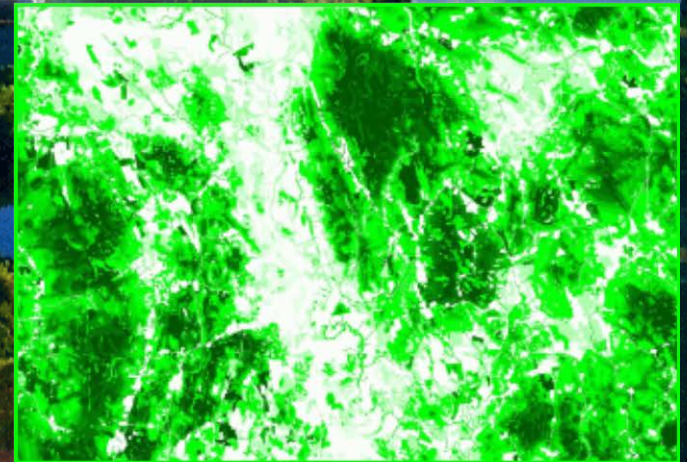
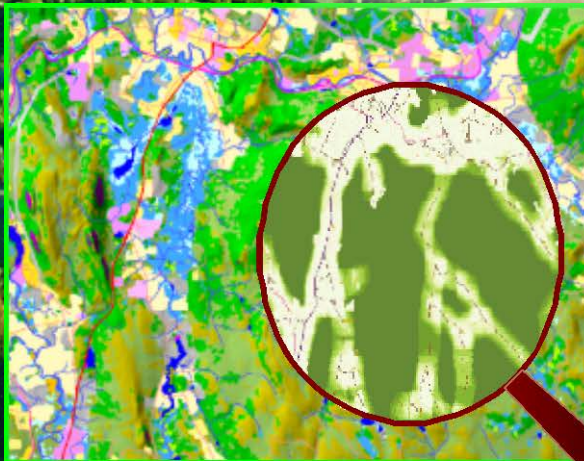


Designing Sustainable Landscapes in the Northeast

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

Landscape Conservation Design
July, 2014
Aquatics



Landscape Conservation Design

Step 2: Design Conservation Network

b) Delineate aquatic buffered core areas –

Example 1

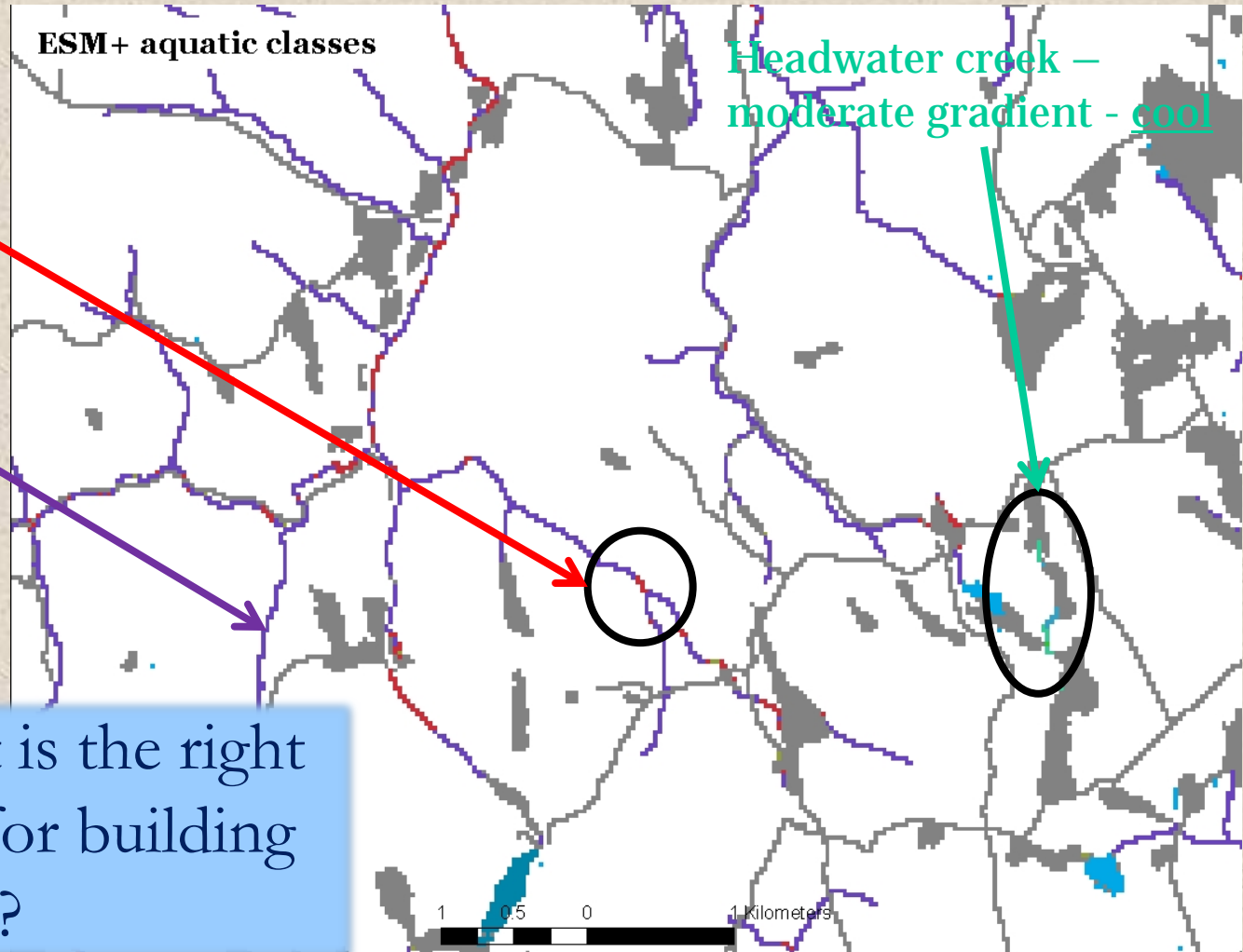
Headwater creek – moderate gradient - cold

Headwater creek – high gradient - cold

?



What is the right unit for building cores?

