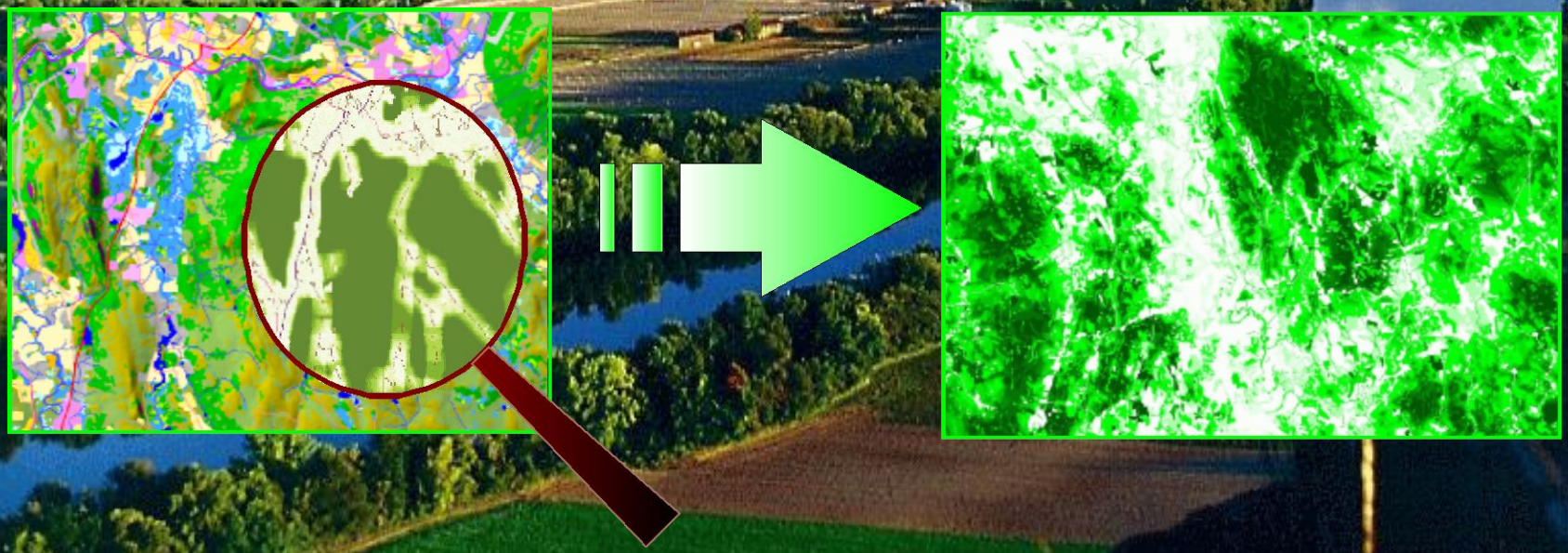
Designing Sustainable Landscapes in the Northeast

A project of the North Atlantic Landscape Conservation Cooperative & Northeast Climate Science Center

