demanding conditions is essential in achieving key forestry management objectives as well as creating value for individual logging operations. In the Western United States, qualified timber harvesters have been in decline for decades creating much concern over how this industry will perform for years to come. Limited access to training programs is cited as one of the greatest barriers to qualified logger recruitment. The implementation of vocational school programs geared toward preparing individuals to enter the logging workforce is cited as one of the best and most promising solutions for preparing young workers and to promote a younger qualified workforce.

According to Palik and D'Amato, ecological forestry is more of a management framework rather than a philosophy.<sup>17</sup> It is believed that making this distinction between framework and philosophy is important to the adoption of ecological forestry for a variety of stakeholders across North America. To support healthy forest ecosystems and accomplish timber harvest benchmarks, it is useful to have more knowledge and resources available to adapt to different forest management needs. According to the authors, to adopt ecological forestry is to add another tool and not get an entirely new toolbox. Thinking of ecological forestry in this manner is anticipated to be beneficial and further the movement of ecological forestry in timber harvest operations.

The wood supply chain is complex and multi-faceted. In recent decades, changes have been occurring that affect loggers and foresters.<sup>18</sup> The mechanization of logging as well as other economic and demographic changes create new challenges and opportunities. The emergence of ecological forestry as a high priority for foresters requires new thinking and leadership. Given these trends and the interconnection between loggers and foresters in land management, there is a need now more than ever for foresters and loggers to have a coordinated response and strategies for effective collaboration.

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<sup>16</sup>Damon Vaughan, Catrin Edgeley, Han-Sup Han, Forest Contracting Businesses in the US Southwest: Current Profile and Workforce Training Needs, *Journal of Forestry*, Volume 120, Issue 2, March 2022, Pages 186–197, <https://doi.org/10.1093/jofore/fvab060>

<sup>17</sup>Brian J. Palik, Anthony W. D'Amato, Ecological Forestry: Much More Than Retention Harvesting, *Journal of Forestry*, Volume 115, Issue 1, January 2017, Pages 51–53, <https://doi.org/10.5849/jof.16-057>

<sup>18</sup>Not addressed in this report are trends impacting landowners and forestland ownership in the US, for discussion of this topic, see: A Survey of Industrial-Scale Multigenerational Family Forest Owners Across the United States, <https://www.dovetailinc.org/portfolio/detail.php?id=5e260824963b8>