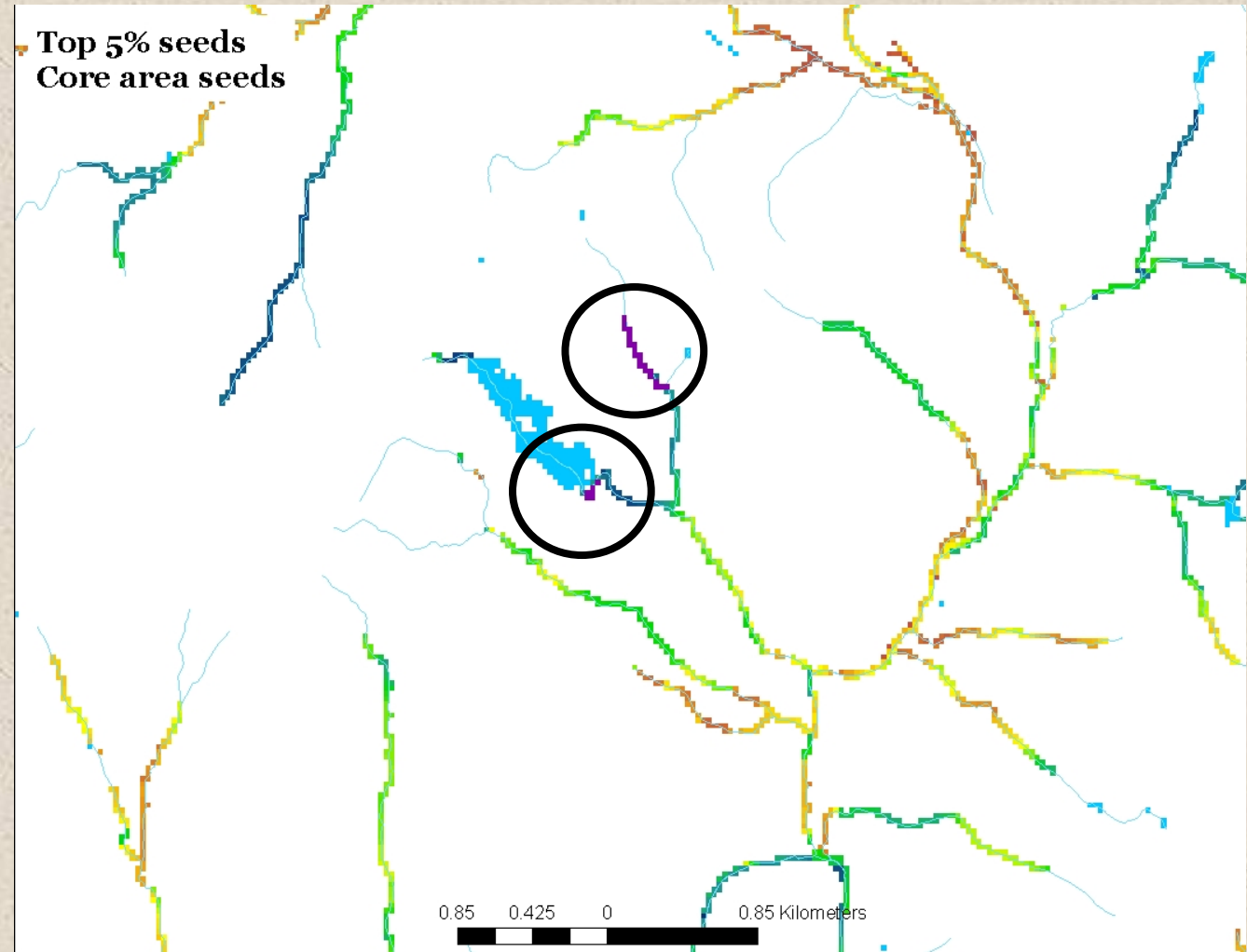


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

- **Example 1**

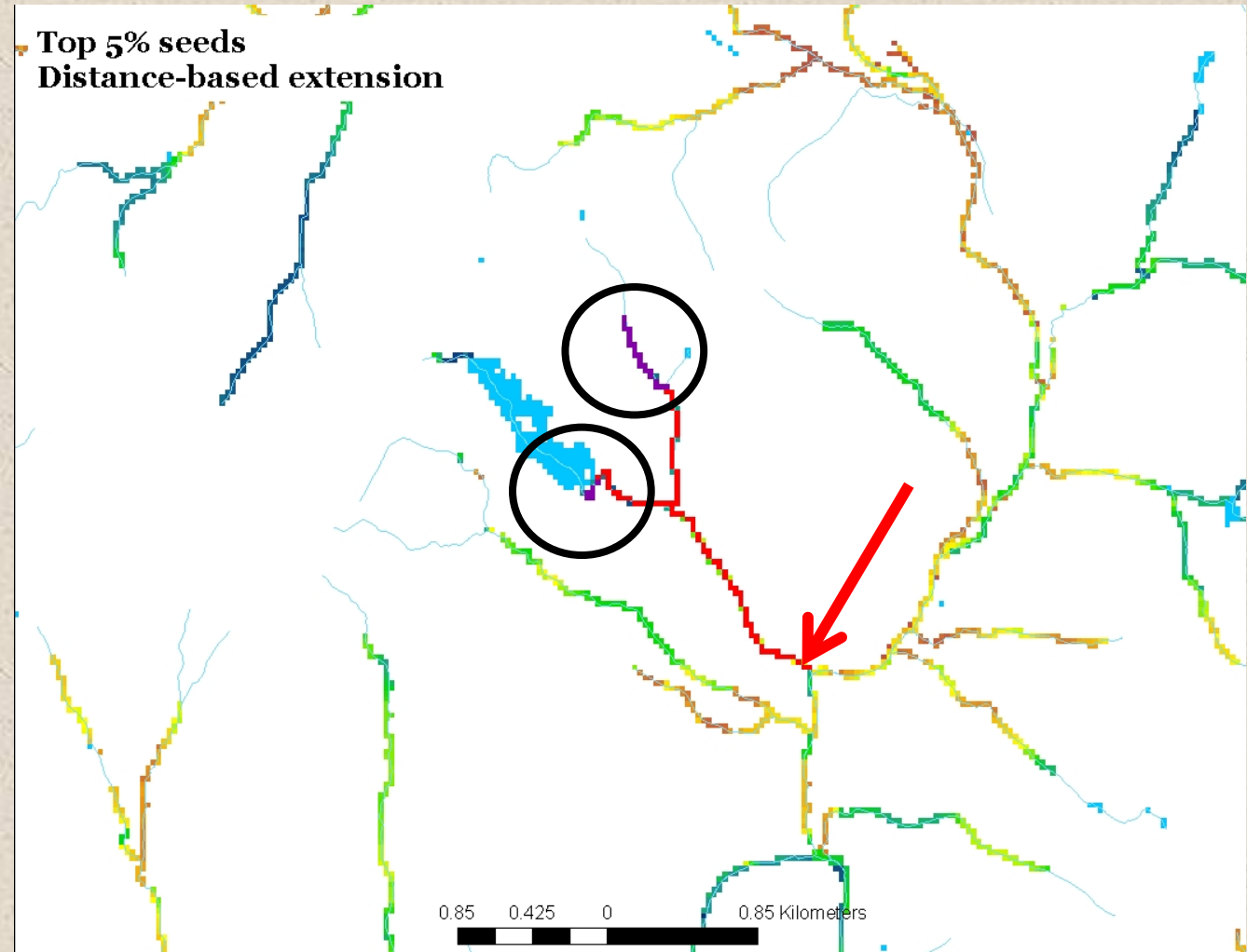


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

- **Example 1**

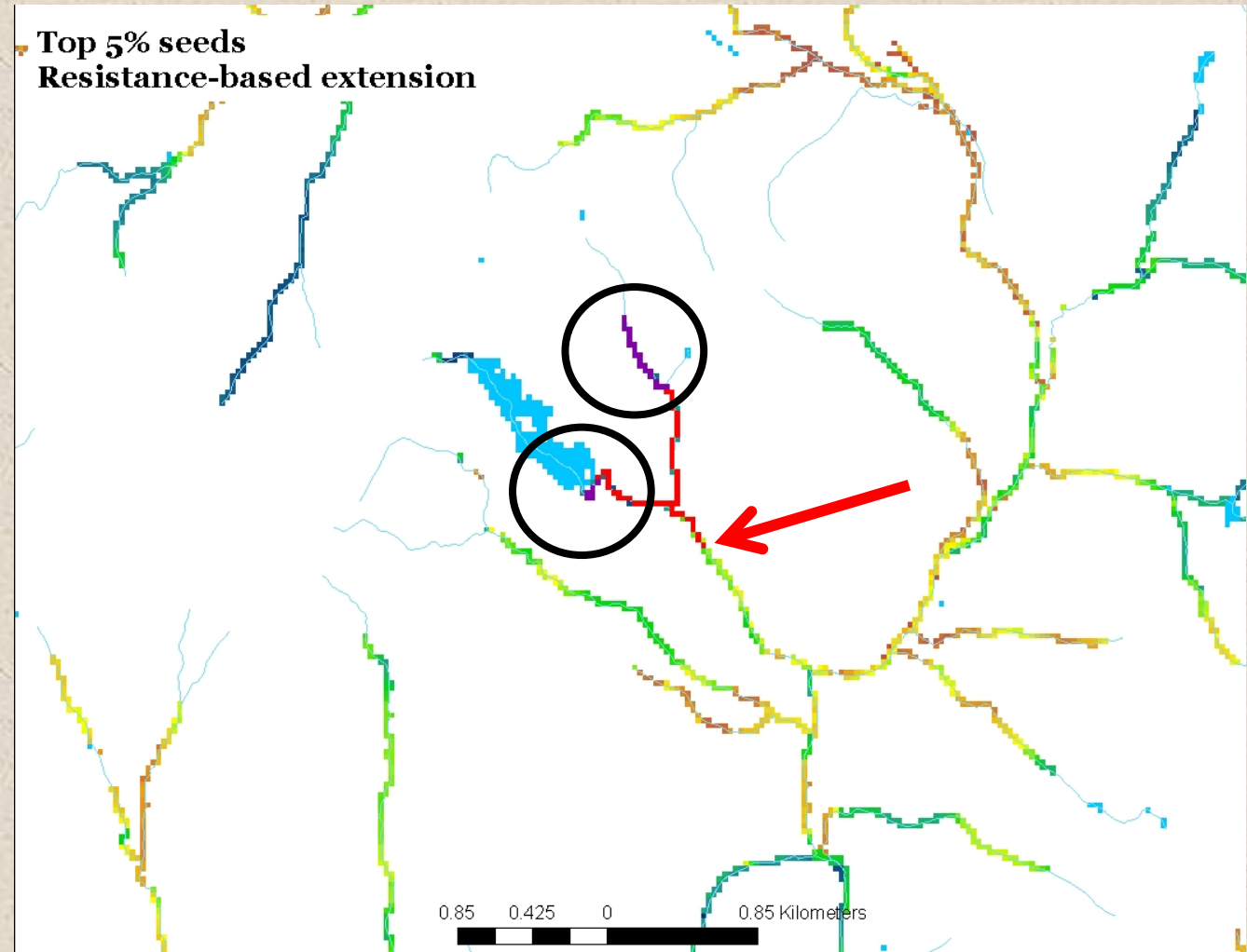


