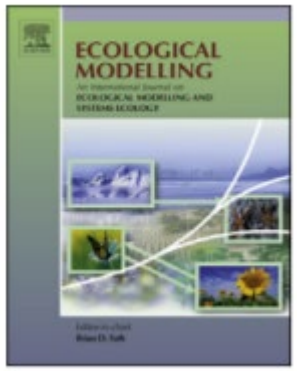

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Segment-based assessment of riparian buffers on stream water quality improvement by applying an integrated model

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GOALS:

- Develop a robust model for evaluating more variability in riparian buffer management approaches
- Look at effectiveness of riparian buffers with varying characteristics at improving water quality at sub-watershed scales

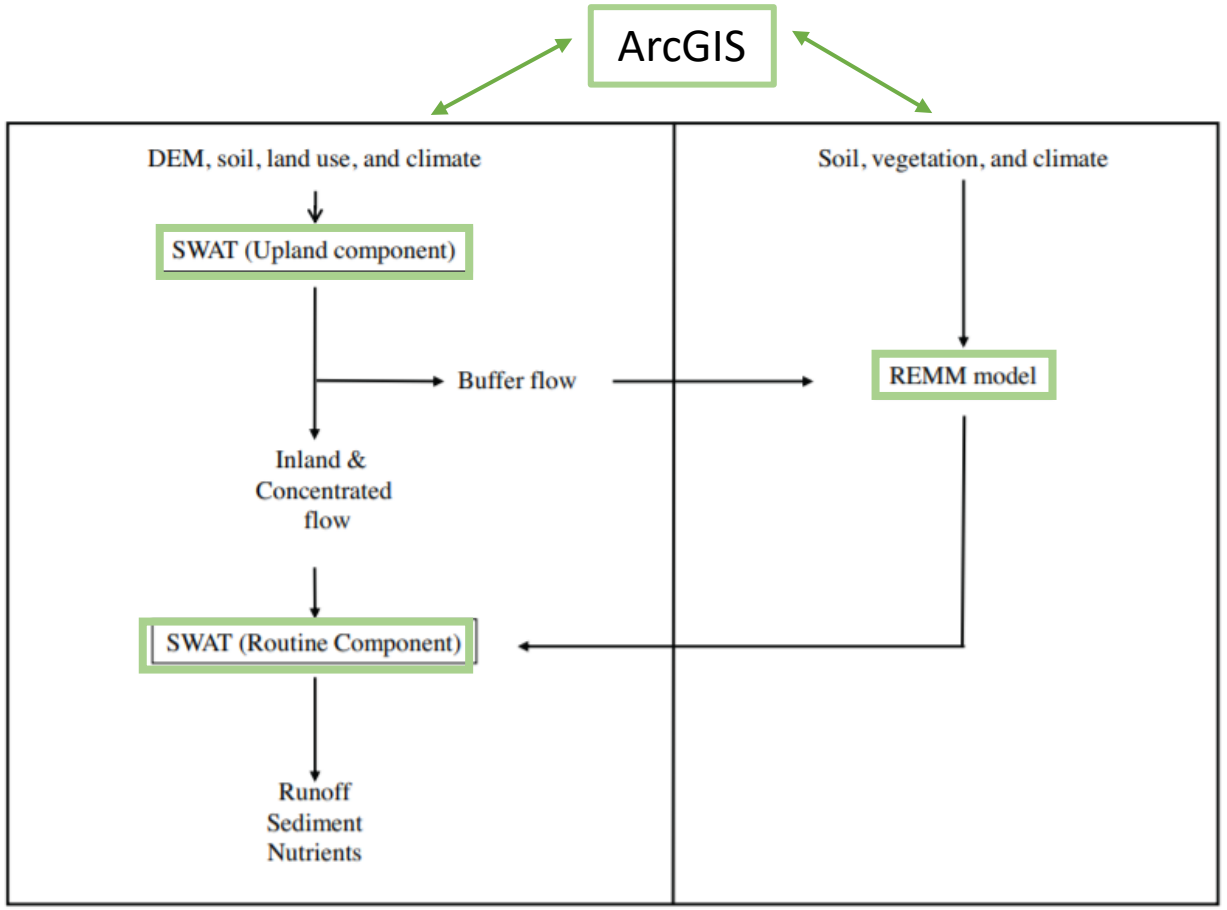

Fig. 1. Overview of the integration of the Soil and Water Assessment Tool (SWAT) and the Riparian Ecosystem Management Model (REMM).

