



NatureServe

Connecting Science With Conservation

Questions We Answer

- *What Is It?*
- *Where Is It?*
- *How Is It Doing?*
- *What Can We Do?*

90,000+



Species Assessed

7,000+



Ecosystem Types Classified



| ENVIRONMENT |

One million species at risk of extinction, UN report warns

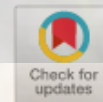
A landmark global assessment warns that the window is closing to safeguard biodiversity and a healthy planet. Yet solutions are in sight.

US protected lands mismatch biodiversity priorities

Clinton N. Jenkins, Kyle S. Van Houtan, Stuart L. Pimm, and Joseph O. Sexton

PNAS April 21, 2015 112 (16) 5081-5086; first published April 6, 2015 <https://doi.org/10.1073/pnas.1418034112>

Edited* by Edward O. Wilson, Harvard University, Cambridge, MA, and approved March 17, 2015 (received for review September 23, 2014)



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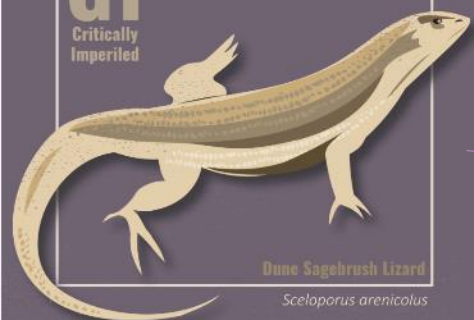
G1
Critically
Imperiled



Lost River Sucker
Deltistes luxatus

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NatureServe
Global Status
G1
Critically
Imperiled