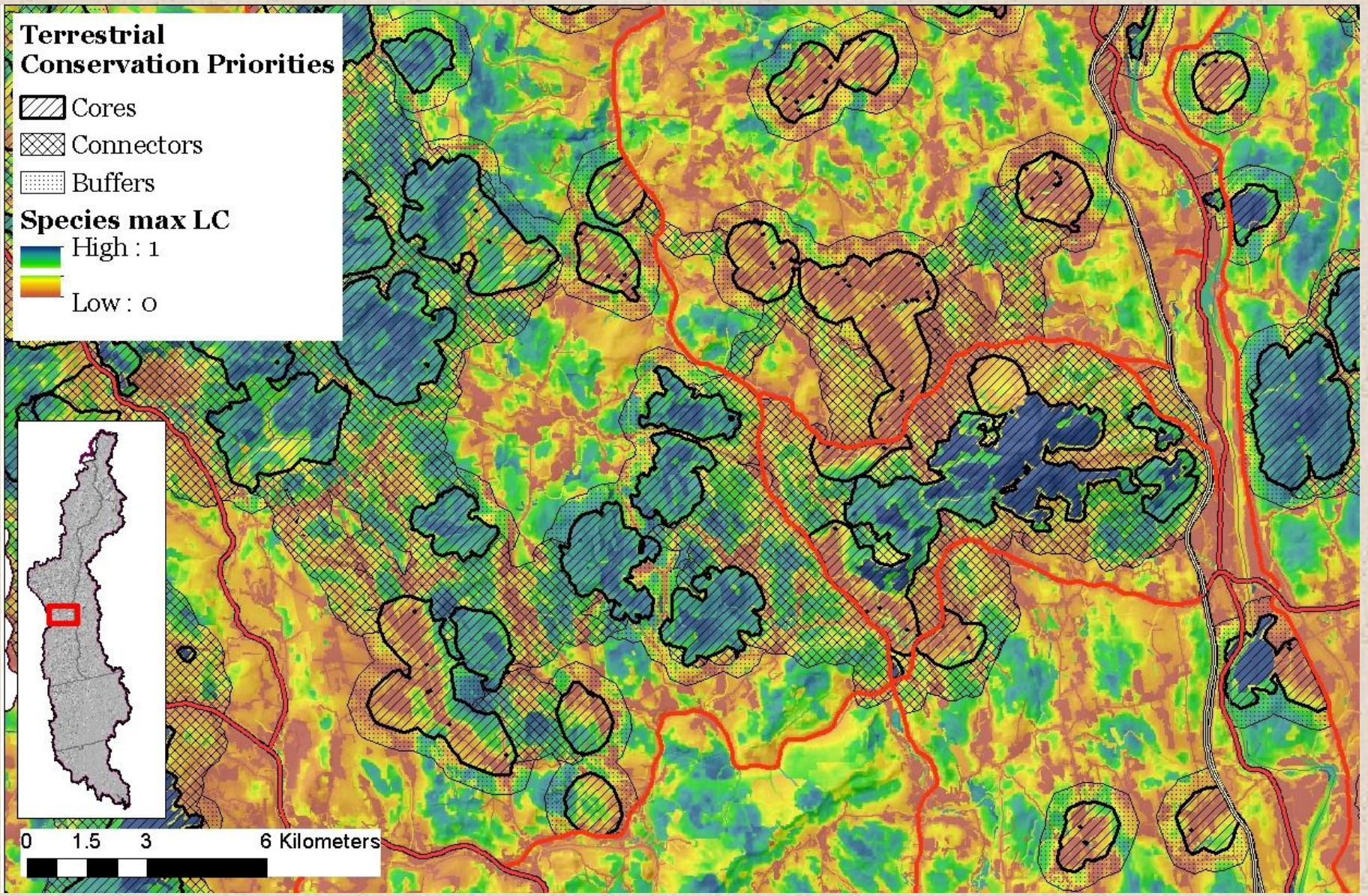
Landscape Conservation Design

January 30, 2014



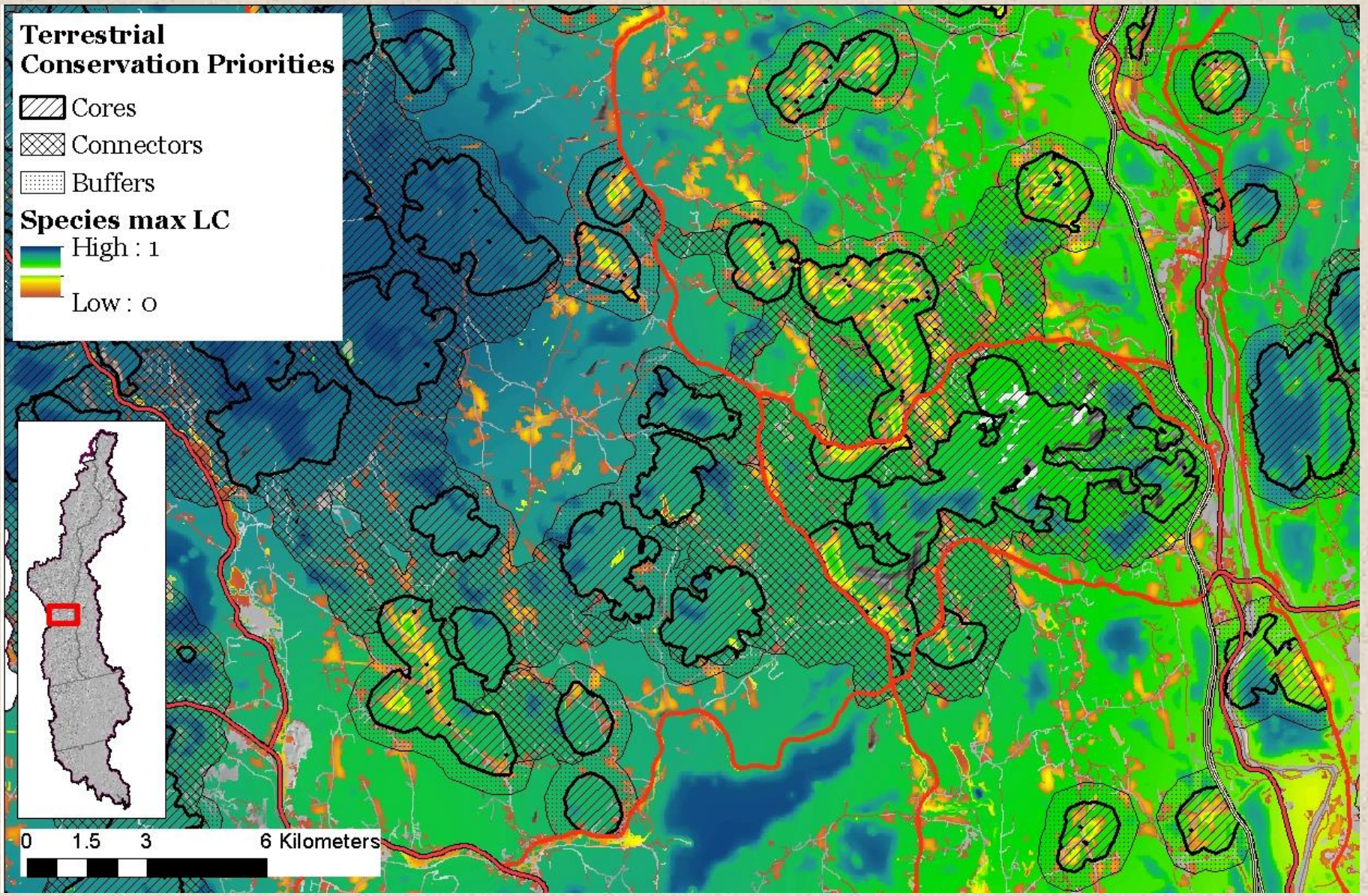
Conservation Tiers/Priorities

Ecosystem value