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

■ Example 1

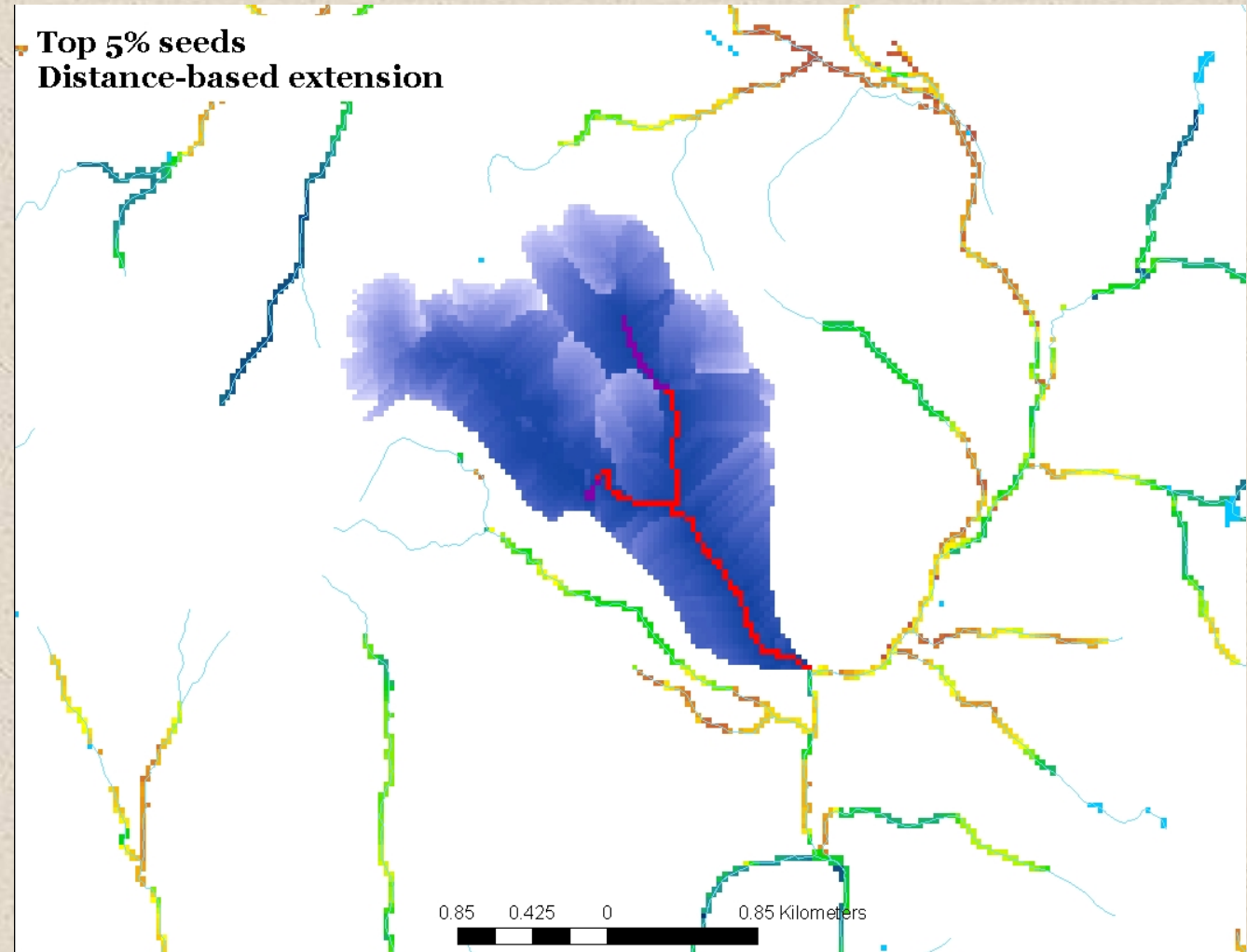


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

■ Example 1

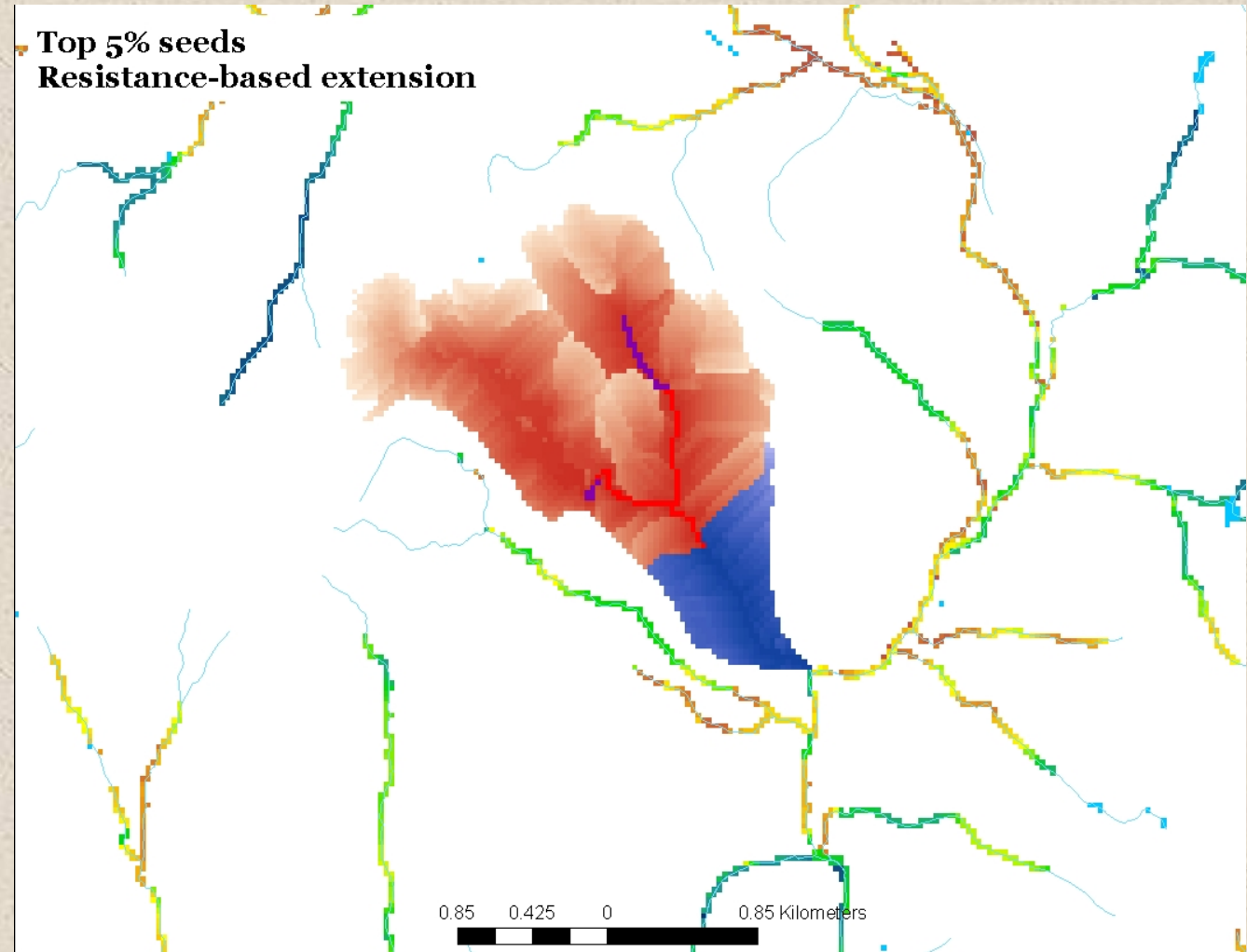


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

■ Example 1