Study Site: Black Brook Watershed

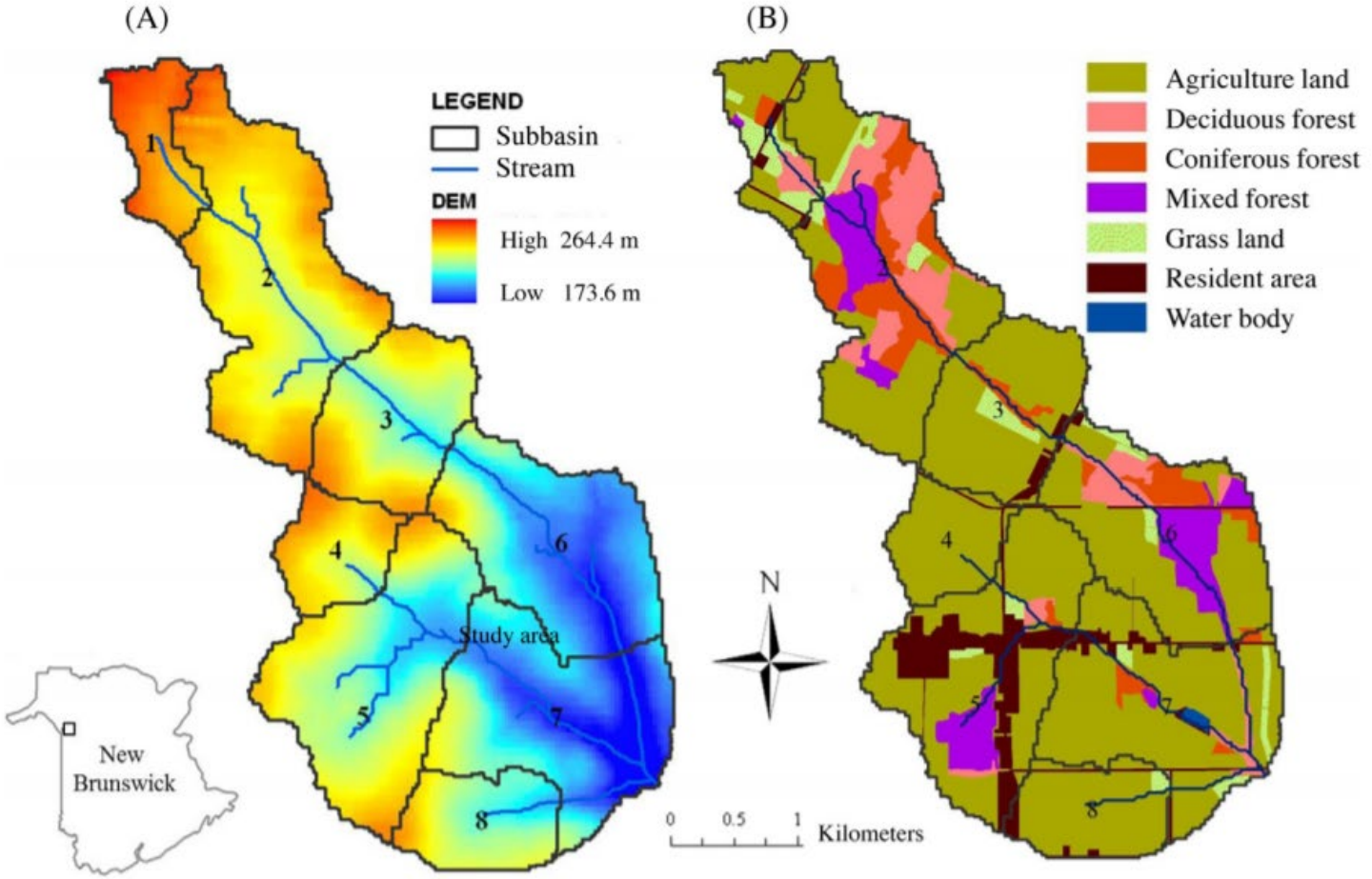

Fig. 4. Topography (A) and agriculture land and riparian buffer zones (B) in the Black Brook watershed.