Conservation Tiers/Priorities

Species value



Conservation Tiers/Priorities

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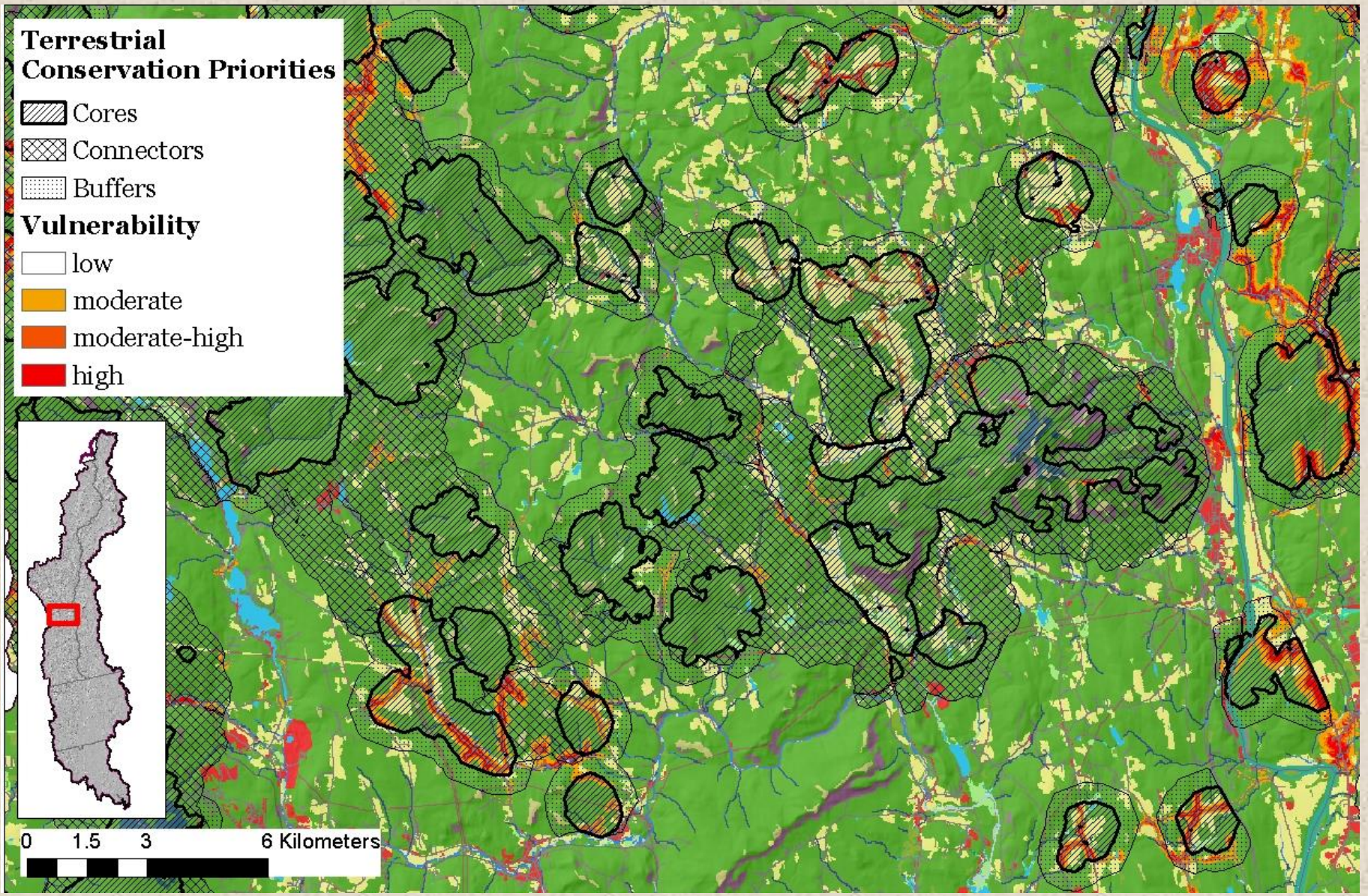