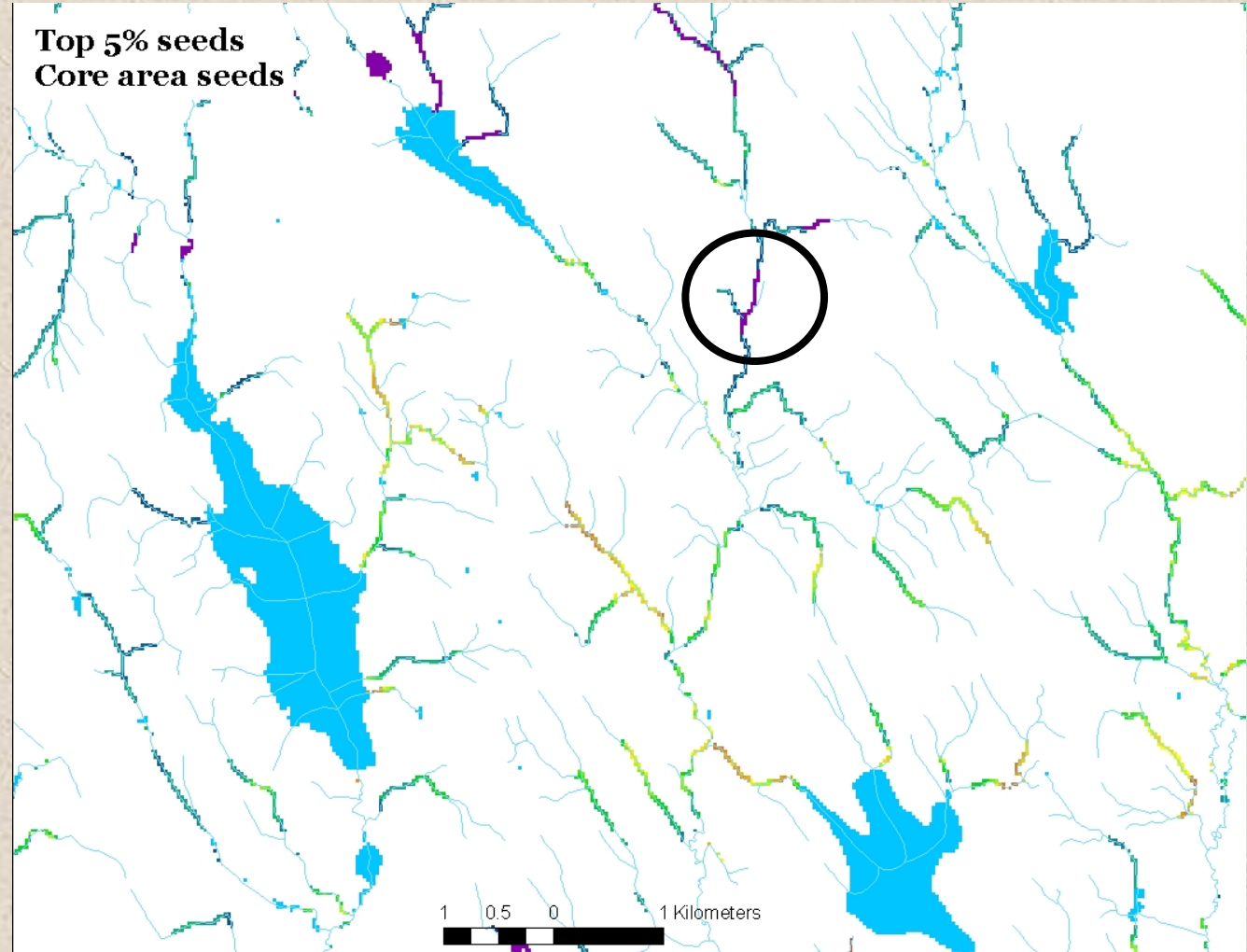


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

- **Example 2**

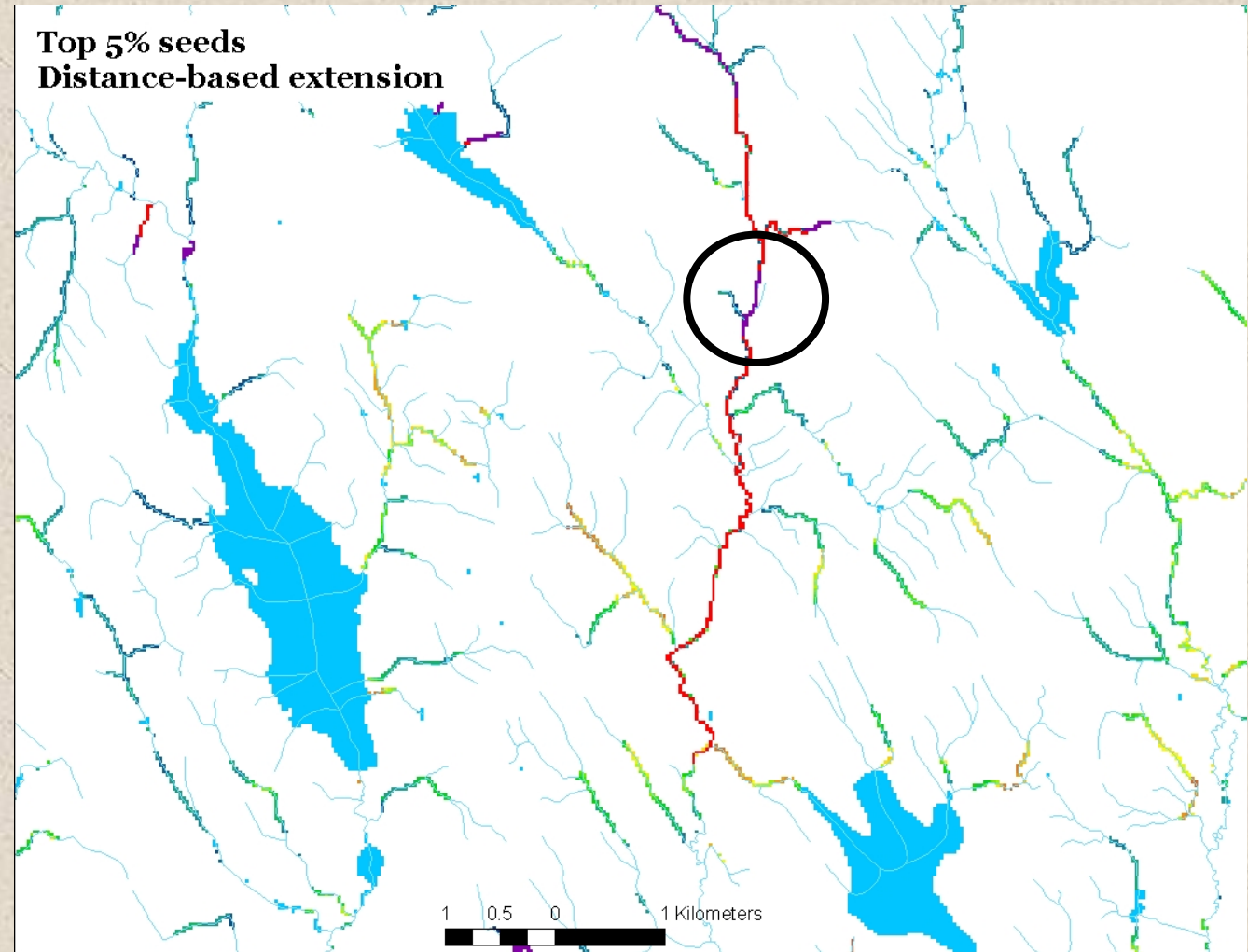


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

- **Example 2**

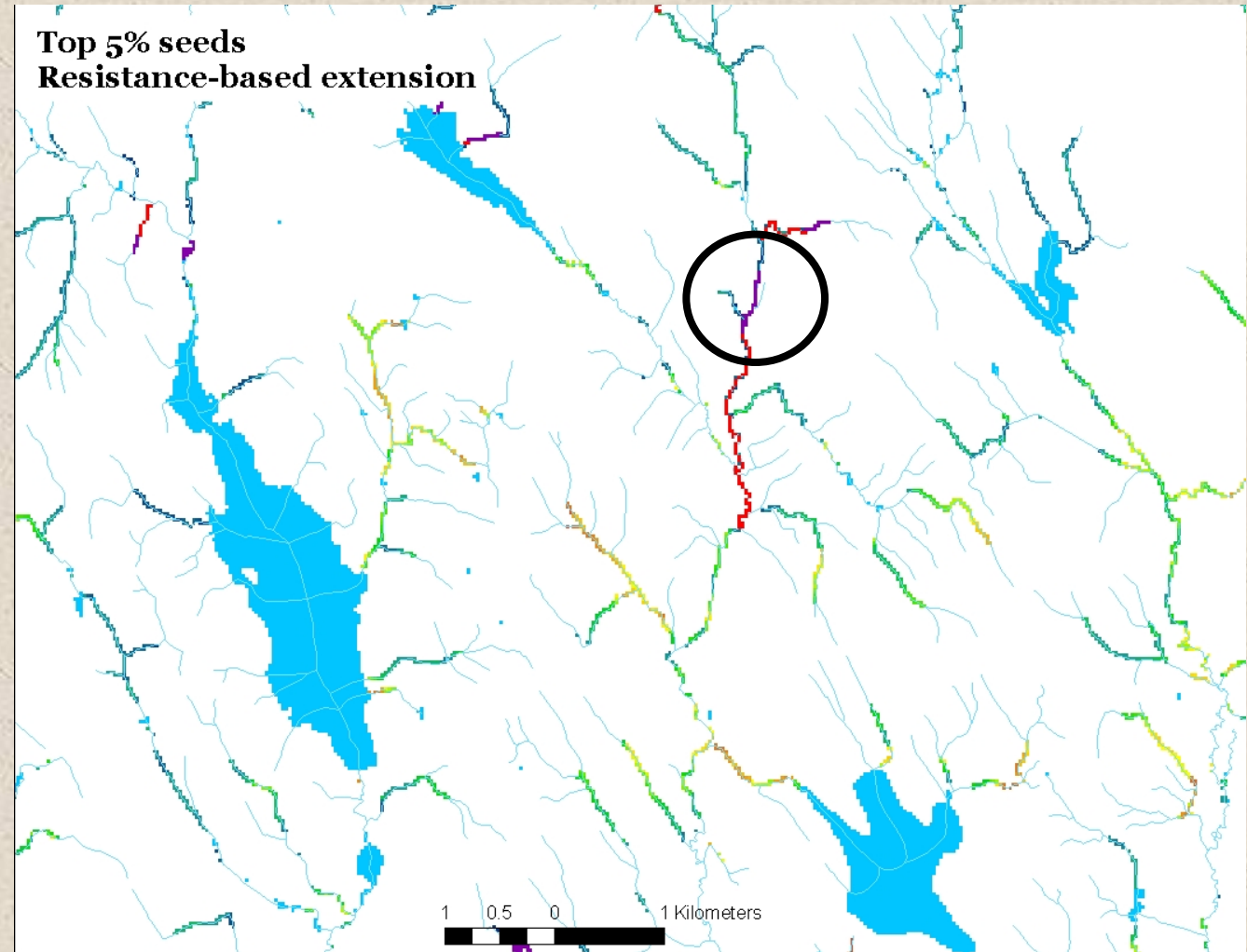