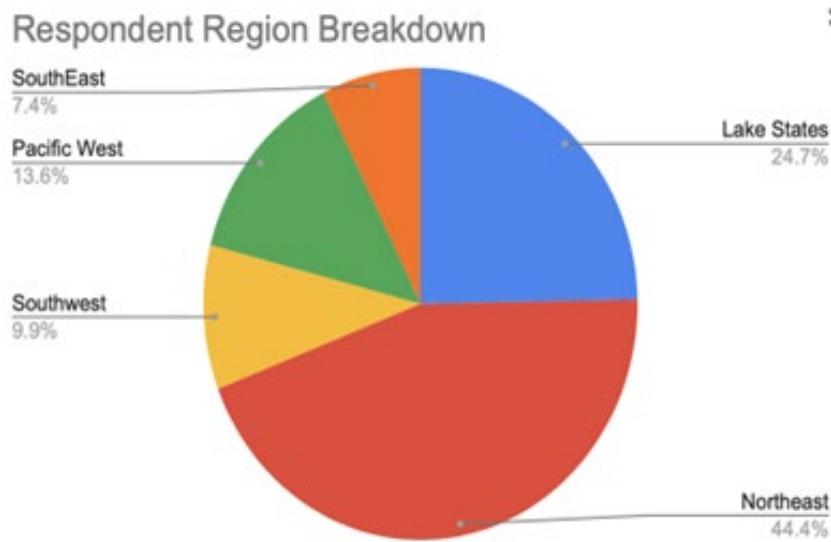


### III. Methodology

The survey tool for this project was developed in early 2022 with several revisions made in order to engage recipients in creating a dialogue that aims to address key topics and concerns in the industry. The survey was developed by the research team and also reviewed, and feedback incorporated from Forest Stewards Guild (Guild) staff and members of the Guild's Membership & Policy Committee (MPC) composed of professional Guild members from across the country. The questions in the survey ranged from multiple choice and ranking to short answer form questions (see Appendix A for the full list of survey questions). Additionally, there were several optional questions that allowed survey respondents to voice more complete thoughts and feelings about issues pertaining to the topics discussed. The intent of the survey was to engage Guild membership in a topic of interest, collect information on member perspectives on the issue, and utilize the findings to engage other (logging) groups.

The survey was distributed via email on March 1, 2022 with a reminder message distributed on March 12th and a deadline of March 15th for responses. The survey was sent to the Forest Stewards Guild Professional Member list nationwide.<sup>19</sup> Of the 449 individuals that received the survey, 81 respondents provided feedback (18%) and each of the five Forest Stewards Guild regions were represented in the collected responses. The regions include the Lake States, Pacific West, Northeast, Southeast, and Southwest. Figure 2 provides a graphical representation of the distribution of survey respondents based on their identified Guild member region. A total of 44.4% of survey respondents were from the Northeast region and approximately a quarter were from the Lake States. The Southeast had the lowest proportion of respondents at 7.4%.

**Figure 2. Respondents by U.S. Region (%)**



<sup>19</sup>Professional members of the Forest Stewards Guild include foresters and others working in natural resources, also see: <https://foreststewardsguild.org/membership-and-giving/>



## IV. Findings and Results from the Survey

The insights gained from survey results were instrumental in analyzing trends across the regional demographics of survey respondents. Figure #3 displays the results of the question:

*How important is a high-quality timber harvesting operation in achieving forest stewardship goals? (Rate each quality on a scale 1 through 5 with 5 being of the highest importance. Multiple qualities can be assigned the same rating)*

1. Carbon sequestration in our forests (and forest products)
2. Structurally diverse habitat for forest birds (and other wildlife)
3. Supporting forest-based communities
4. Reducing the threat of wildfires (especially near WUI)
5. Improving resilience to forest threats (pests, disease, climate change)

As shown in Figure 3, the importance of each ranked relatively evenly (17-23% for each) with reducing threats of wildfire being slightly lower, perhaps due to the regional differences related to this risk (see further discussion below).

