

Supplementary Information

Predicting the presence of Groundwater Influenced Ecosystems in the northeastern United States with ensembled
models

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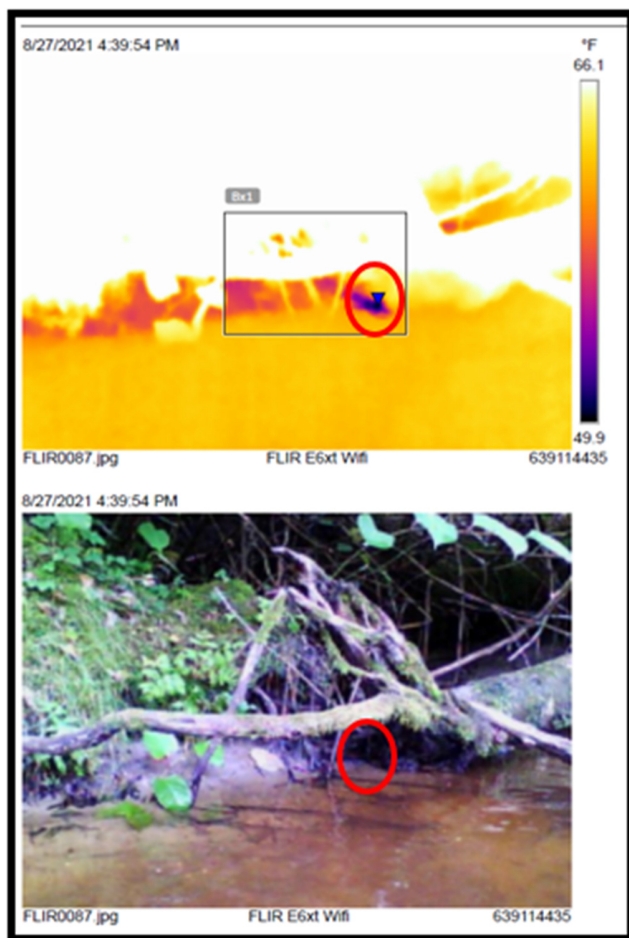


Figure S1. Location of groundwater discharge in a stream in southern Maine identified with a handheld thermal camera. The top image is the thermal image indicating the water temperature (degrees Fahrenheit) in the frame. The dark blue area (red ellipse) indicates the coldest water in the frame (blue triangle indicates coldest pixel in the frame) and is where groundwater is discharging into the stream. The ellipse in the bottom truecolor image indicates the corresponding area in the thermal image. Photo credits: Shawn Snyder taken with FLIR E6xt camera.