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

- **Example 2**

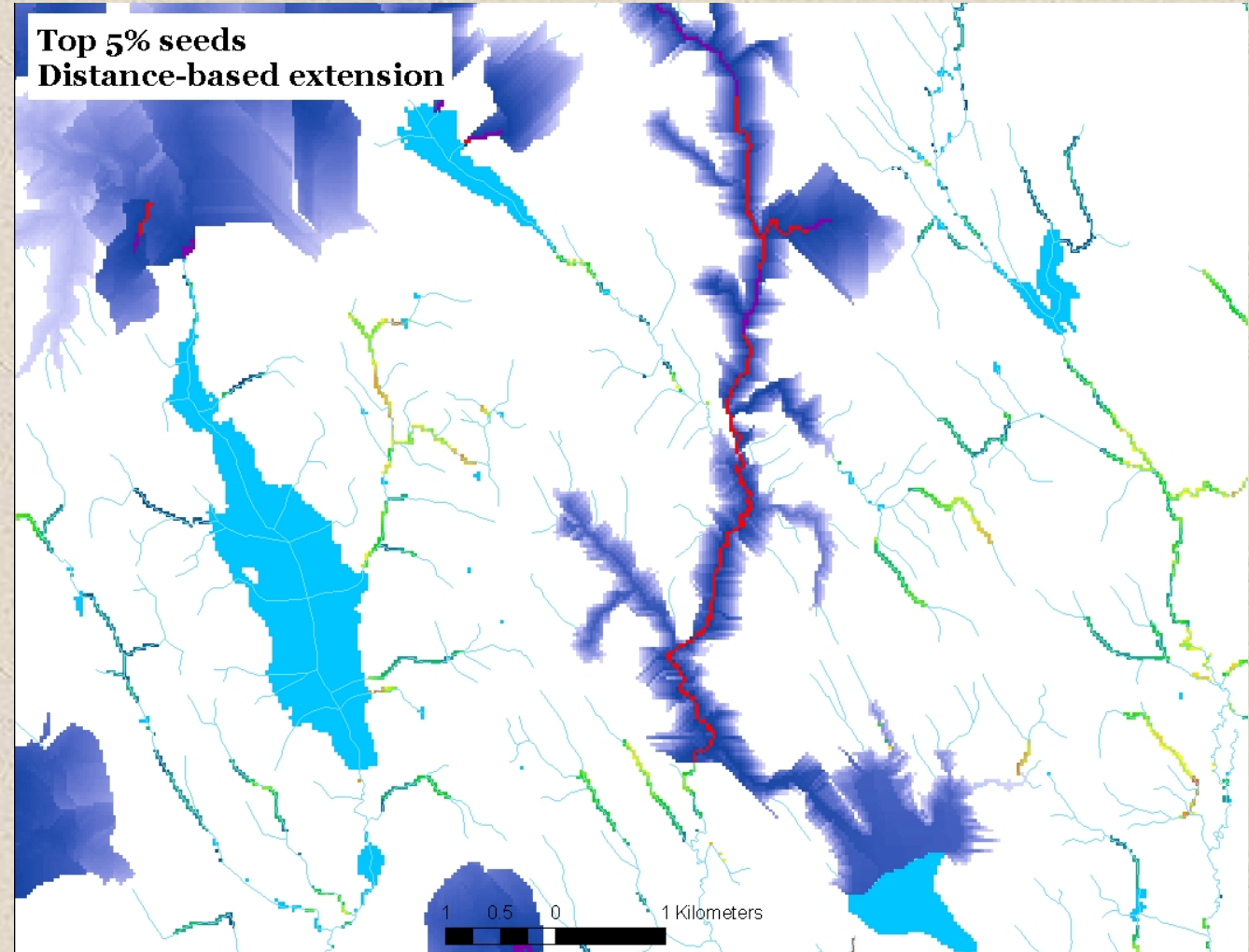


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

- **Example 2**

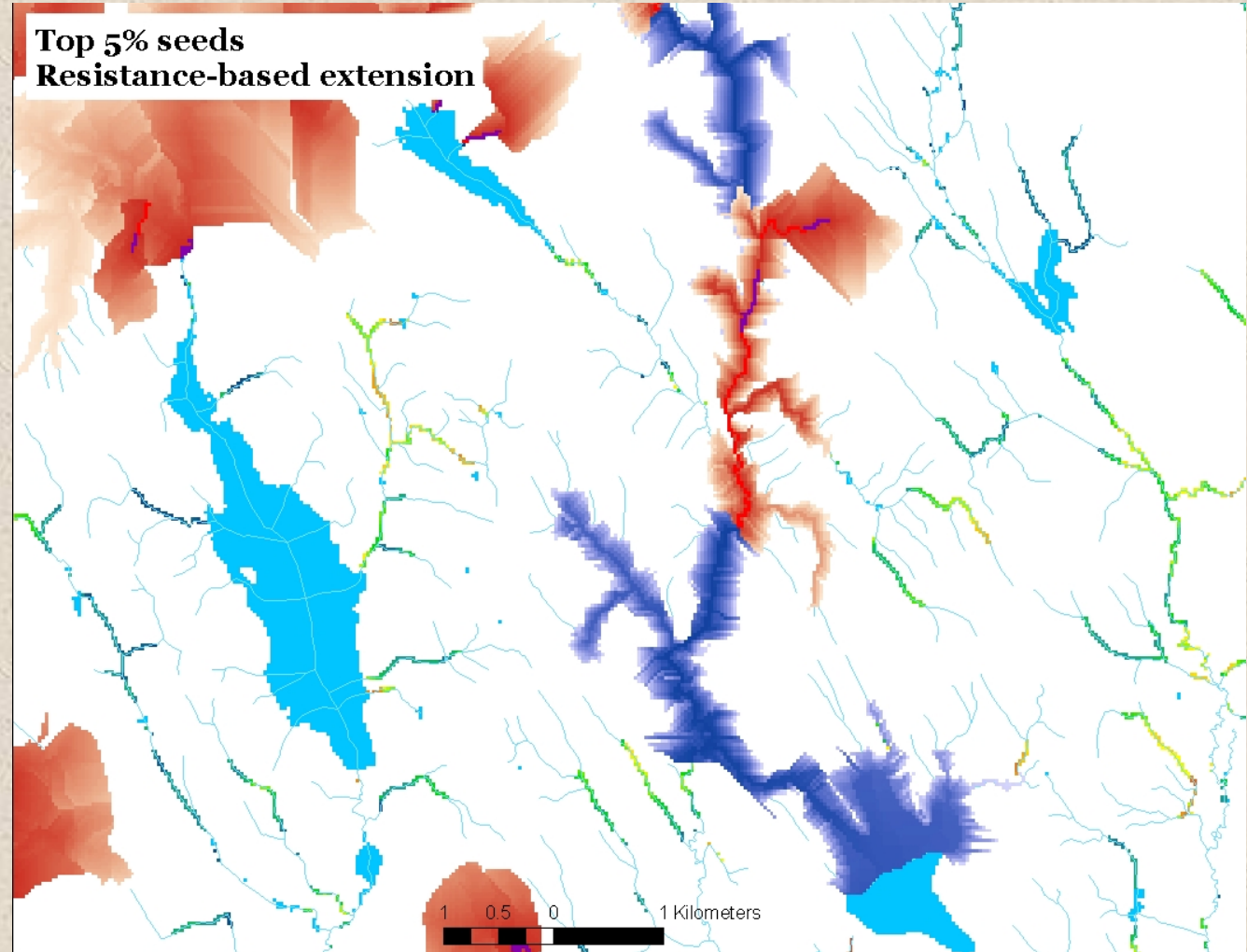


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

