**Supporting Information for:** Applying a deep learning pipeline to classify low-quality historical RGB imagery into land cover classes

Harold N. Eyster $^{1,2,*}$  and Brian Beckage $^{1,2}$ 

<sup>1</sup>Gund Institute for Environment, University of Vermont, USA <sup>2</sup>Department of Plant Biology, University of Vermont, USA

\*Corresponding author. Please direct any questions or comments to haroldeyster@gmail.com.

## 1 Additional figures

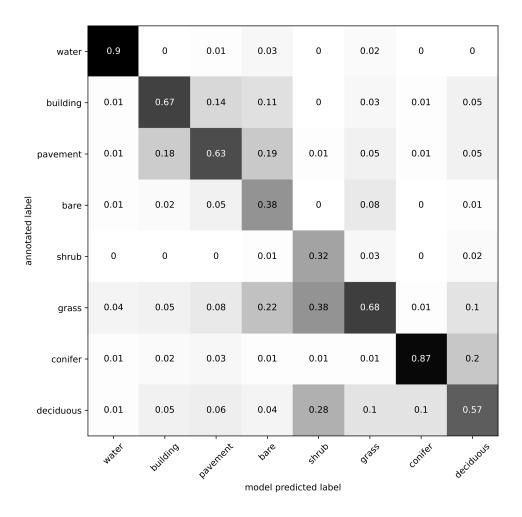


Figure S1: Modern confusion matrix, normalized by column.

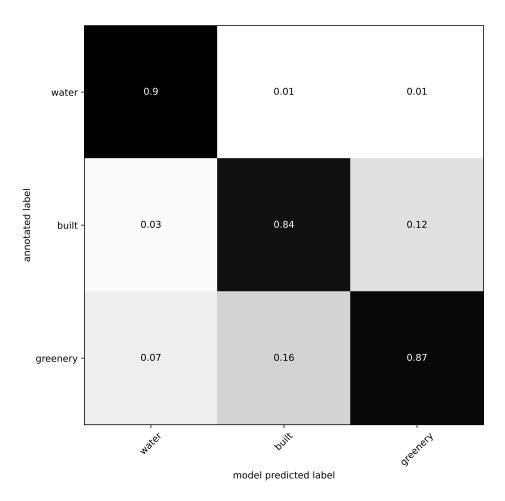


Figure S2: Modern confusion matrix after binning into water, built, and greenery categories, normalized by column.

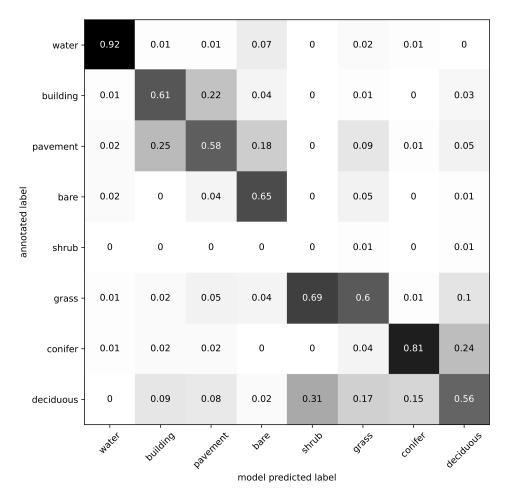


Figure S3: Historical confusion matrix after training on hand-annotated historical imagery augmented by rotation, normalized by column.