Conservation Tiers/Priorities

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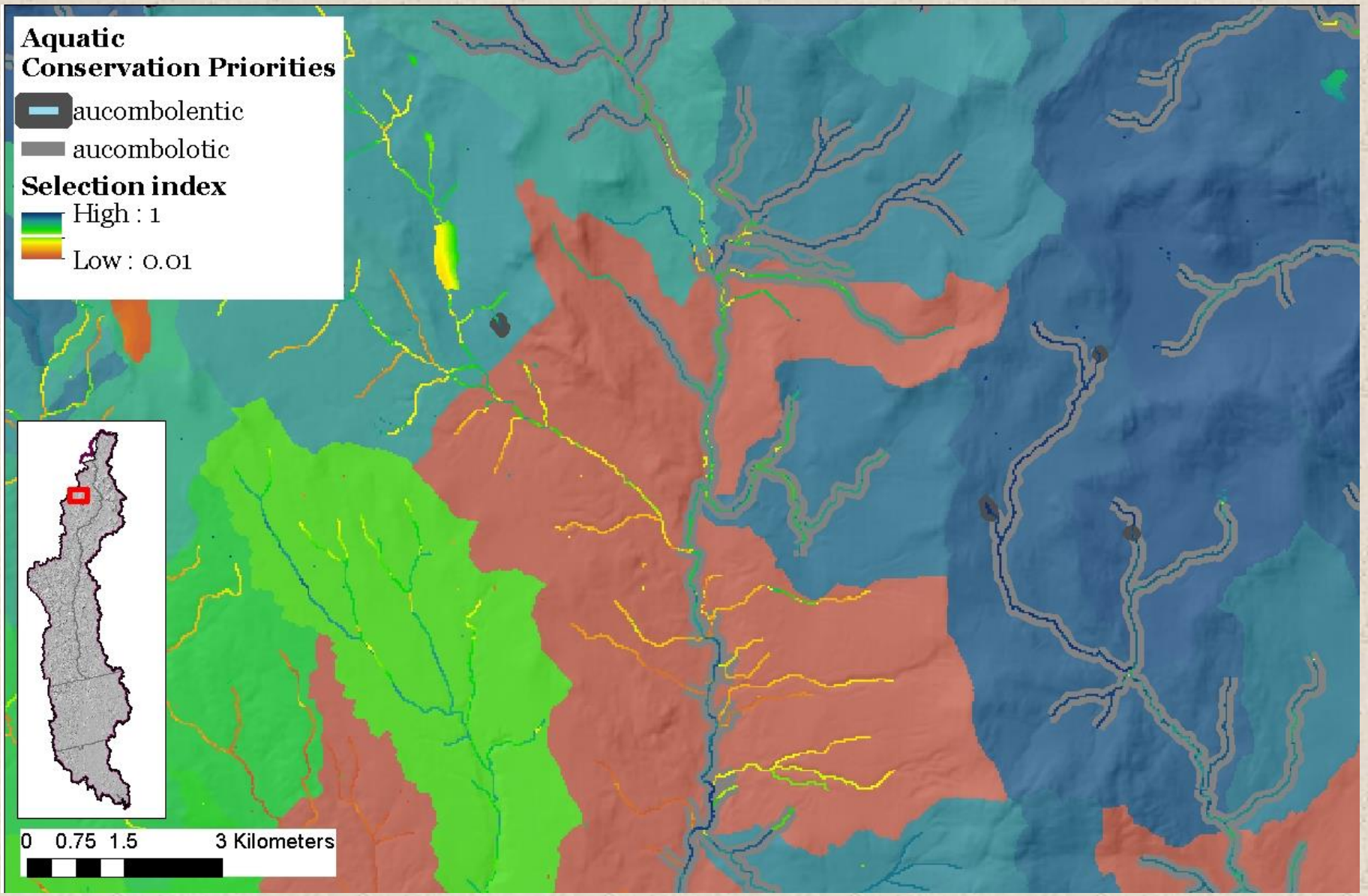
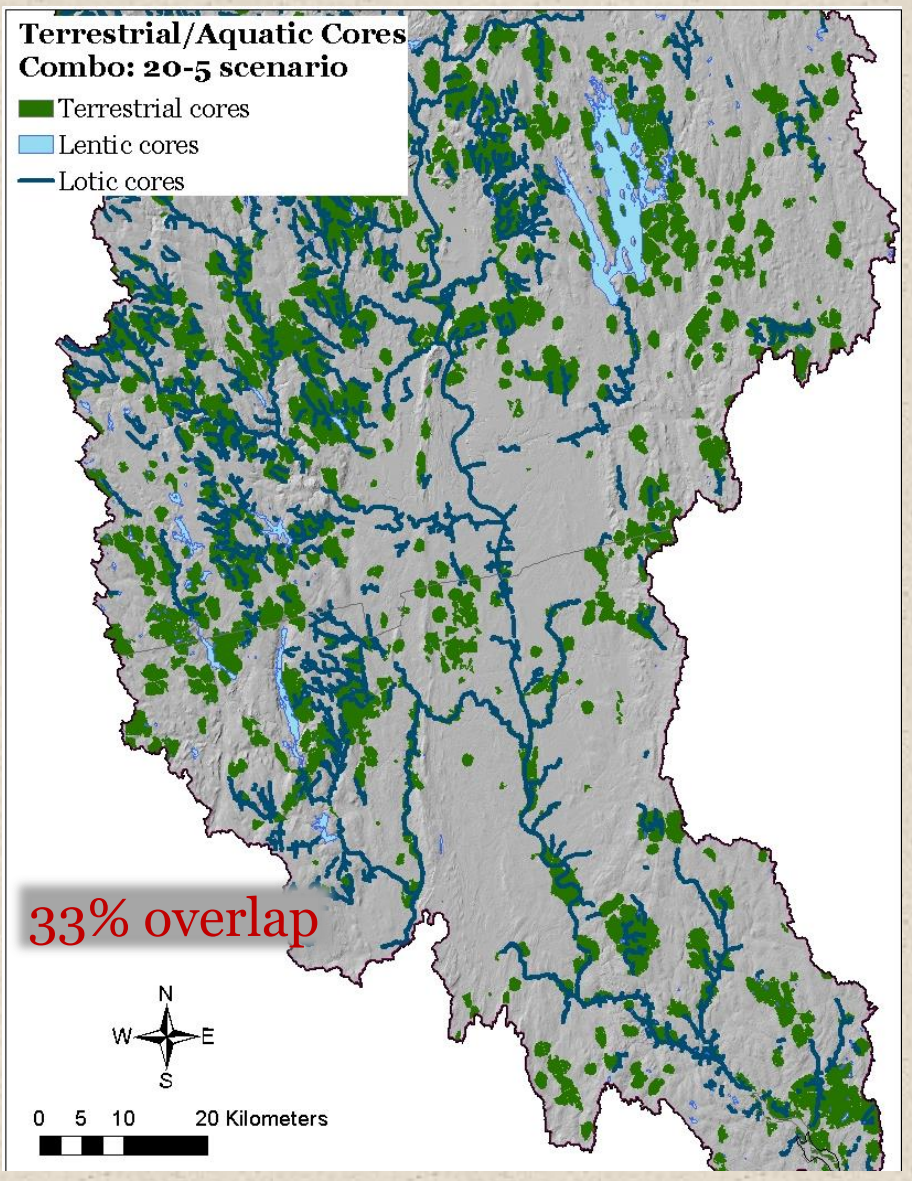
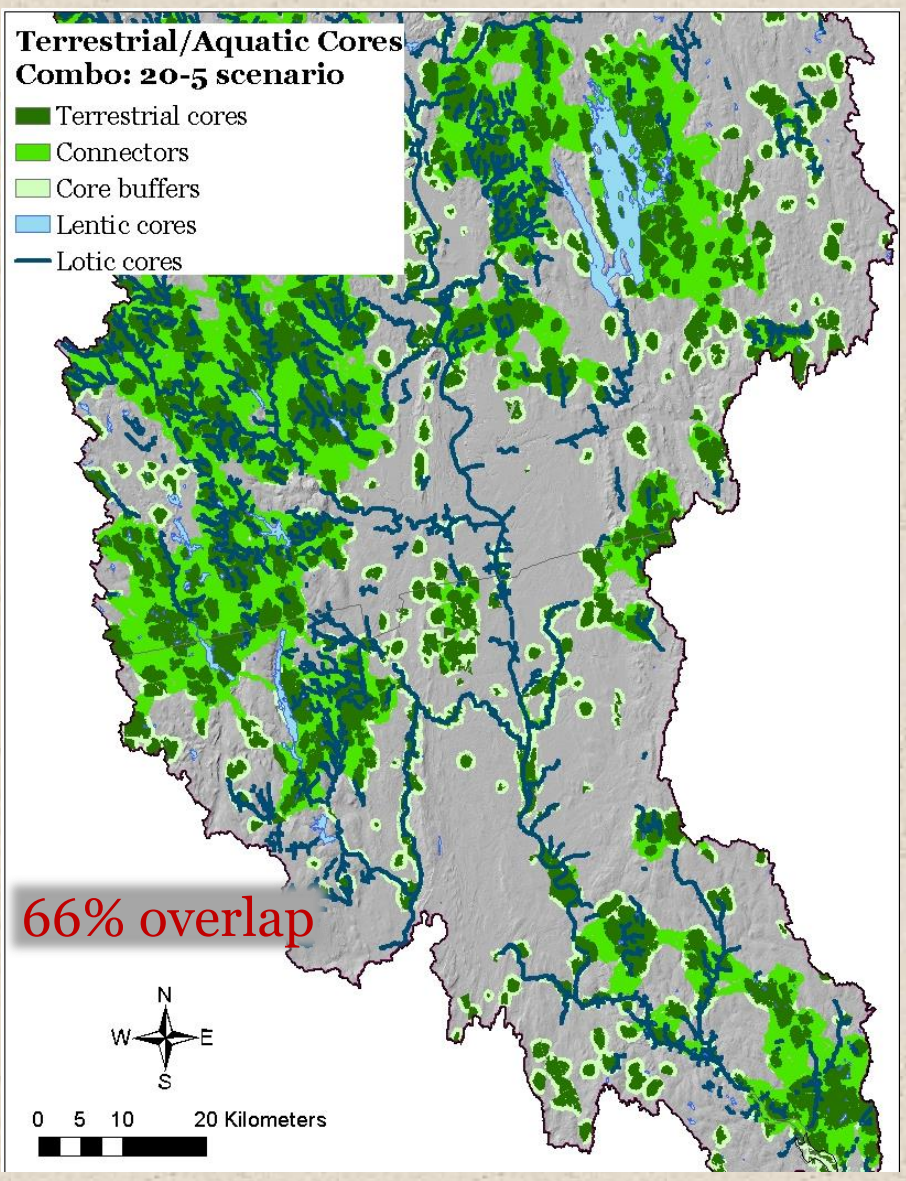