Study Site: Black Brook Watershed

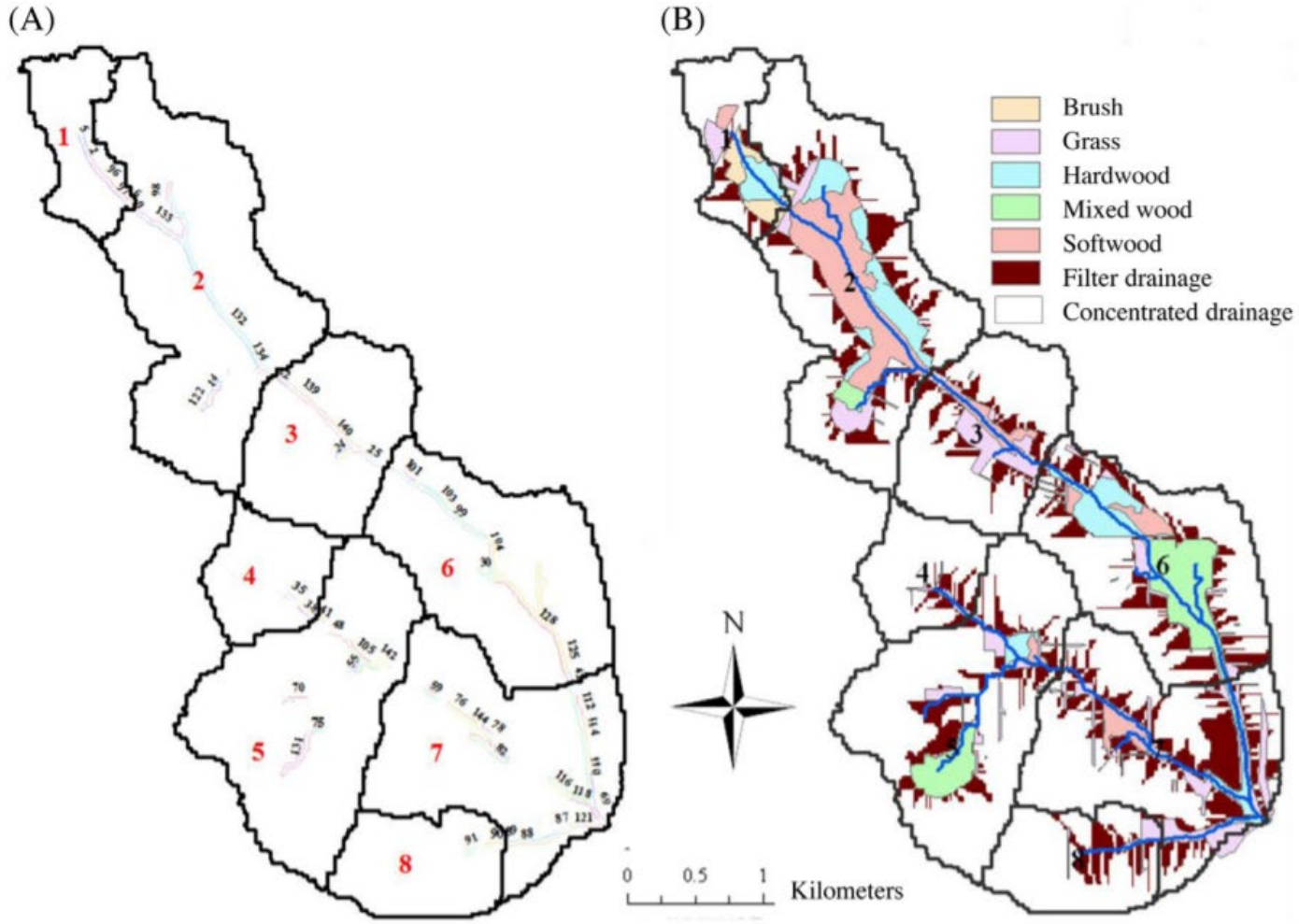

Fig. 5. Stream buffer segments divided (A) and corresponding buffer drainage and effective buffer (B) in Black Brook Watershed.