**Figure 3. Composite of Priorities**

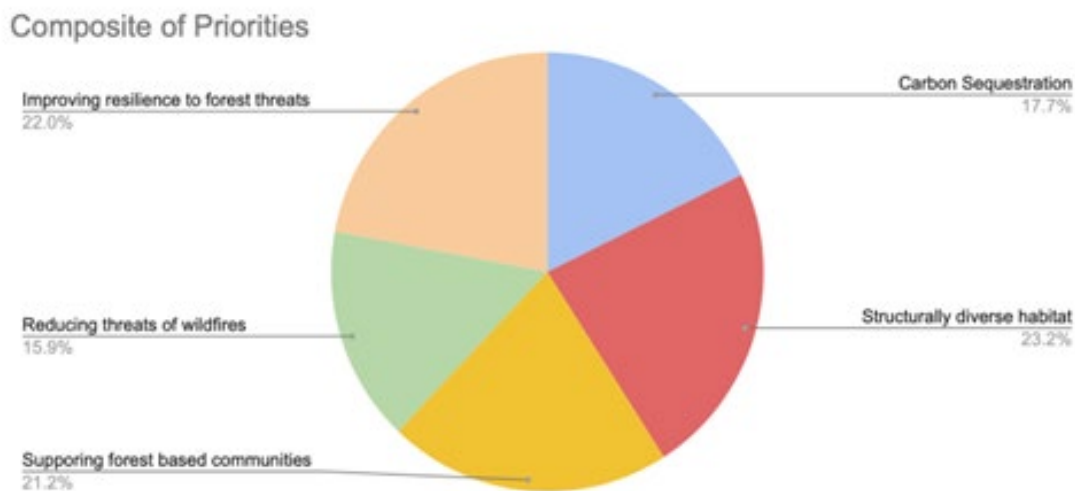
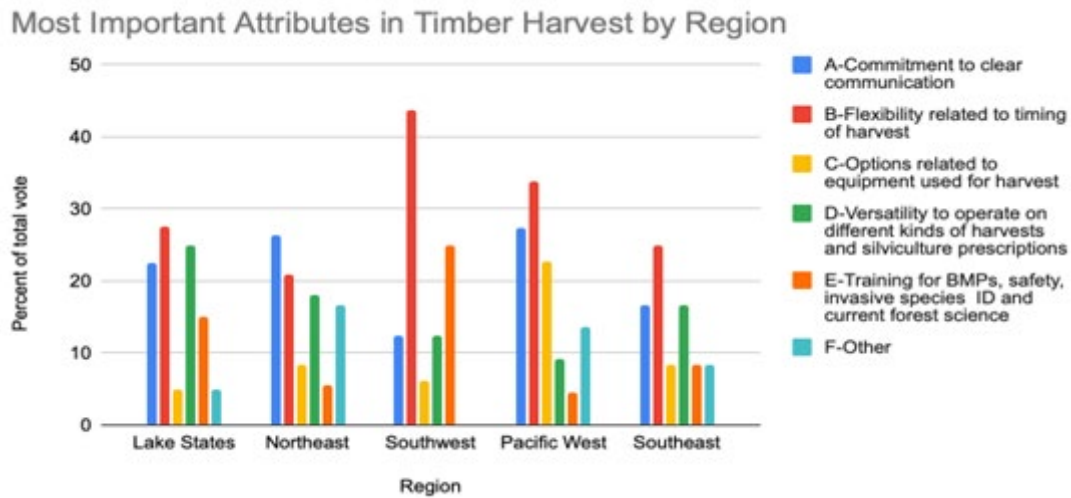


Figure 4 shows the ranking of important attributes in timber harvest by region. Each respondent could choose two out of the five qualities (or “other”) as being the most important characteristics of a timber harvest. The percent of total vote was calculated by multiplying the total number of respondents for a region by two since each respondent selects up to two qualities as being most important for a timber harvest. By tallying up the total number of selections for each attribute (A through F) and dividing the total for each attribute by the total number of selections per region, the percent of vote could be calculated. This is useful in analyzing what regional trends can be seen.



Figure 4. Most Important Attributes in Timber Harvest by Region



The first trend that is apparent is the relatively high number of respondents who rated *Flexibility related to timing of harvest* as one of the most important attributes to have in a timber harvest in the Southwest and Pacific West regions. One could hypothesize that this can be attributed to many factors, including inclement weather and natural disasters to regulation and other human factors which affect when logging can occur.

The survey findings also showcase the importance the Pacific West places on *Options related to equipment used for harvest*. A complex terrain coupled with varied infrastructure and a whole host of other potential obstacles could cause individuals in the Pacific West to rate this attribute as more important when compared with other regions.

Additionally, the Lake States demonstrated a relatively uniform priority in the top three attributes for a timber harvest. The three attributes are *Flexibility related to timing of harvest*, *Versatility to operate on different kinds of harvest and silvicultural prescriptions*, and *Commitment to clear communication*. The Lake States region is composed of an assortment of climates and topography and could provide insight into why respondents gave these three attributes the highest importance.

Another interesting finding from the survey is the regional differences regarding the difficulty in finding loggers who can execute forest management prescriptions in certain circumstances or situations. In the Northeast and Lakes States regions, approximately 20% of respondents indicated that they had difficulties in finding loggers to execute forest management prescriptions. This is vastly different when compared with survey respondents from the other three regions. In contrast, 54.5% of respondents in the Pacific West, 62.5% of respondents in the Southwest, and 100% of respondents in the Southeast indicated difficulties in finding loggers. While sample sizes vary between regions, and “regions” here are defined by Forest Stewards Guild geographical region delineations, there is some indication that there may be differences when it comes to finding loggers to execute forest management prescriptions across North America.