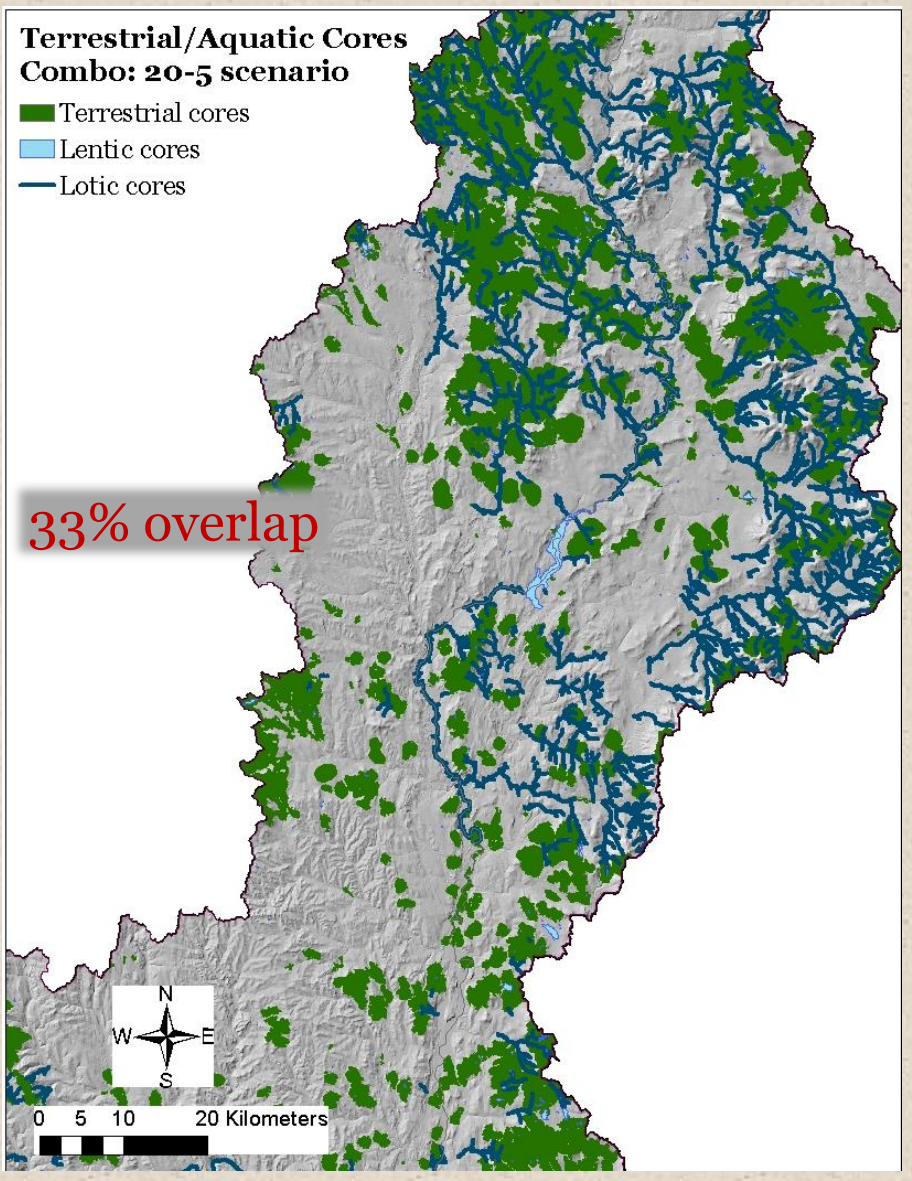
Combining Terrestrial and Aquatic Core Areas

