FOREST BIOMETRICS RESEARCH INSTITUTE
4033 SW Canyon Road
Portland, Oregon 97221

A Non-Profit Research Corporation since 2002
For the advancement of research, education, and service in forest biometrics

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To FBRI Supporting Organizations:

Back in June, after Jim passed, I was deeply concerned about the future of FBRI. Could we keep the Institute going? Well, we rolled up our sleeves and got to work. Richard Zabel and I met on a weekly basis to make sure we tackled every issue that came along, and the Board of Directors met monthly to chart a course for the future of the Institute. Slow but sure, the ship was righted. To move forward, however, our biggest immediate need was to find someone to assist with day-to-day operations. We needed someone who could provide technical support, conduct FPS training sessions, produce "how to" webinars, and walk on water (LOL!). All of us at FBRI could not be more pleased with the outcome of our search. On November 1 we announced that Brock Purvis would be coming on board. As many of you know this will be Brock's second stint with FBRI. A few years ago, he worked closely with Jim providing technical support to FPS users. At this juncture Brock is an excellent fit for the Institute, and I look forward to working with him to make sure our Supporting Organizations get the most out of their investment in FPS with outstanding technical support, training, and guidance. I'm now very enthusiastic about the future of FBRI.

FBRI is also fortunate to have Halli Hemingway as a part-time member of the team. Halli just started working with Jim earlier this year on a process to develop satellite-based forest inventories. Without a doubt, Jim was very passionate about this technology and its potential influence on the science of forest measurements.[1] I am pleased to report that Halli recently completed a satellite-based inventory project for the Colville Tribes that Jim initiated in January 2020. The results are indeed promising and demonstrated the utility of this new approach to forest inventory. To complete the Colville project Halli had to refine the process she jointly developed with Jim. She's already working on another satellite inventory project for the Tongass National Forest. This is outstanding. It's very gratifying to see Halli pick up where Jim left off and push

[1] Arney, J. D., and M.V. Corrao. 2021. The Evolution of Forest Inventory. Japan J Res., Vol 2, Issue 3.

this technology another step forward. I encourage you to stay abreast of this technology and to seriously consider its application the next time you have an inventory project that covers 100,000 acres or more. Contact Richard Zabel at (503) 227-0622 if you're interested in pursuing a FBRI Enterprise Services contract for a satellite-based forest inventory.

Okay, so what am I doing? With Brock handling the day-to-day technical support requests, I have turned my attention to the most important concern of our Supporting Organizations—debugging and stabilizing FPS. I have good news on this front as well. Over the past six months I have evaluated and assembled a collection of FPS programs from Versions 7.55, 7.57, and 7.58 that can be used together to reliably perform the various tasks described in the Forester's Guidebook. This configuration is as follows: Start with FPS Version 7.57 as the base model. Then take the cruise compiler (Fp7Crus.exe) and the re-merchandizer (Fp7Vols.exe) from Version 7.58 and copy those programs into the C:\Fp7 folder. Next, copy the cruise expansion program (Fp7Xpnd.exe) and the GIS update program (Fp7Xgis.exe) from Version 7.55 and paste them into the C:\Fp7 folder. Updating the C:\Fp7 folder in this manner will greatly enhance the stability of your FPS software.

I've also been spending a lot of time taking a hard look at how FPS calculates Scribner Decimal C board foot volumes. Over the past few years, I received several emails from users who noticed that FPS did not always scale logs in accordance with the *Official Rules for Log Scaling and Grading Bureaus developed by the Northwest Log Rules Advisory Group dated January 1, 2011* ("Official Rules"). Thankfully, Jim put all the log scaling computations in a dynamic link library named FPSTree.dll. It took me weeks to modify the Fortran source code and test the results, but, when the task was completed, I had a new FPSTree.dll that computes volumes in strict accordance with the Official Rules. In my opinion, this is an important FPS update for any organization and it is simple to implement. All you need to do is obtain a copy of the new FPSTree.dll and put it in the C:\Fp7 folder.