Dune Sagebrush Lizard
Sceloporus arenicolus

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G1
Critically
Imperiled



Orcutt's Spineflower
Chorizanthe orcuttiana

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G3
Vulnerable



Salamander Mussel
Simpsonia ambigua

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G2
Imperiled



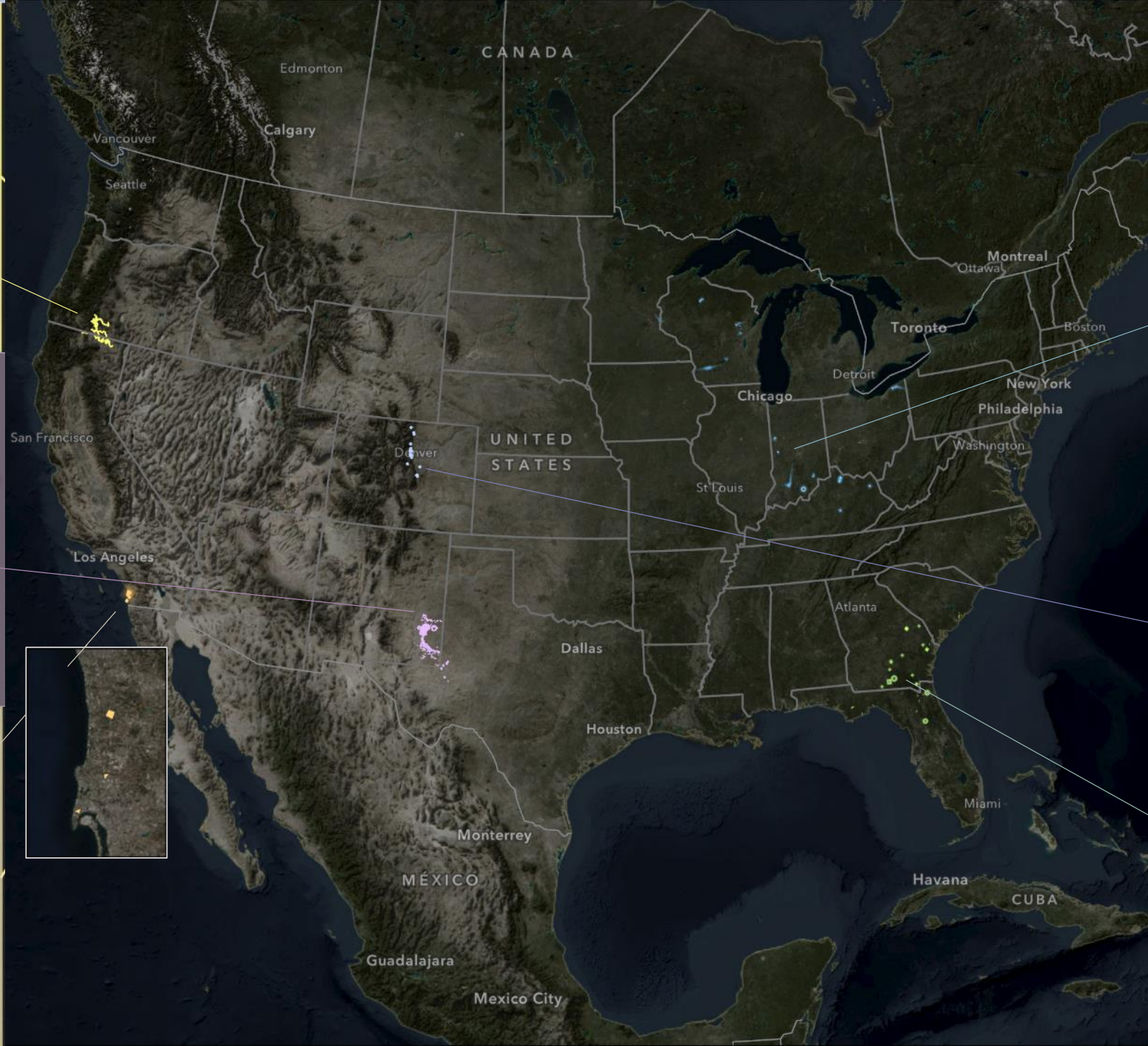
Hops Azure Butterfly
Celastrina humulus

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G2
Imperiled



Frosted Flatwoods Salamander
Ambystoma cingulatum



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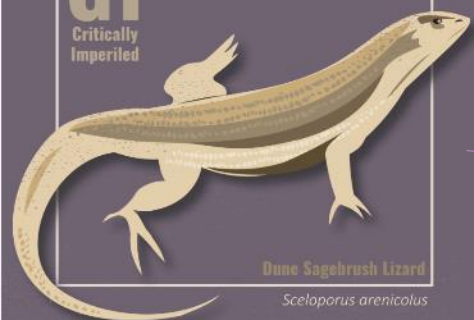