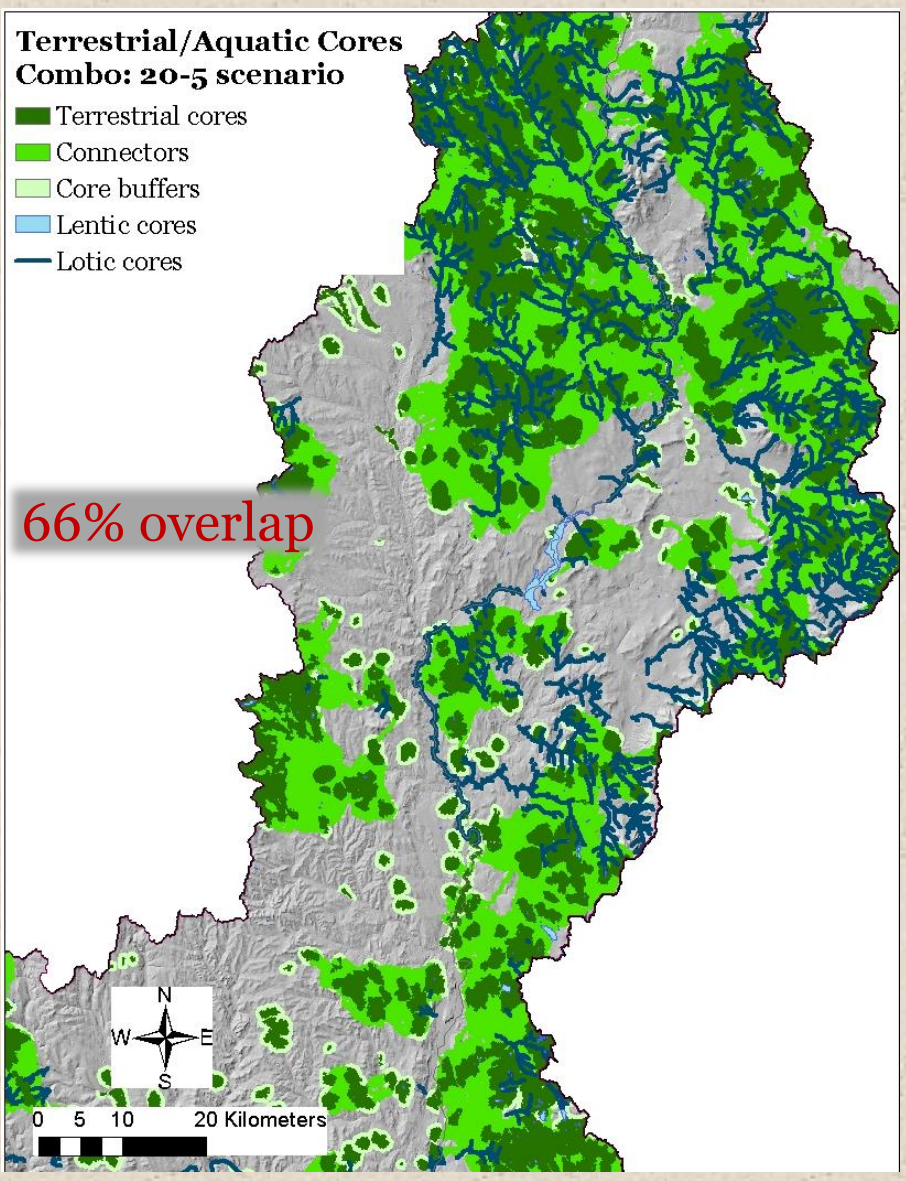




Combining Terrestrial and Aquatic

Core areas





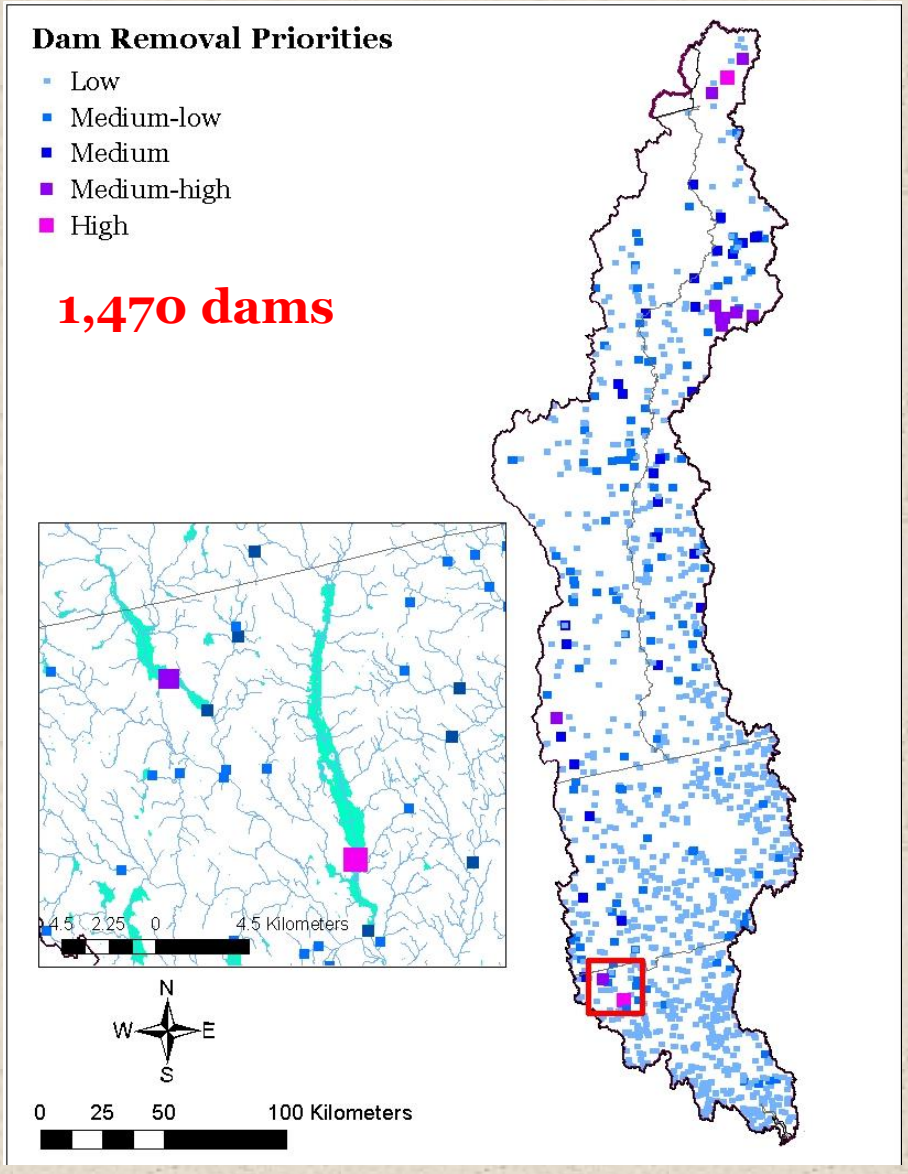
Restoration & Management

- **Restoration & management opportunities…** areas with high restoration or management potential
  - **Dam removal…** gradients in potential to improve aquatic connectivity
  - **Culvert upgrades…** gradients in potential to improve aquatic connectivity
  - **Terrestrial road passage structures…** gradients in potential to improve terrestrial connectivity
  - **Management priorities…** areas with management needs/opportunities to maintain or improve ecological integrity or species landscape capability

Restoration & Management

Dam removal

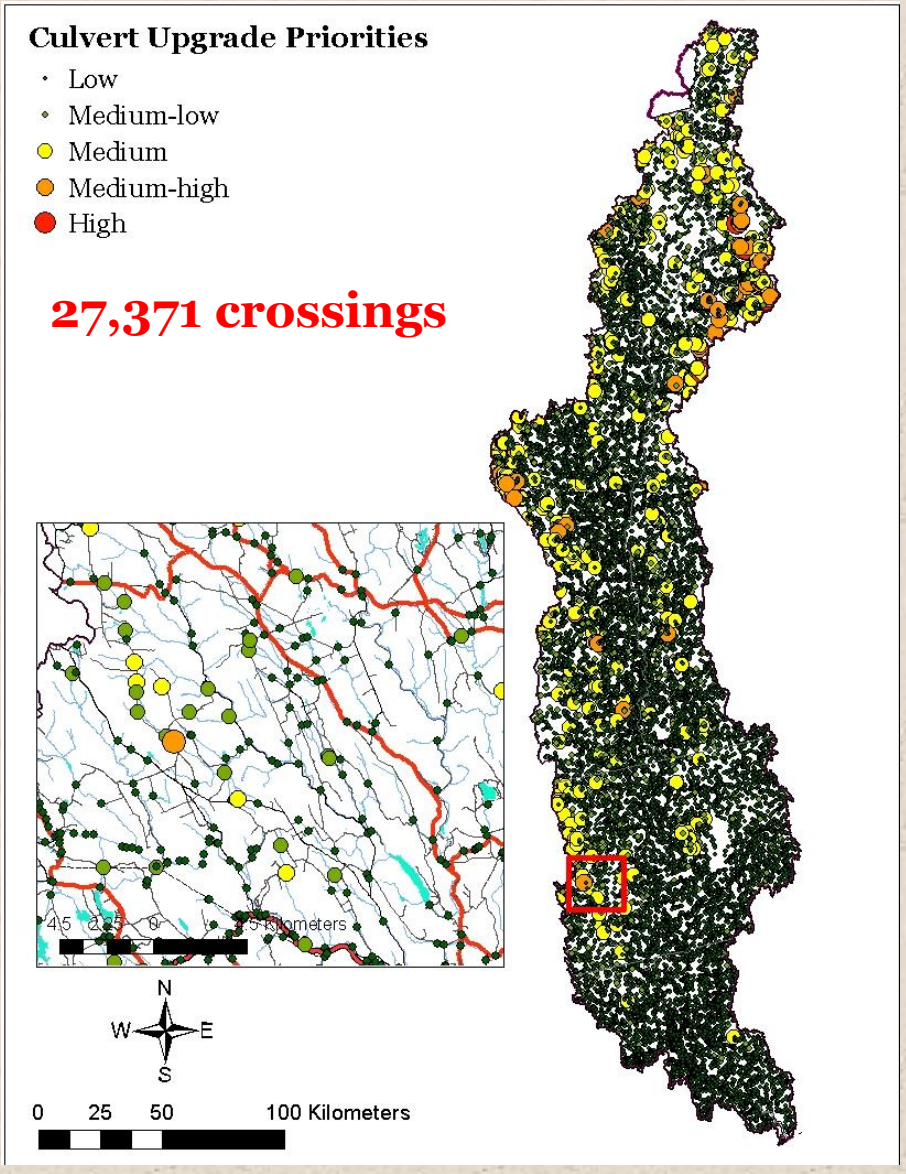
- Based on improvement in local aquatic connectedness resulting from removal of the dam (Δaqconnect)