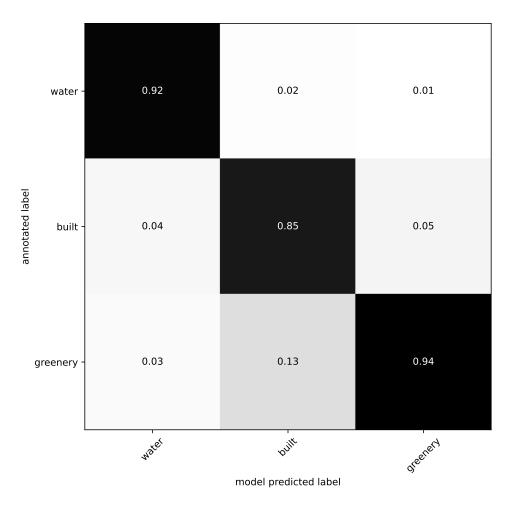
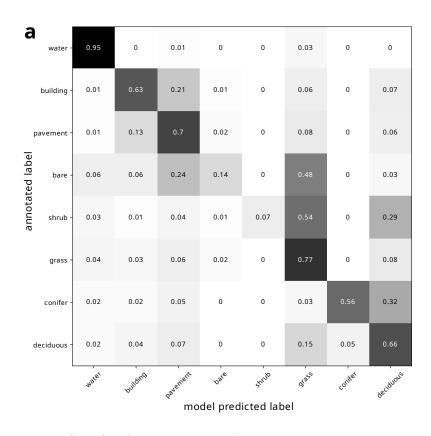


Figure S4: Historical confusion matrix after binning into water, built, and greenery categories and after training on hand-annotated historical imagery augmented by rotation, normalized by column.



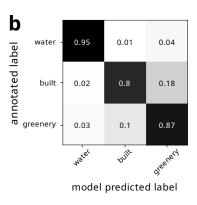


Figure S5: Confusion matrix of modern land cover model predictions, normalized by row of (a) all land cover types and (b) binned land cover categories

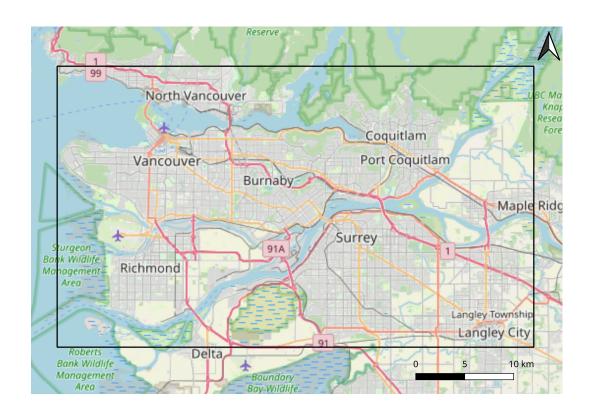


Figure S6: Map of Metro Vancovuer, with black bounding box showing extent of training data. Basemap  $\bigcirc$  OpenStreetMap.

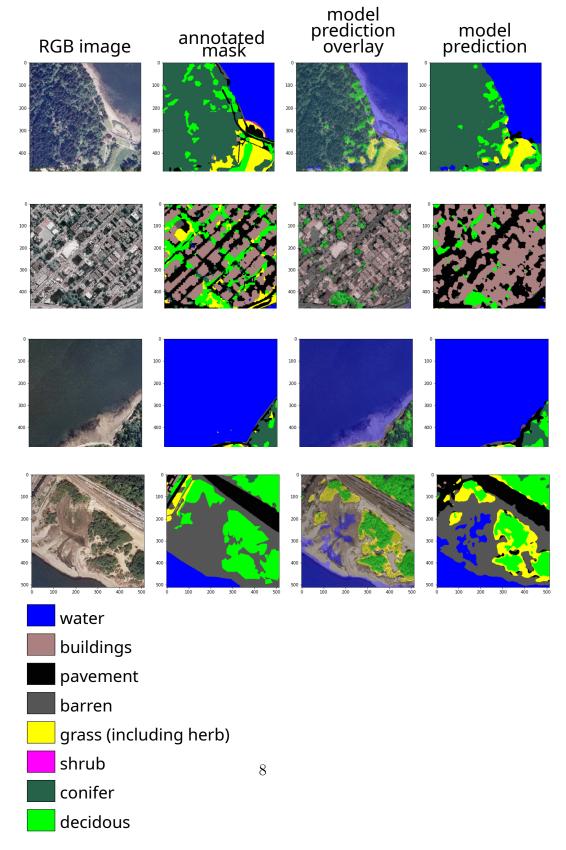


Figure S7: Historical RGB imagery tiles and land cover predictions.