In conjunction with the above-mentioned findings, the question illustrated with the national data in Figure 3 was also further analyzed to gain insight into regional differences. The question asked survey respondents to assign each priority a rating between 1 and 5 with 5 being most important and 1 being least important. Priorities could be assigned the same rating. For example, a respondent could rate all priorities as a “5” (most important) or could rate 3 priorities as a “4” and 2 priorities as “1” (least important). Findings from this question, shown in Figure 5, are what one would predict given the preconceptions about each region’s environment. In the Southwest Region, the average rating for “Reducing the threat of wildfires” and “Improving resilience to forest threats” were closest to 5 “most important”. This makes sense with the Southwest’s arid climate and susceptibility to forest fires which many scientists predict will only worsen with a changing climate. In contrast to this sentiment, the Northeast had an average rating for “Reducing threats of wildfires” at around “2”. This is most likely attributed to the more temperate climate which greatly reduces concerns of wildfires especially when compared with the Southwest. The remainder of the findings proved relatively uniform for all regions. Most priorities received an average rating between 3 and 4.

**Figure 5. Average Rating of Priority by Region**

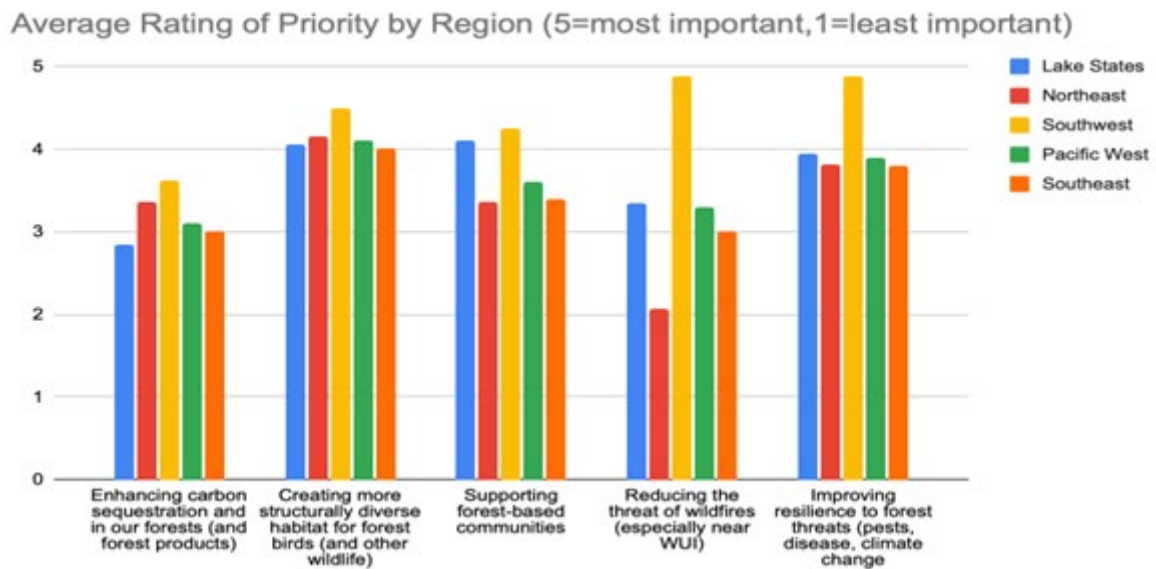




Table 1 demonstrates the count of rankings for each priority by region. In this table, we were able to observe three trends in the data which we highlighted for ease of locating. The yellow area of the chart demonstrates the differing opinions on the priority “Reducing the threat of wildfires” when comparing the Southwest and Pacific West regions to the Northeast region. The strong emphasis on reducing threats of wildfires in the Pacific West and Southwest is in alignment with the challenges that both regions face on an annual basis. In the Northeast, it makes sense that reducing the threat of wildfires is rated lower as the threat of wildfires in the Northeast region is not as great of a concern as it is in the more arid western region of the United States.