Restoration & Management

Culvert upgrade

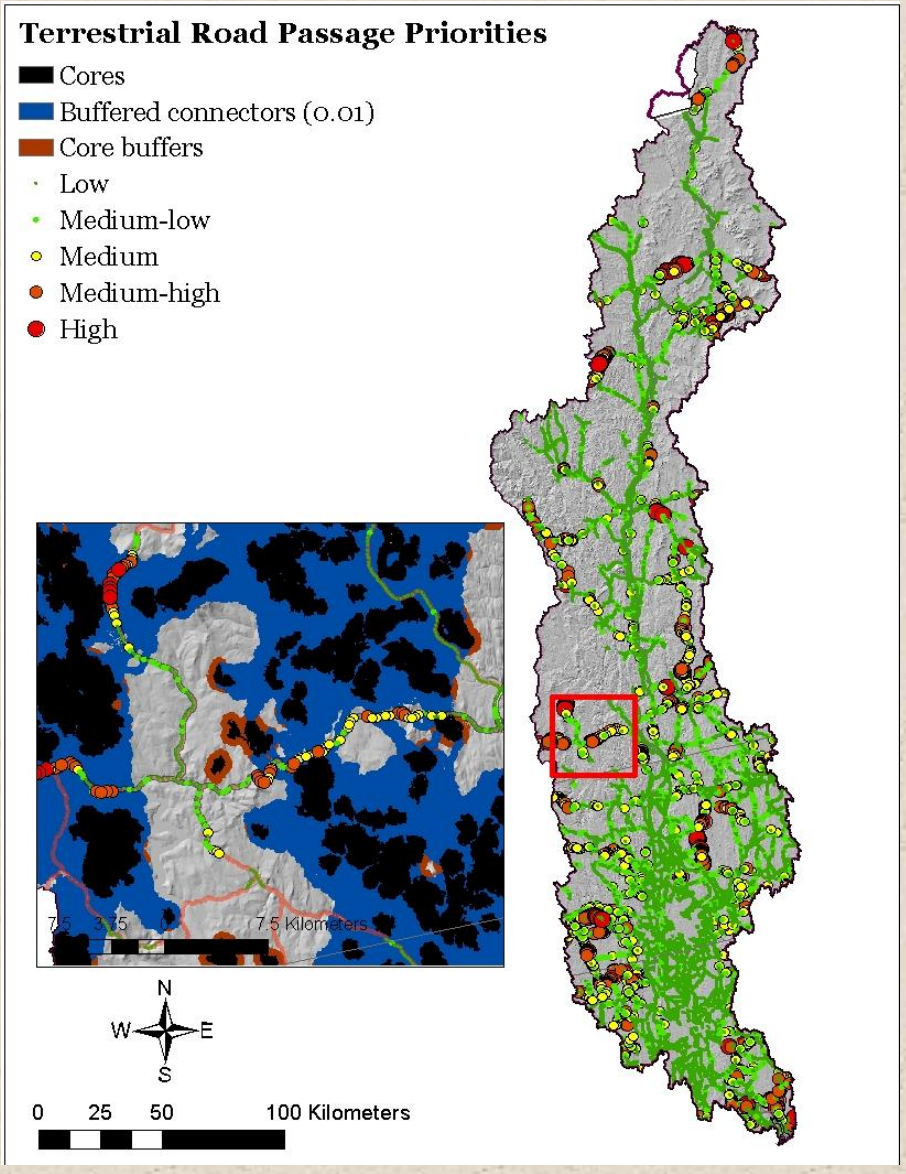
- Based on improvement in local aquatic connectedness resulting from replacing culvert with bridge (Δaqconnect)



Restoration & Management

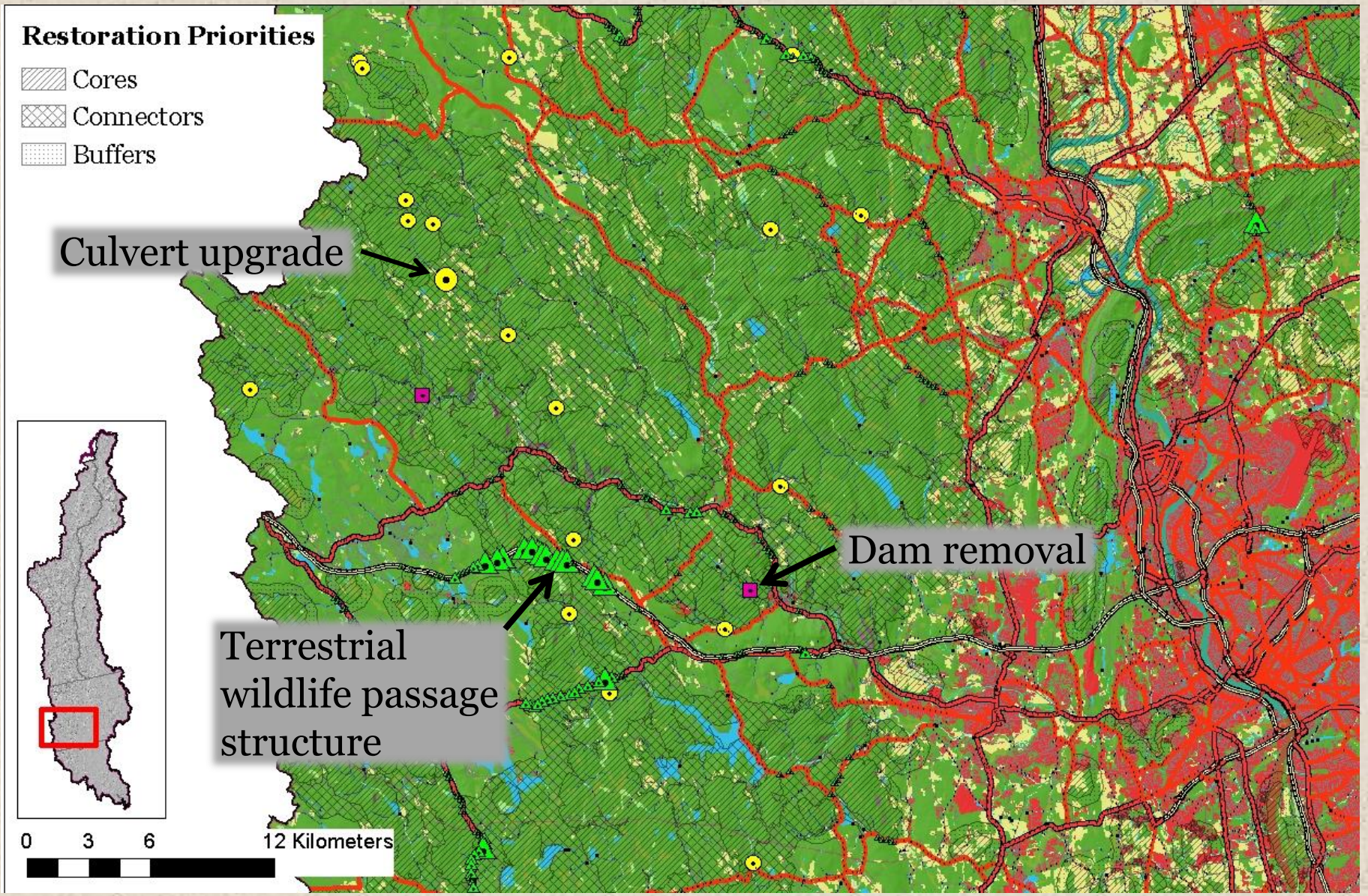
Terrestrial road passage structure

- Based on improvement in local connectedness resulting from installing a terrestrial road passage structure (Δconnect)