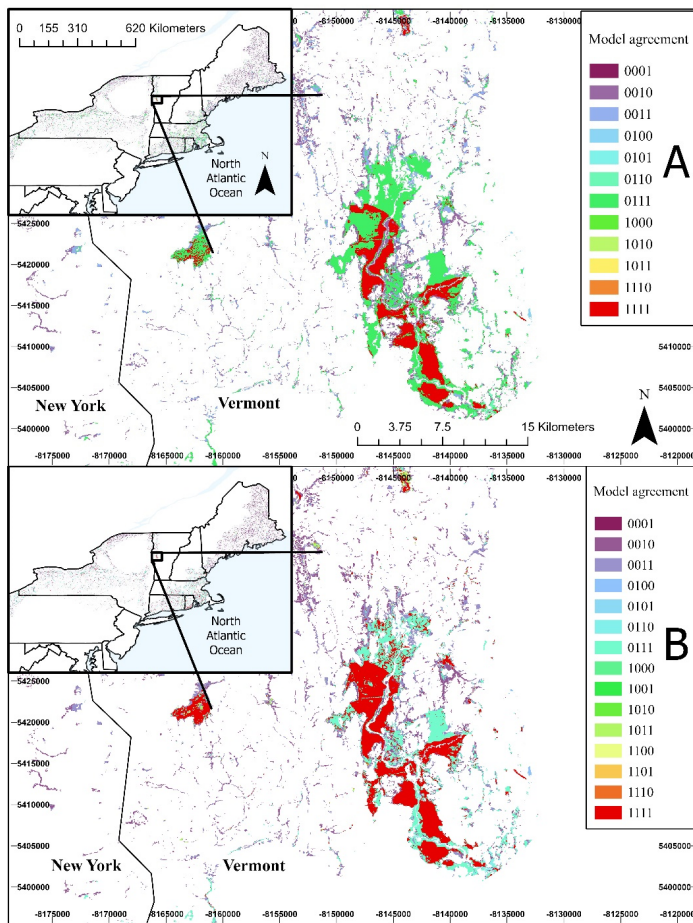


Figure S2. Model agreement maps for the Mixed Wood Plains EPA Level II Ecoregion. Image A depicts where there is agreement among the four modeling methods for areas predicted to be suitable (> 0.70). Image B depicts areas of model agreement based on the Natural Breaks threshold. We assigned suitable areas in GAM models a value of 1, GLM models a value of 10, maxent models a value of 100 and Random Forest models a value of 1000. For example, if a pixel had a value of 0111 that would indicate the Generalized Additive Model (GAM), Generalized Linear Model (GLM) and maxent models were in agreement for that pixel but the Random Forest model was not (i.e., $0 + 1 + 10 + 100 = 0111$).