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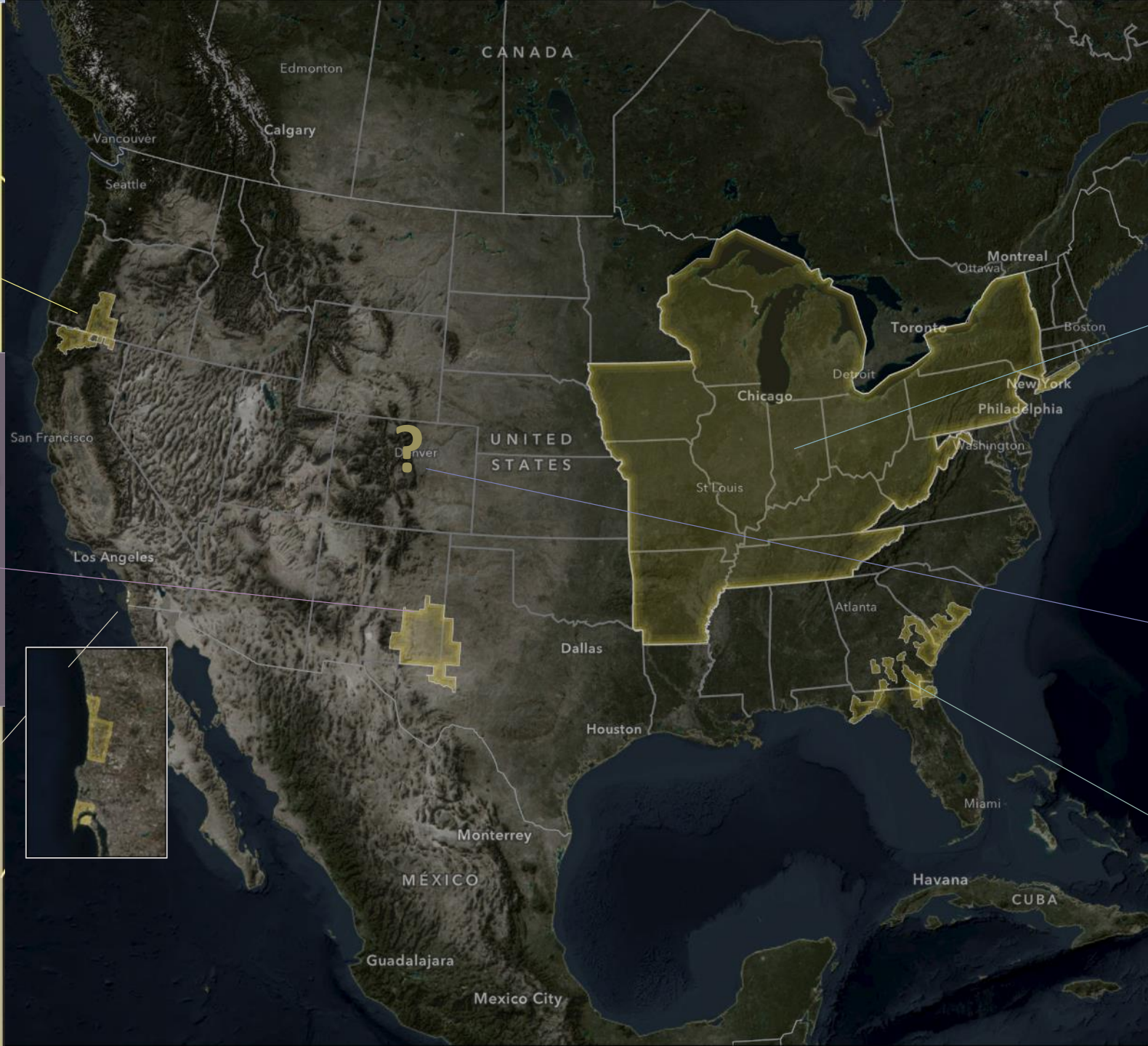
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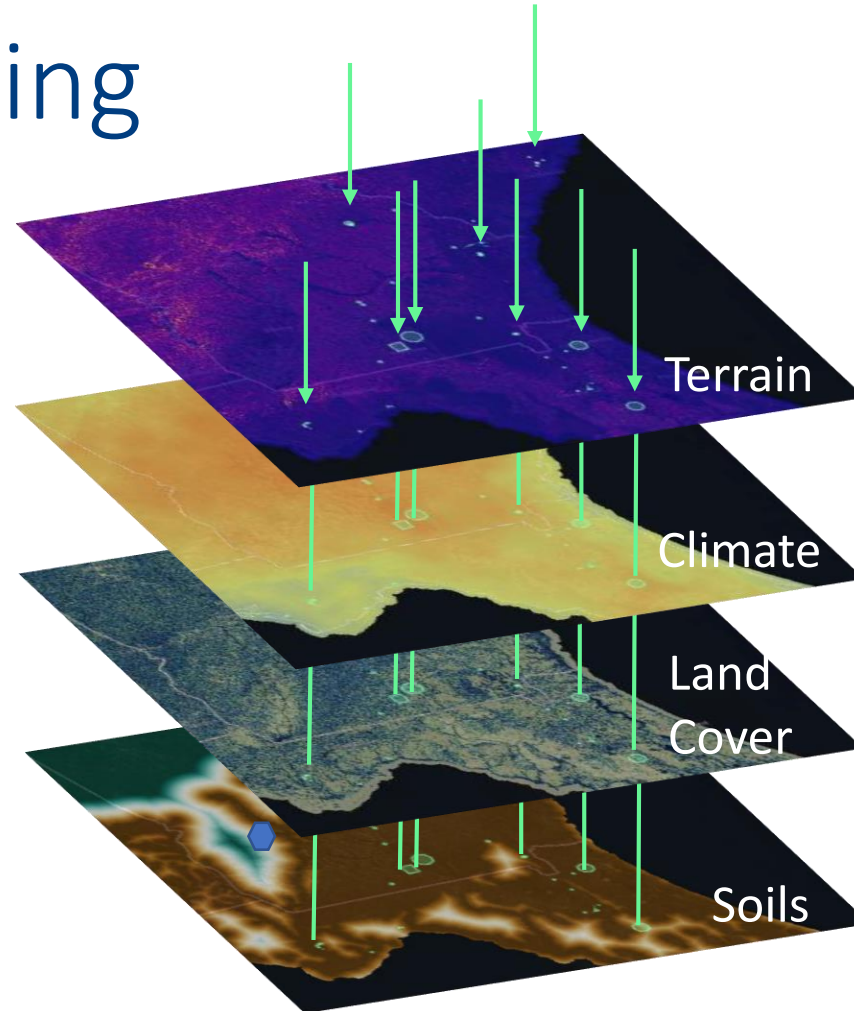


Frosted Flatwoods Salamander
Ambystoma cingulatum

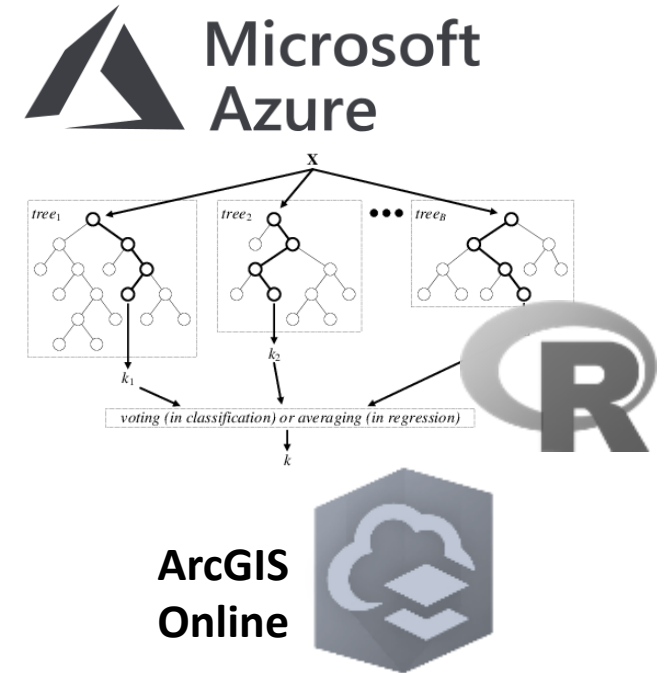
Building Better Distribution Data with Predictive Modeling