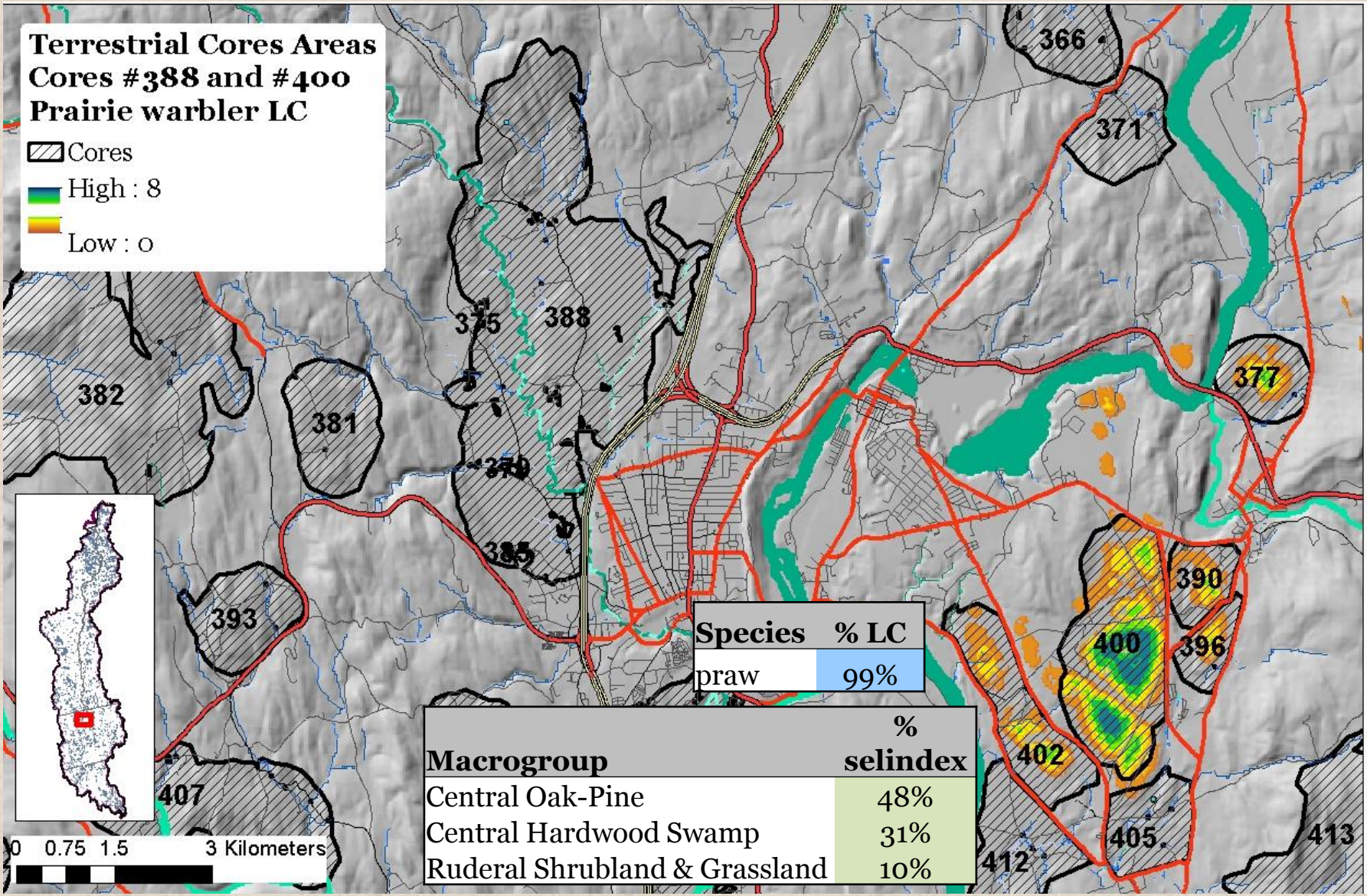
Restoration & Management

Terrestrial road passage structure



Restoration & Management

Management priorities



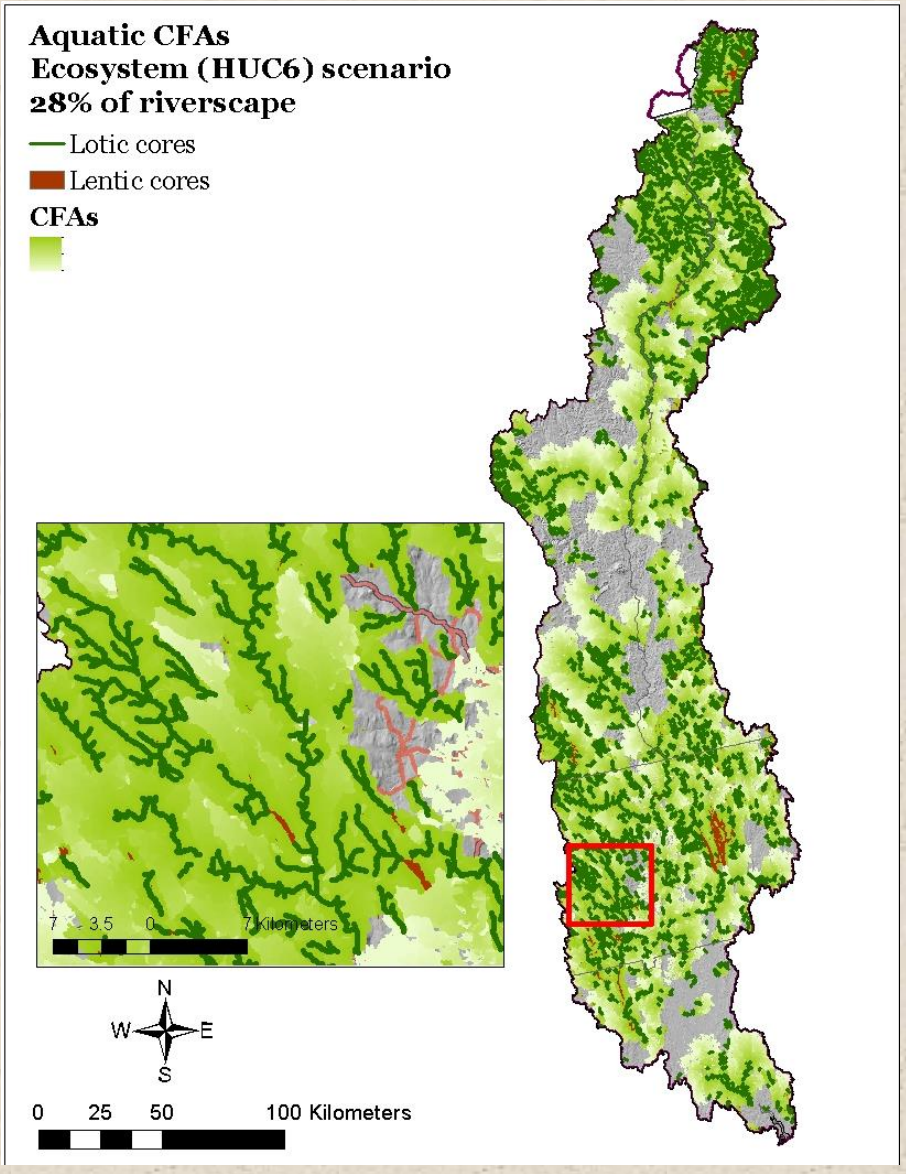
Species	% LC
praw	99%

Macrogroup	% selindex
Central Oak-Pine	48%
Central Hardwood Swamp	31%
Ruderal Shrubland & Grassland	10%

Core Area Buffers

The buffer concept

- **Aquatic buffers…**
  constrained watershed area with influence on integrity of aquatic cores



Core Area Buffers

The buffer concept

- **Terrestrial buffers…** constrained (by major development) 500 m (?) wide buffer around core areas representing an "area of influence" on integrity of terrestrial cores