- **Example 2**

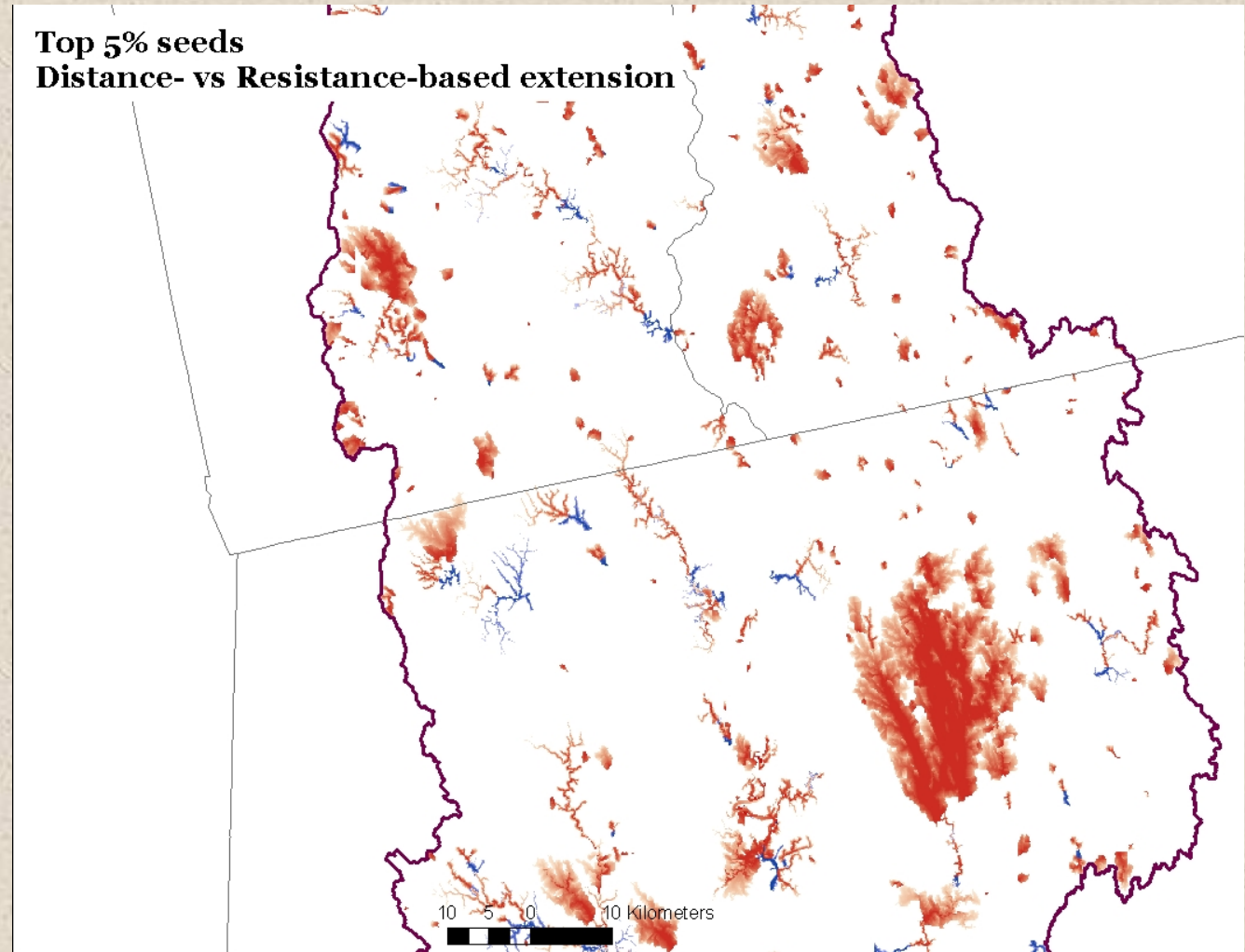


Landscape Conservation Design

Step 2: Design Conservation Network

1. Method for extending seed downstream

- **Example 3**

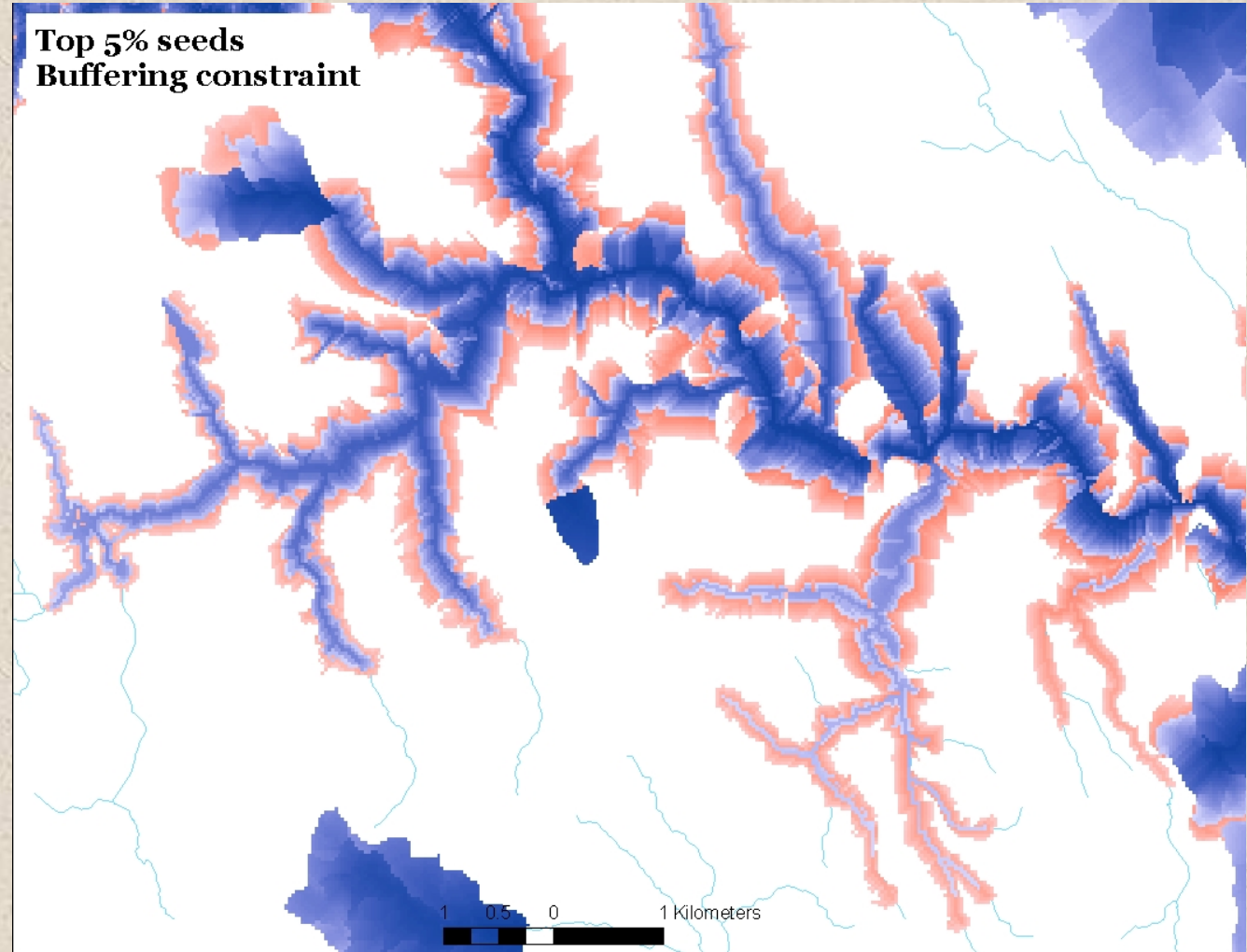


Landscape Conservation Design

Step 2: Design Conservation Network