**Table 1. Count of Priorities by Region**

	Enhancing carbon sequestration and in our forests					Creating more structurally diverse habitat for forest birds (and other wildlife)					Supporting forest-based communities					Reducing the threat of wildfires (especially near WUI)					Improving resilience to forest threats (pests, disease, climate change)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Lake States	3	5	7	2	3	1	1	2	8	8	0	2	3	6	9	1	3	7	6	3	0	1	4	10	5
North East	3	7	8	10	8	1	2	4	12	17	0	2	16	11	7	13	12	7	4	0	1	2	11	11	11
SouthWest	1	0	2	3	2	0	0	1	2	5	0	1	1	1	5	0	0	0	1	7	0	0	0	1	7
Pacific West	3	2	1	3	2	0	1	1	4	5	1	1	1	5	3	2	1	1	4	3	0	1	2	4	4
South East	1	1	3	1	0	0	1	0	2	3	0	2	0	3	1	2	1	1	1	1	1	0	1	1	3
Total	11	15	21	19	15	2	5	8	28	38	1	8	21	26	25	18	17	16	16	14	2	4	18	27	30

The green portion of Table 1 indicates a strong respondent-wide sentiment that creating more structurally diverse habitat is a very important priority related to enhancing QLOs. It is a positive thing to see such a strong nationwide belief that creating more structurally diverse habitats is important to enhancing QLOs. By having priorities aligned across the Guild members and regions of this survey, there can be a common goal or mission to ensure the creation of this habitat and any goals to go along with it are worked towards.

Lastly, the blue shaded area of the chart displays the polarization of responses in the Pacific West region related to the priority of carbon sequestration. It is interesting to observe the split in the responses in a specific region as one would think individuals in a specific region would tend to think similarly. Also this is in contrast to the other regions where the respondents are consistently grouped around the middle (3) ranking. The polarity in opinions in the Pacific West could provide reason to further investigate the intricacies of enhancing carbon sequestration in these forests with respect to respondent’s opinions.

In summary, Table 1 provides a detailed breakdown of respondents’ attitude towards each quality and its importance. While sample size for each region varies, certain trends can be observed, and these trends will be instrumental in creating a dialogue on the issues pertaining to logger engagement and retention with respect to performing quality logging operations.

## V. Interview Results

In addition to the survey distributed to recipients, additional interviews were conducted with survey respondents who indicated that they would be willing to provide supplemental information to the project. One of the survey questions invited respondents to indicate their willingness to participate in a follow-up interview. A total of 39 individuals indicated that they would be open to participating in a supplemental interview. It was not possible to interview all the willing participants, so a subset of 20 individuals were identified. To gain insight into a variety of experiences across the country pertaining to the forestry industry, a select number of individuals from each region were chosen with different occupations and levels of experience. All 39 willing interview participants were sent an email message (April 29th) thanking them for their willingness to be interviewed, providing the list of interview questions, and inviting written responses (by May 20th) if they wished to share their reactions. In total, 19 individuals were interviewed by a member of the project team and an additional 4 individuals provided written comments. Below are some of the common themes and impactful quotes that we observed for each question in our interview process.

### ***What changes to logging operations have you observed over the course of your career in forestry?***

Regarding changes, many interviewees noted that an aging logger workforce and improvements in technology are the most notable. In conjunction with an aging logger workforce, insufficient pay and lack of incentives were cited as being key problems in logger recruitment.

The shift in the scale of logging operations was also cited as a major change that interviewees observed over the course of their careers. More large-scale operations with higher investments in equipment appear to have replaced many smaller players in the industry.