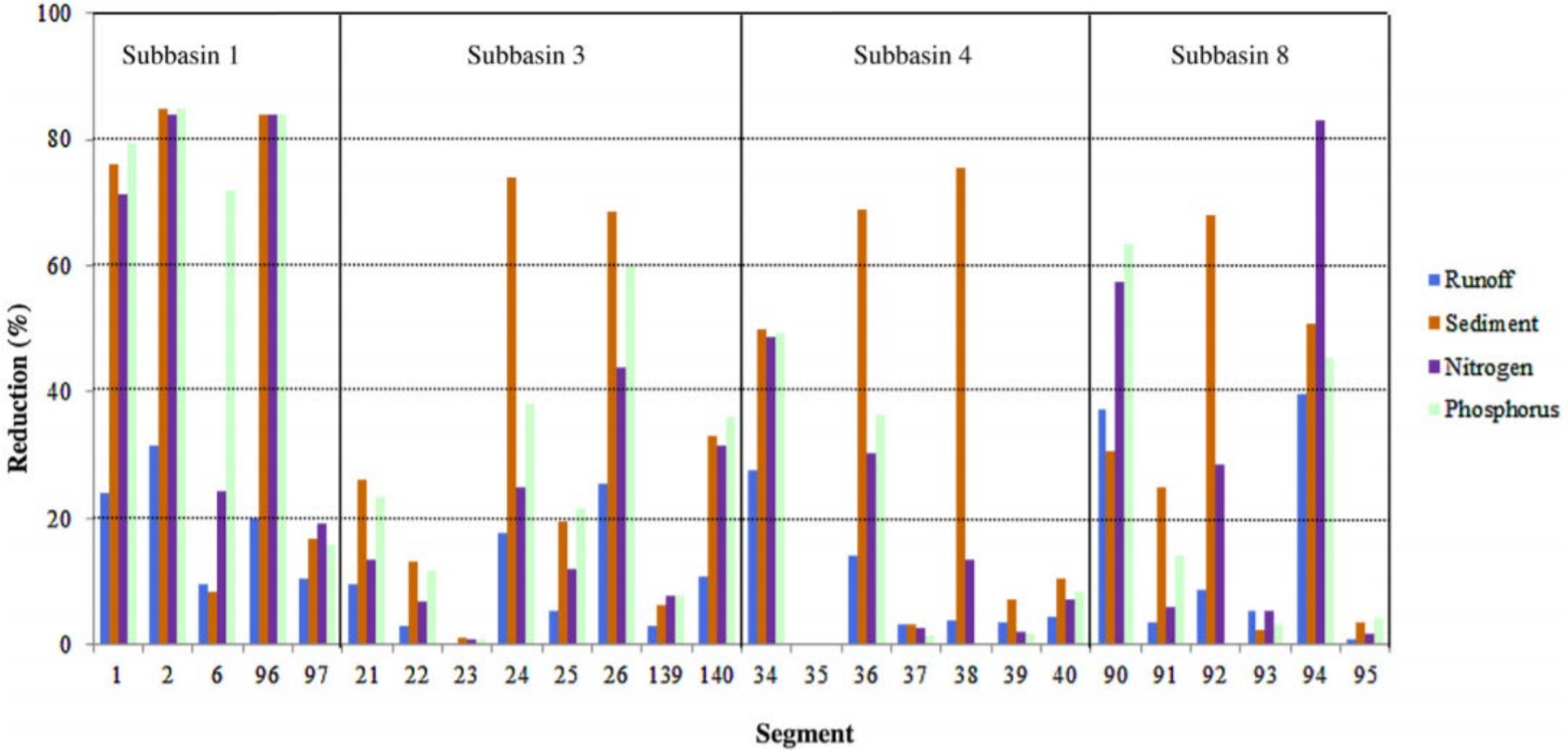

Fig. 6. Model predicted reduction of runoff, sediment, nitrite, and phosphorus reduction by each buffer segment.