Dear Editor,

In this revised version of the manuscript, we have added a paragraph noting some of the limitations of the geostatistical methods, landscape pattern metrics and landscape metrics and the cellular automate models. This addition is included in the discussion in **lines 530:542** in the revise version as

“*We note that the spatial scale (i.e., spatial resolution and extent) can strongly influence various landscape pattern metrics (e.g., Wu et al., 2002; Levin 1992; Chou, 1991) we have used in this study. Geostatistical methods (e.g., semivariogram) are inherently affected by cell-size (Lausch et al., 2013; Atkinson and Tate, 2000, Atkinson, 1993) while cellular automata models are also influenced by cell- and neighborhood-size (Pan et al., 2010; Ménard and Marceau, 2005;**Chen, 2003). Our modeling results and interpretations are based on 10m grid size. While the minimum mapping unit (MMU) varies from 20-50 m (Nungesser, 2011; Rutchey et al., 1995), smaller features (< 10 m) are apparent in these mapping products. Setting raster and model resolution at 10 m captured the majority of perceivable features without requiring untenable computation times. The neighborhood-size in our model is controlled by local-facilitation parameters kx and ky which highlights that different neighborhood sizes produce patterns with remarkably different spatial attributes and only a few parameter combinations can produce the patterns that are highly consistent with the reference ridge-slough landscape*.”

We also believe that inclusion of these points have improved our paper. Thank you for your comment and suggestions.