Additionally, a number of interviewees stated that more ecologically sound work is being done by loggers with a real emphasis on respect and health of the land that is being logged. One interviewee in the Northeast region with over 30 years of forestry experience indicated that he has seen a shift in more professional logging operations, and similar observations were made in other regions.

### ***What makes a logging operation successful?***

When asked this question about what makes a logging operation successful, many of our interviewees mentioned the logistical side of things as well as the implementation of ideas to make the ground operation successful. One respondent from the Northeast with a decade of experience in ecological forestry mentioned that the paperwork and office side of forestry is just as, if not more, important for the success of a logging operation. Figuring out logistical issues and working on effective communication between the different parties involved in a QLO is extremely important. According to this individual, the business aspect of the operation is really what ensures the operation is successful.

Other responses from interviewees included:

*When the logger's vision is long-term just like a forester."* – Over thirty years of experience, currently practicing ecological forestry in the Lake States Region

*Having someone who understands silviculture practices and uses logging as a tool not as a driver to implement treatments in order to meet goals"* - Retired consulting forester in Northeast Region

*The logger needs to have a passion and love for the work, no matter the circumstance. The logger needs to be dyed in the wool"* - Consulting forester in the Southwest with several decades of experience

*A big part of it is treating the people on the ground fairly - the social-economic component."* – Public and private sector experience, Western region



***Have you observed any problems, issues, or disconnects between loggers and landowners/land managers? If so, what were they?***

Many respondents indicated a disconnect between loggers, landowners, and forest managers. Individuals indicated loggers are motivated by the party who pays them, which is often the mill and not always aligned with the objectives of the management prescription that do not directly relate to maximizing productivity. This can make it difficult to build trust and communicate effectively about goals of the property.

A very separate disconnect regarding this issue is public perception of loggers and forest management professions. There is a stigma regarding loggers as an uneducated bunch and that the profession is not as respectable as others. This is in fact quite the opposite in other parts of the world. One interviewee stated that, "In Scandinavia, the people that worked in the forest - landowners, foresters, loggers, etc - these people were highly valued in the culture. Contrasted with a low opinion of people that worked in the woods locally - poor or difficult students were directed to forestry jobs." The public's perspective of loggers in America is a large issue and something that needs to be changed to move forward.

***What might be your recommendation to help solve, bridge, or fix the differences and conflicts that might arise between loggers and landowners/land managers?***

Nearly every respondent indicated that training and further education is essential for fixing the problems and disconnects we observe between loggers, landowners, and land managers. Education can be a tool to overcome many of the issues we observe in and between the groups today. Shifting the narrative on what sound ecological forestry is will make every aspect of the operation run more efficiently. In the same vein as changing the narrative on ecological forestry, one consulting forester from the Northeast with over 35 years of experience stated that having a conversation with loggers and building a dialogue about the responsibilities and expectations of each group (logger, forester, landowners) is essential in getting past some of the issues that have been plaguing the industry for a long time.

***Do you have hope for the future in terms of finding a solution to any issues you've observed?***

Across the board there was a resounding yes in response to hope for the future of logging and finding solutions to current challenges. While there happen to be several obstacles for many who are employed in the forestry sector, one interviewee stated, "Despite the odds, you keep going and somehow it works out and they are doing okay - Everybody that works in this arena really likes it - they like being in the woods, they like the independence - and we are eternally optimistic" (public forester, retired, Southeast region).

There was also a recognition that change should be expected, as one interviewee put it, "There is an unmet need to accelerate the future of loggers. Any profession needs to continue to evolve and meet the needs of society" (Owner/operator of a family forest business, Pacific West region).