I want to emphasize that the set of FPS programs mentioned above and the new FPSTree.dll work very well together. I've used this setup to do just about everything a forest inventory manager needs to accomplish including cruise compiling, cruise expansion, re-merchandising, growing an inventory, growing the STAND table using sophisticated silvicultural regimes, and long-term harvest planning. Brock and I will be formally presenting this information to FPS users in a Zoom meeting to be scheduled early next year. If you can't wait for the details, contact Brock today at (406) 541-0054. He can get you set up in no time. During the upcoming year I plan to recompile the

entire set of debugged Fortran programs and release it as FPS Version 7.59. I'm confident that this will be the stable, debugged version of FPS that users have desired for many years.

Another task on my plate is to review the contents of all the flash drives and external hard drives that Jim used to backup and archive the tremendous amount of work he completed over his lifetime. It's an absolute gold mine of information and we are extremely fortunate to have it in our possession. In fact, it has already come in handy. In mid-November I received an email from Liz Cole. She wanted to know if I had access to Excel spreadsheets that Jim developed to analyze Nelder plot data for a scientific paper that she's co-authoring with Jim and Dr. Mike Newton. The good news is that I found the spreadsheets on one of Jim's flash drives. Now I can update the figures that Liz needs, and she can move forward with getting the paper published. As many of you know, Jim was very passionate about the use of Nelder plots to obtain individual-tree distance-dependent growth data. In fact, he encouraged foresters from several organizations to install Nelder plots on their ownerships so they could collect data for their tree species and site-specific conditions. With a little luck and Jim's spreadsheets, I'll be able to assist these foresters with the analysis of their data.

A few months ago, I was contacted by Andrew Davis of Alpine Land Information Services. Alpine has developed an impressive program called Visual Forester, and Andrew wanted to know if we were interested in using it to display FPS data. I jumped on this. In a few short weeks Alpine developed a tool to access data in a DBHCLS table. Brock and I are now in the process of evaluating their software. I think many of you will be extremely interested in Visual Forester because it allows you to display your FPS data in ways that go way beyond what SVS can do. Not only does Visual Forester produce realistic 3D visualizations of a stand, but it also generates classic stand tables, stock tables, diameter distribution charts, and more! For now, stay tuned. In my next letter I'll provide you with an update on this exciting opportunity.

Just a few more things to mention before I close… FBRI will conduct another silviculture and harvesting cost survey in 2022. FBRI has done this survey twice before, in 2016 and 2019, so this will be our third installment of this popular survey. In 2019 we received 53 responses which nicely covered all the regions in the West. When you get the notice for the 2022 survey, please take the time to fill it out. The information you provide will be kept confidential, and survey respondents will get a very informative comprehensive report on forest management costs.

My primary goal in writing this letter is to assure you that FBRI is moving forward. We are in a sound financial position, and we have a solid 2022 workplan that

emphasizes the need to debug and stabilize FPS. Our commitment to providing outstanding technical support, training, and forestry education has never been stronger. And thanks to Jim's mentoring, we can provide timberland owners with valuable Enterprise Services including the aforementioned satellite-based forest inventories. To get where we are today, I want to let you know that our Board of Directors demonstrated exemplary leadership this year in guiding the Institute's direction following Jim's passing. The voyage was really rough for a few months, but things have settled down and it looks like fairly smooth sailing ahead. I'm very enthusiastic about the future. If you have questions or comments about anything you've seen in this letter, I have included contact information in Attachment A for our Board of Directors and FBRI contractors including myself, Brock, Halli, and Richard. I encourage you to get a hold of one of us and let us know what's on your mind.

Lastly, FBRI has set up a scholarship fund to honor Dr. James D. Arney. If you or your organization wish to contribute, please follow this link:

https://fbrinstitute.org/forest-biometrics/passing-of-dr-james-arney/

All of us at FBRI are looking forward to awarding scholarships to deserving students in Jim's name. What a great way to honor Jim and his many contributions to the forestry profession!

Best Wishes and Happy Holidays,

Dan...

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