Network Training
Data

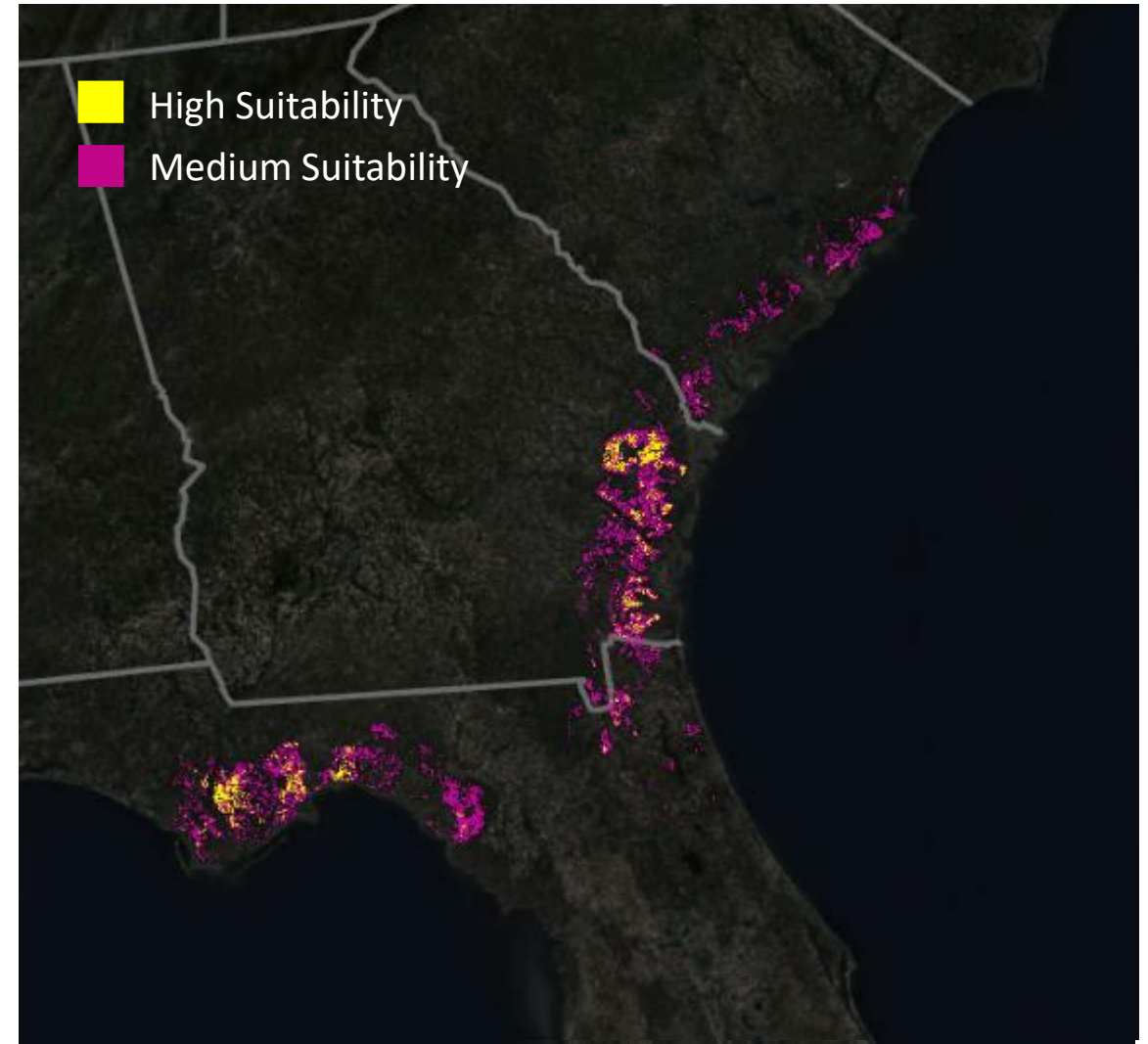
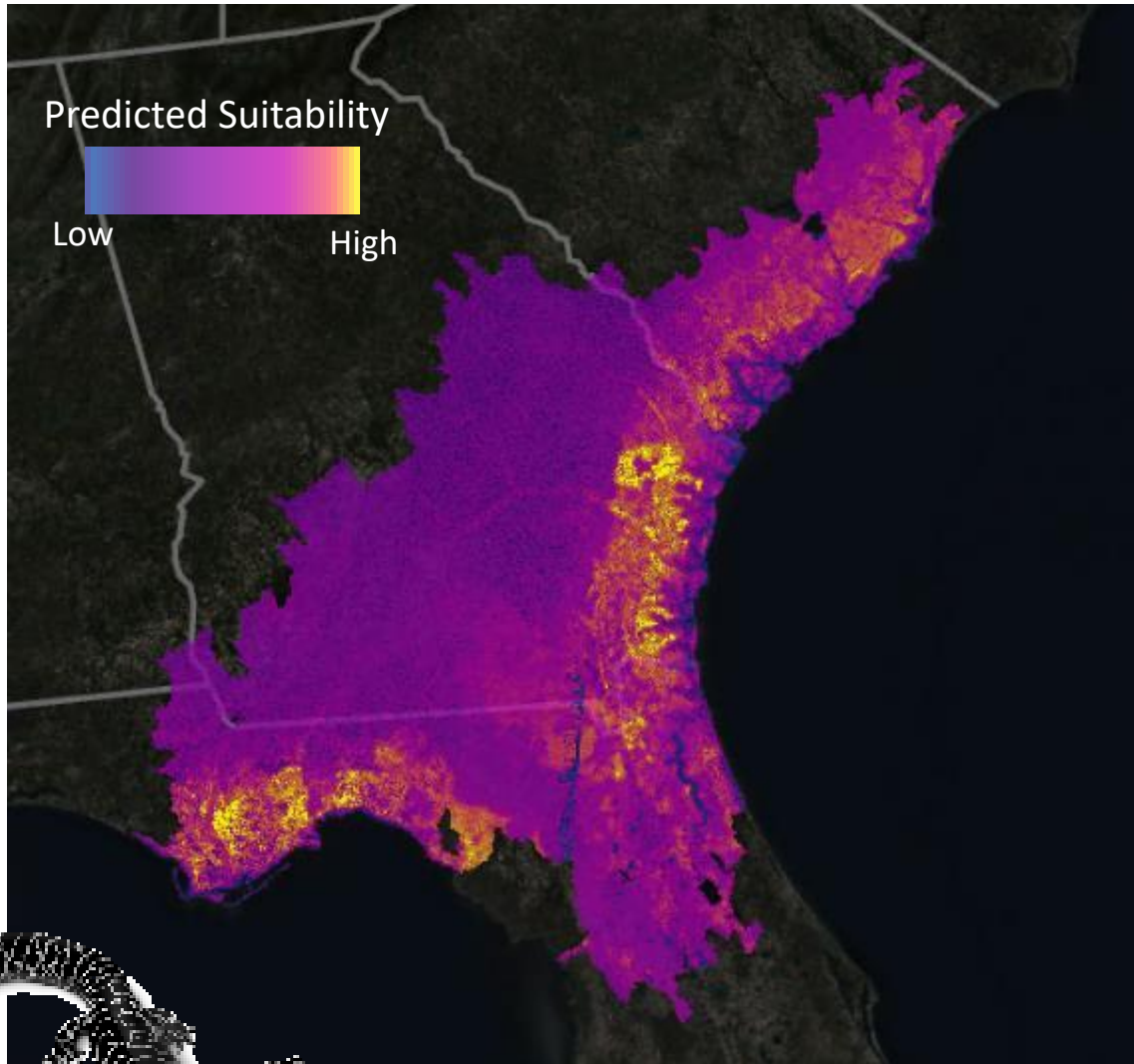