## VI. Conclusions & Recommendations

The United States' logger, landowner, and land manager relationship is at a critical stage. The interconnectedness of the three groups makes knowledge of the work, communication of the process, and understanding of each party's motivations and desires essential to the success of a quality logging operation. In this report, a select group of natural resource professionals, represented with the membership of the Forest Stewards Guild, were invited to voice their opinions, share their recommendations, and provide their experiences and future outlook as it pertains to logger engagement and retention within the framework of ecological forestry. The results of the Guild member survey highlighted the importance of a QLO in meeting the objectives of ecologically based forestry. Through the data, interviews, and the review of prior research conducted in this area, this project stands as a platform for which loggers, landowners, land managers, and forest stewards can continue a dialogue to overcome the issues each entity is facing.

Key recommendations for next steps include:

- Sharing of project results with Forest Stewards Guild members and through regional natural resource organizations and logging associations;
- Gathering of additional input from the logger community, potentially by engaging logging associations in creating and answering a similar survey, and/or by researching additional data about logger's challenges and values toward QLOs;
- Consideration of project results in presentations, workshops, and engagement activities for loggers, landowners, and foresters; and
- Periodic revisiting of data and trends in logger workforce development to inform strategies for recruitment and retention as well as advancement of professional practice.





## Appendix A. Survey and Interview Questions

### Survey Questions:

1. Are you currently a Forest Stewards Guild (Guild) member? (Yes, No, I'm not sure)
2. Please tell us how you would describe your professional role (mark all that apply):
  - o Consulting Forester
  - o Public Agency Forester
  - o Forestry Industry
  - o Biologist/Hydrologist (Wildlife, Soil, Water, birds, etc)
  - o Other Natural Resource Profession
3. What state do you live in? (Listing of 50 states, and Other)
4. a) Please select the top 2 attributes you value in a timber harvest operation. Select up to 2.
  - a) Commitment to clear communication
  - b) Flexibility related to timing of the harvest (Responsive to weather, site conditions, species presence, etc.)
  - c) Options related to equipment used during harvest (cut to length, grapple skidder, etc)
  - d) Versatility to operate on different types of harvests and silvicultural prescriptions
  - e) Training for BMPs, safety, invasive species ID, and current forest science
  - f) Other
4. b) If you selected f (other) above, please explain.
5. How important is a high quality timber harvesting operation in achieving forest stewardship goals? (Rate each quality on a scale 1 through 5 with 5 being of the highest importance. Multiple qualities can be assigned the same rating)
  1. Enhancing carbon sequestration and in our forests (and forest products)
  2. Creating more structurally diverse habitat for forest birds (and other wildlife)
  3. Supporting forest-based communities
  4. Reducing the threat of wildfires (especially near WUI)
  5. Improving resilience to forest threats (pests, disease, climate change)
6. What else would you like to describe in your own words about the importance of high quality timber harvesting operations in fulfilling ecologically, economically, and socially responsible forest management practices specifically?

7. Is it difficult for you to find loggers who can execute your forest management prescriptions in certain circumstances or situations? (Yes/No)

8. If you answered “Yes” to the question above, please explain what types of barriers exist?

9. What ideas do you have about how to recruit and/or retain logging operations that support ecologically, economically, and socially responsible forestry?

10. Based on your answer from the above question, what opportunities and/or barriers are you aware of for implementing these ideas?

11. a) We are looking to supplement our research and survey with your experiences and knowledge of this issue. Are you willing to participate in an anonymous interview for our project? (Yes/No)

11. b) If you answered “yes” to the above, please provide your name, email and or phone number so that we may contact you at a later date.

12. Please add any additional questions, comments or concerns.



## Follow-up Interview Questions:

1. Tell me about yourself and your experience in forestry.
2. What changes to logging operations have you observed over the course of your career in forestry?
3. What makes a logging operation successful?
4. Have you observed any problems, issues or disconnects between loggers and landowners/land managers? If so, what were they?
5. What might be your recommendation to help solve, bridge or fix the differences and conflicts that might arise between loggers and landowners/land managers? NOTE: If the interviewee indicated "No - they don't have a problem finding quality loggers" - this might be an opportunity to ask how they are making it work/ how they are finding success?
6. Do you have hope for the future in terms of finding a solution to any issues you've observed?
7. Any other comments or questions?





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