2. Magnitude of buffering constraint

- **Example 1**

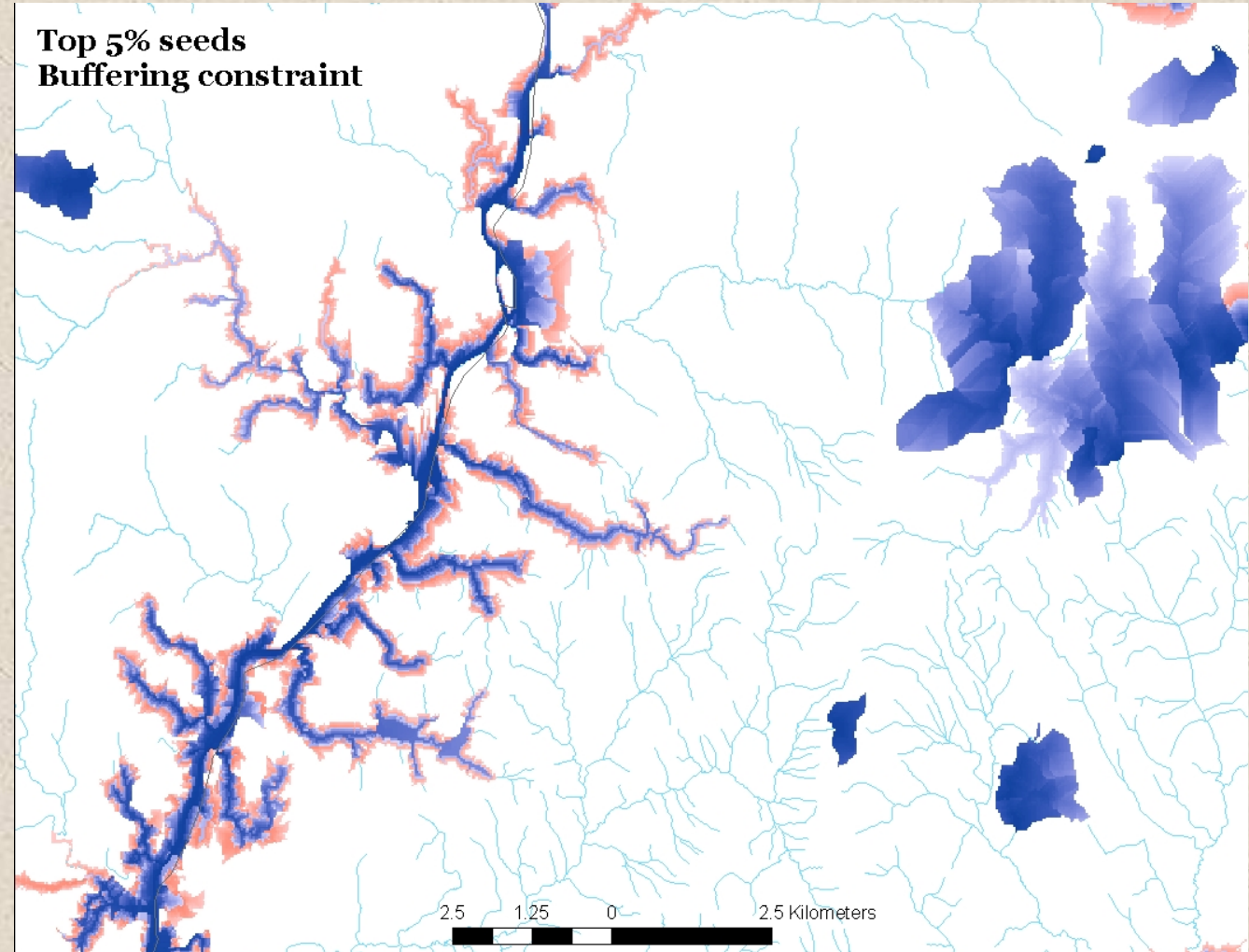


Landscape Conservation Design

Step 2: Design Conservation Network

2. Magnitude of buffering constraint

- **Example 2**

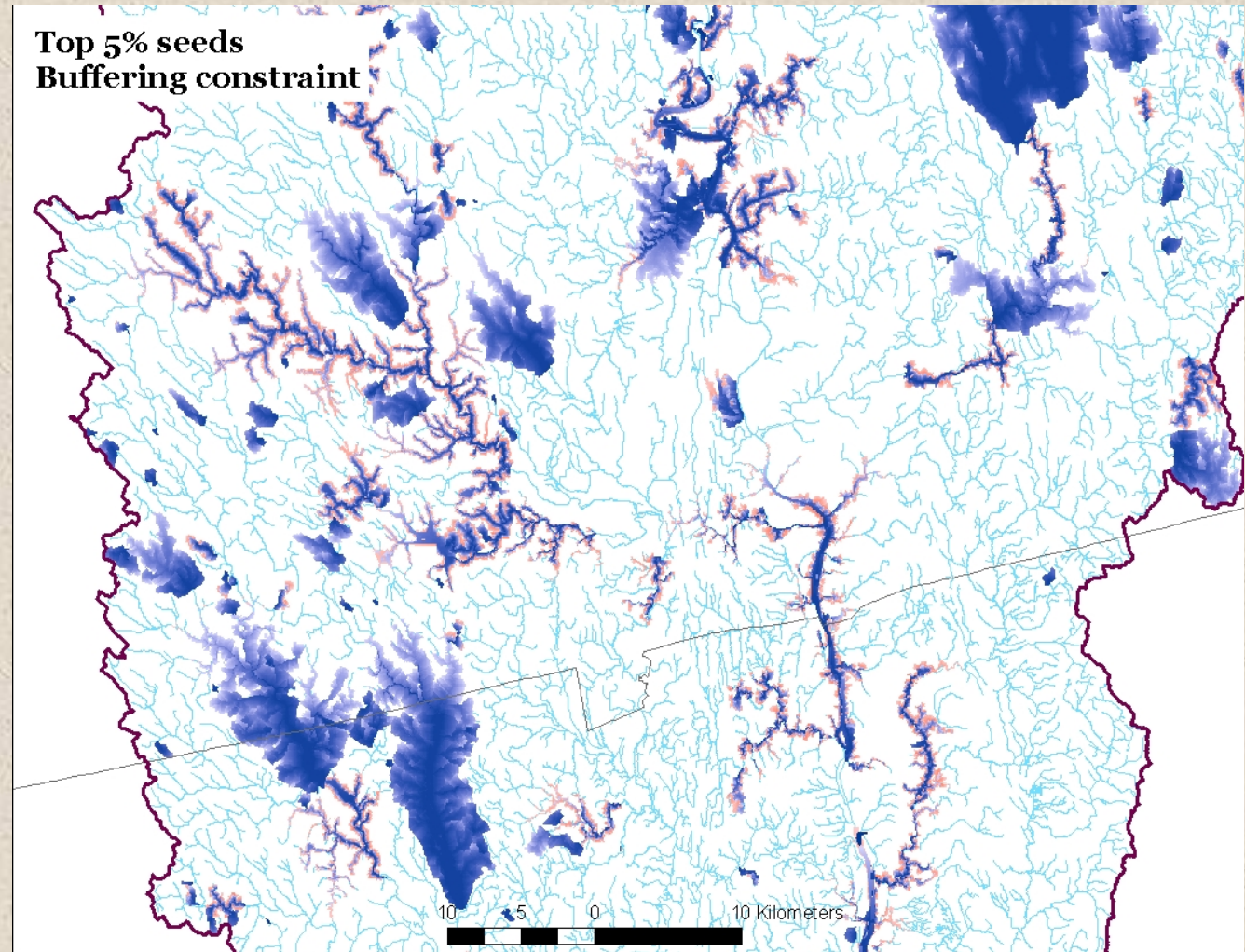