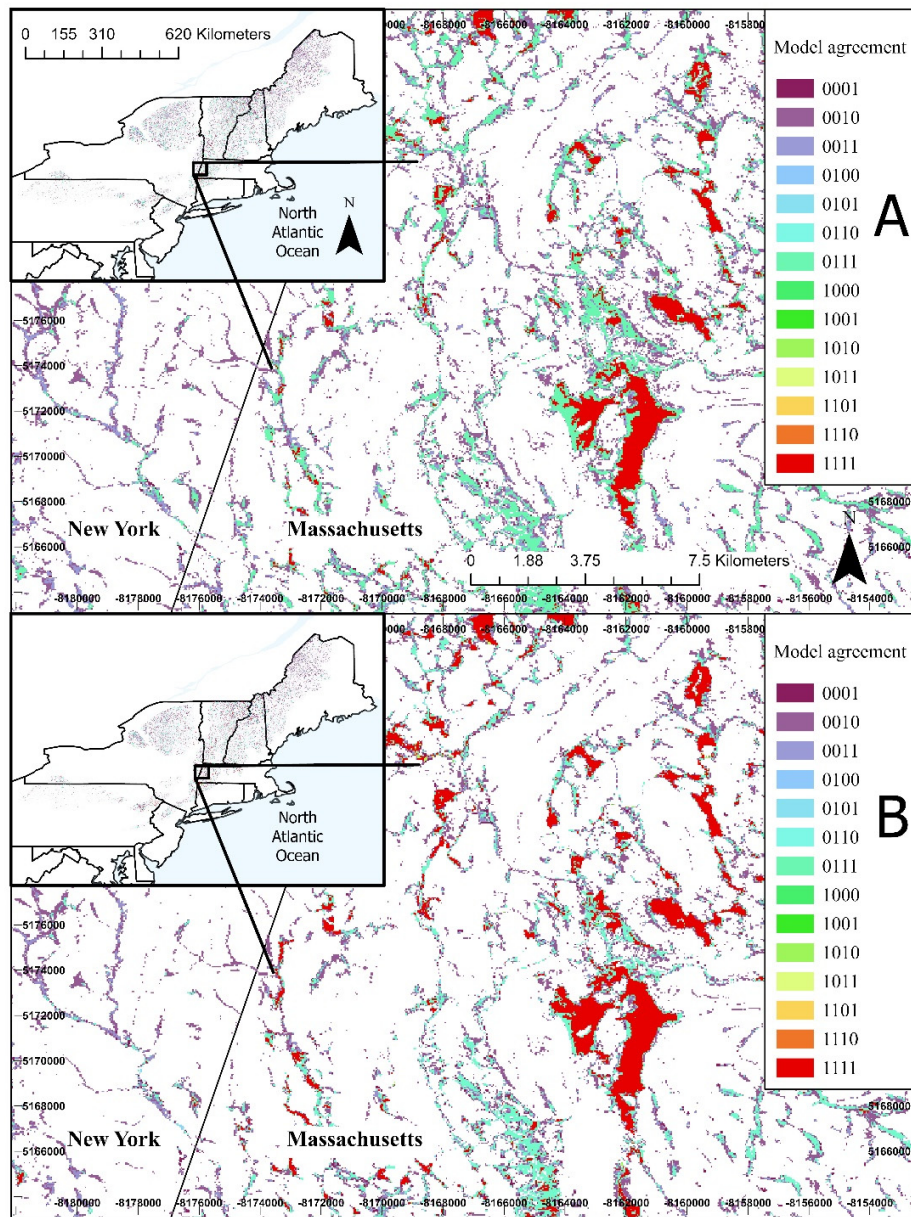


Figure S3. Model agreement maps for the Atlantic Highlands EPA Level II Ecoregion. Image A depicts where there is agreement among the four modeling methods for areas predicted to be suitable (> 0.70). Image B depicts areas of model agreement based on the Natural Breaks threshold. We assigned suitable areas in Generalized Additive Model (GAM) models a value of 1, Generalized Linear Model (GLM) models a value of 10, maxent models a value of 100 and Random Forest models a value of 1000. For example, if a pixel had a value of 0111 that would indicate the GAM, GLM and maxent models were in agreement for that pixel but the Random Forest model was not (i.e., $0 + 1 + 10 + 100 = 0111$).

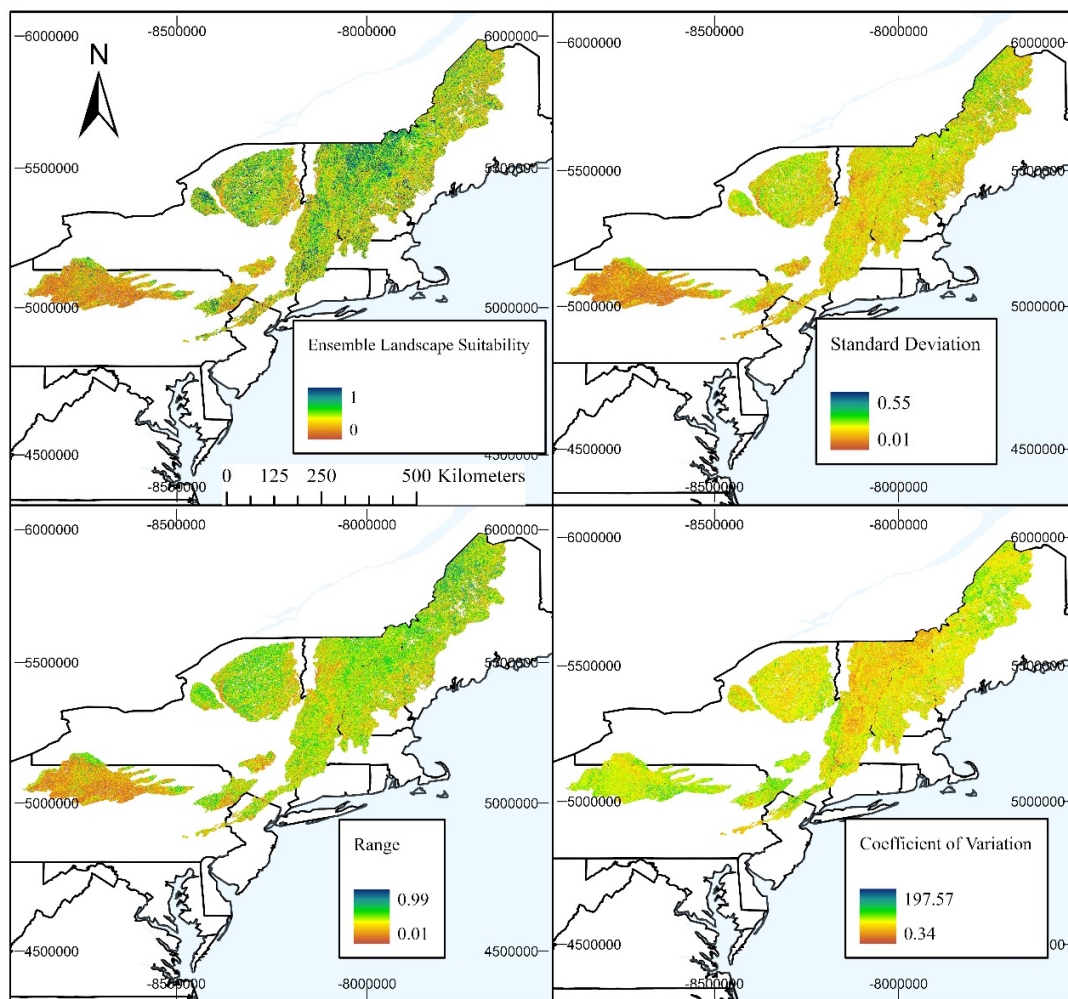


Figure S4. Ensembled model predicted suitability for groundwater influenced ecosystem occurrence and measures of uncertainty from the ensemble predictions in the Atlantic Highlands EPA Level II Ecoregion.