Environmental
Predictor Library

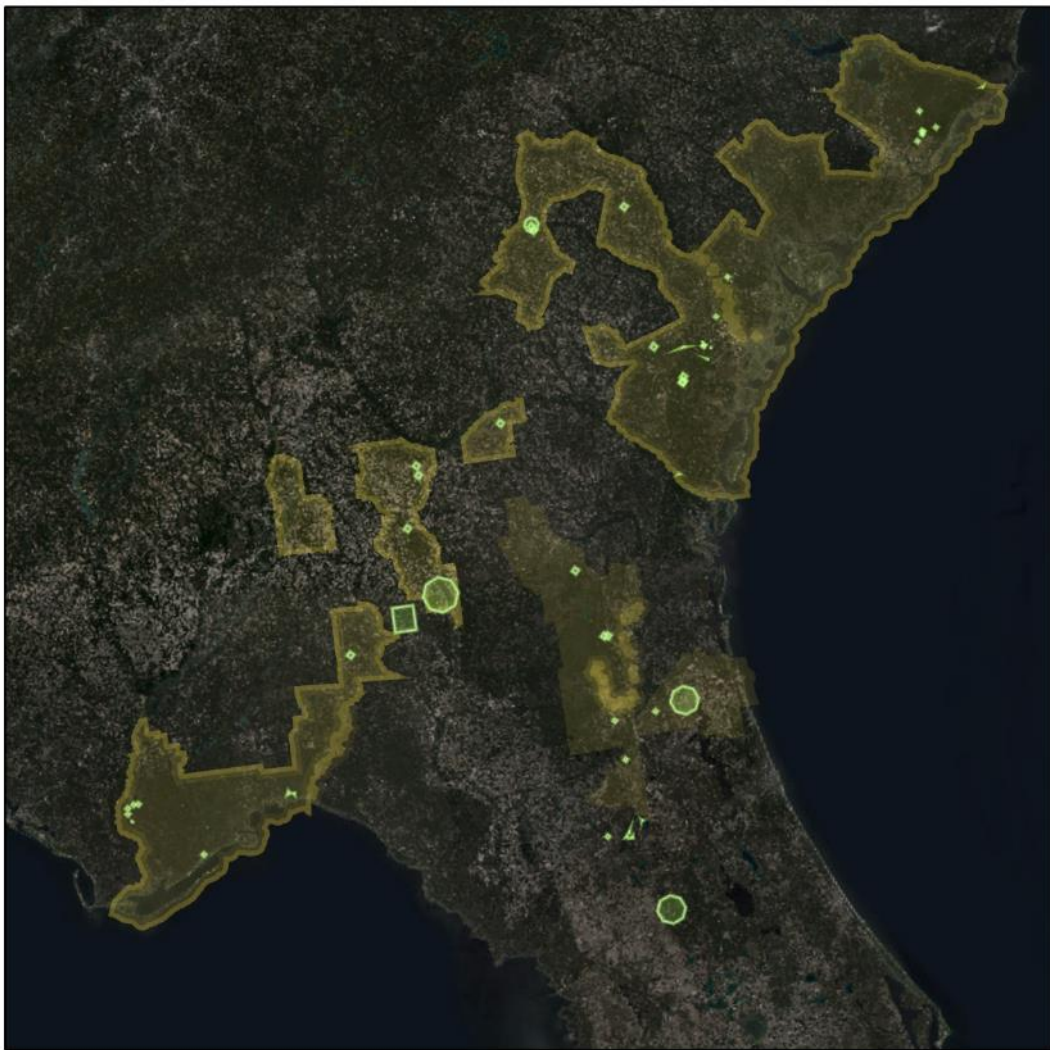


Machine Learning

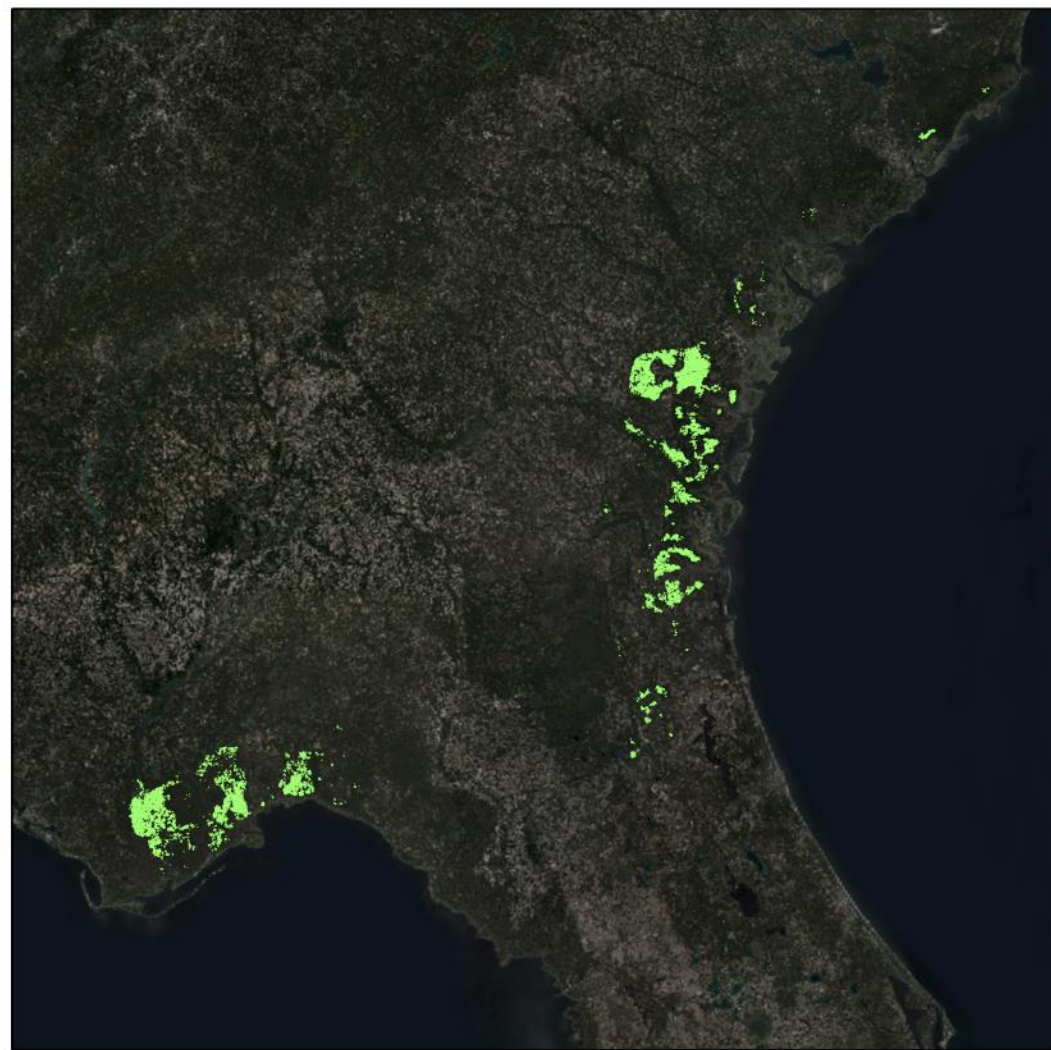
Results



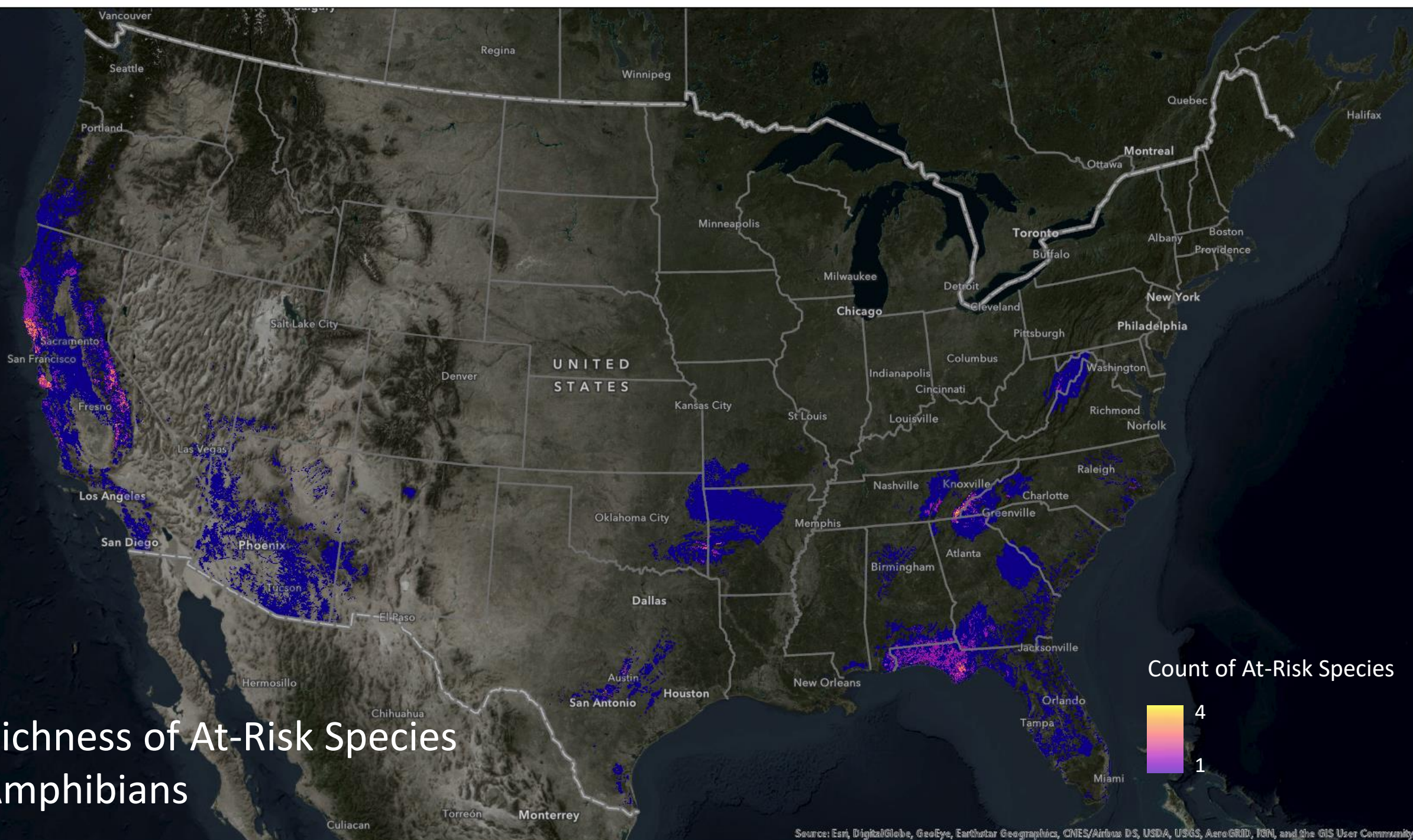
