

# Changes to eFlows Explorer

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This document outlines updates and changes that have been made to *eFlows Explorer*. Please read the documentation below carefully to understand the implications that these changes may have on the outputs of the tool. For further clarification, please email Doug Booker at [doug.booker@niwa.co.nz](mailto:doug.booker@niwa.co.nz).

## Suggested citation

Booker, D.J., Whitehead, A.L. (2021). eFlows Explorer: An interactive tool for exploring how water resource limits can be set. NIWA, Christchurch. <https://shiny.niwa.co.nz/eflowsexplorer/>

## Version 1.1.2

*Release Date: 10 November 2021*

- Added a link to a video demonstration of why and how to use eFlows Explorer.

Booker, D.J., Whitehead, A.L. (2021) eFlowsExplorer: demonstration of the environmental flows explorer web tool. *Presentation to Surface Water Integrated Management (SWIM) Regional Council Special Interest Group, June 2021*. Recording available at: <https://vimeo.com/566791351>

## Version 1.1.1

*Release Date: 15 June 2021*

Changes to make outputs more intuitive - these will not change the values of the results.

- Applied human readable labels to input download file.
- Rationalised columns and some column names for output download file.
- Added “FDC month label” to graphs and legends so that user can see which FDC was used for all results.

## Version 1.1.0

*Release Date: 9 June 2021*

- Generalised habitat predictions for a range of fish species were added.
- Added monthly flow duration curves for calculating reliability of water supply.
- Added the ability to download the input settings and output data.

## Version 1.0.0

*Release Date: 1 November 2020*

- Initial release of eFlows Explorer on NIWA’s external shiny server.

## References

- Booker DJ (2010) Predicting width in any river at any discharge. *Earth Surface Processes and Landforms* 35: 828–841.
- Booker DJ, Woods RA (2014) Comparing and combining physically-based and empirically-based approaches for estimating the hydrology of ungauged catchments. *Journal of Hydrology* 508: 227–239.
- Snelder TH, Booker DJ, Lamouroux N (2011) A method to assess and define environmental flow rules for large jurisdictional regions. *Journal of the American Water Resources Association* 47: 828-840.

## Acknowledgements

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