

Introduction to Quantitative Risk Assessment

21 July 2020 Webinar Q & A

Question: How are crown fire flame lengths calculated?

Answer: The model we have in IFTDSS, Landscape Burn Probability, is the same as FlamMap6. It is the Minimum Travel Time with random ignitions calculations option. FlamMap has great help and details about the calculation methods for all the details. <http://flammaphelp.s3-website-us-west-2.amazonaws.com/>

Question: Can you select what crown fire method you want to use? Finney vs. Scott and Reinhardt?

Answer: Yes, both of those options are available when you set up your model inputs.

Question: Any word on when (or if) we will be able to upload an externally manipulated landscape file?

Answer: We do not have plans to allow that in the near future. It is not due to a lack of users requesting it but more to do with limitations with our mapping platform. If that changes, we will consider it for future development.

Question: How are point and line HVRAs mapped? Is there a buffer applied?

Answer: We do an intersection without a buffer. We do that for all point, line and polygon shapes and shapefiles. We explain the process in the Technical Documentation for Exposure Analysis: <https://iftdss.firenet.gov/firenetHelp/help/pageHelp/content/30-tasks/qwra/exposureanalysis/eatechnicaldoc.htm>

Question: Is raster data created and downloadable for further analysis when doing the different tools separately? Thanks

Answer: Yes! In the download you get everything you would need to do a risk assessment or further analysis with the outputs on your own. That includes the model outputs, rasterized versions of the Sub-HVRAs and the risk outputs. <https://iftdss.firenet.gov/firenetHelp/help/pageHelp/content/30-tasks/qwra/risk/out/downloading.htm>

Question: Will there be a way to send the report over to WFDSS?

Answer: You can download a PDF version of the report from IFTDSS for use elsewhere.

Question: Is it possible to bring a burn probability analysis from FlamMap into IFTDSS...if area is greater than 3.5million acres?

Answer: Unfortunately not, the only types of files you can bring to the mapping of IFTDSS are shapefiles.

Question: Would these tools be suitable for evaluating changes in risk after implementation of fuelbreaks such as greenstrips in sagebrush steppe?

Answer: Yes, we are currently working on a Comparison Dashboard that will automate this process. We do have some great help content on best practices of how to do that now with the functionality we have released. <https://iftdss.firenet.gov/firenetHelp/help/pageHelp/content/30-tasks/qwra/risk/qwraconsiderations.htm>

Question: In LBP is there a way to differentiate high ignition probability vs low probability ignition locations? If not, how (or does) the LBP account for this? Or is it just random?

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Answer: The model does not include the ability to use an Ignition Density grid. This is a limitation in FlamMap as well. It uses random ignitions across the entire landscape area including the buffer.

Question: How is spotting accounted for when simulating linear fuel breaks?

Answer: You set the spotting probability percentage. We have a great help section about the specifics behind the modeling of spot fires,
<https://iftdss.firenet.gov/firenetHelp/help/pageHelp/content/20-models/lbp/in/spotlbp.htm>

Question/Comment: I would humbly suggest if comparing units to not utilize the same weather data unless the unit's weather is very similar. Instead, I might suggest a weather analysis in FFP or similar to identify relevant weather scenarios (probably percentiles) to compare apples to apples.

Answer: Very good point. The same percentile inputs were used for the comparisons presented. We might have misspoke what was done during the webinar. We have suggested what you are saying in our help page as well,
<https://iftdss.firenet.gov/firenetHelp/help/pageHelp/content/30-tasks/qwra/risk/qwraconsiderations.htm>