Before



After



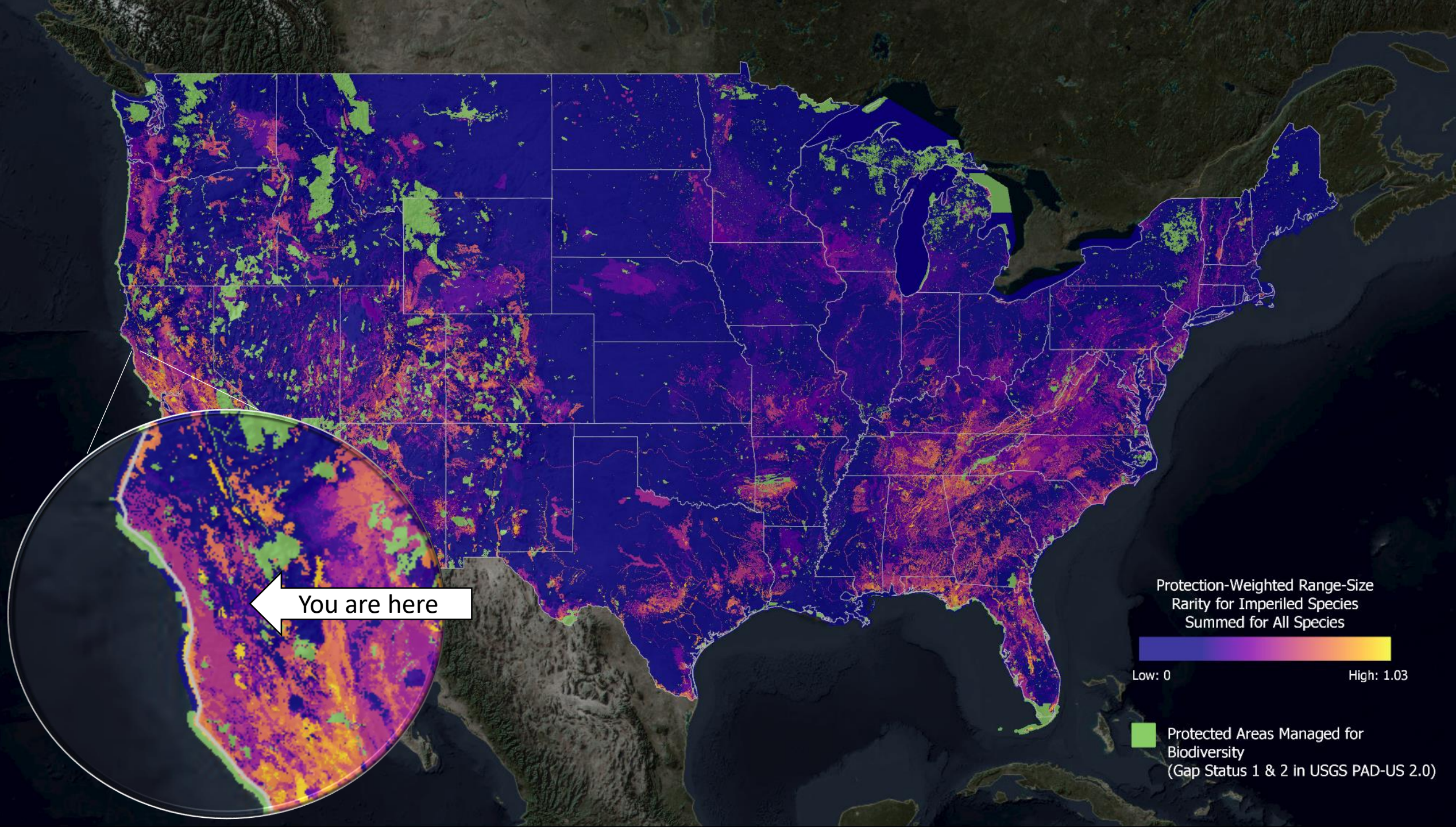
Richness of At-Risk Species Amphibians



Species Richness for Imperiled Species

Count of
for Imperiled Species





Keys to Success

- Standardized, ground-truthed training data
- Partnerships between tech and front line actors
- Human-mediated review of ML outputs