Landscape Conservation Design

Step 2: Design Conservation Network

2. Magnitude of buffering constraint

- **Example 3**

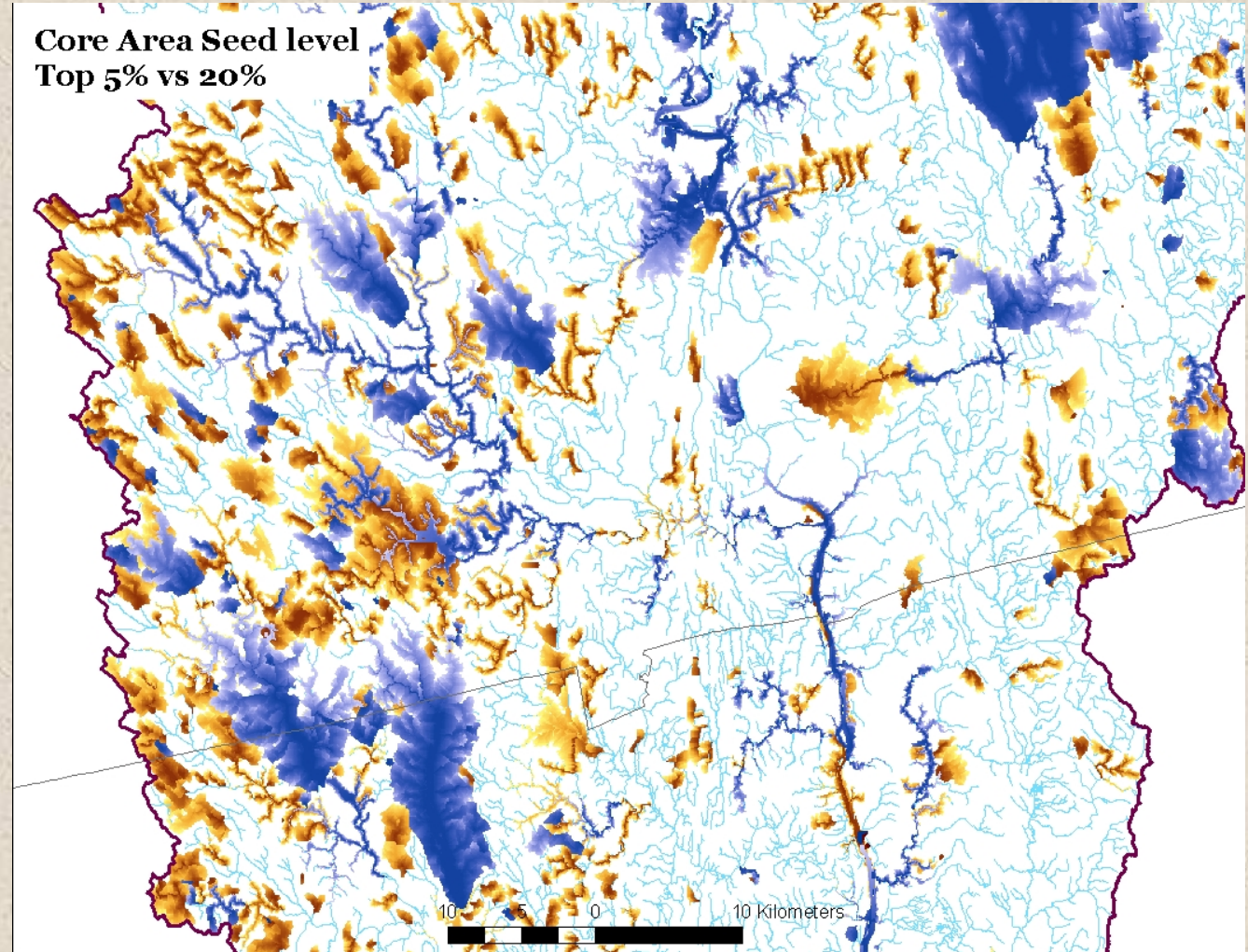


Landscape Conservation Design

Step 2: Design Conservation Network

3. Core area seeds: slice level

- **Example 1**

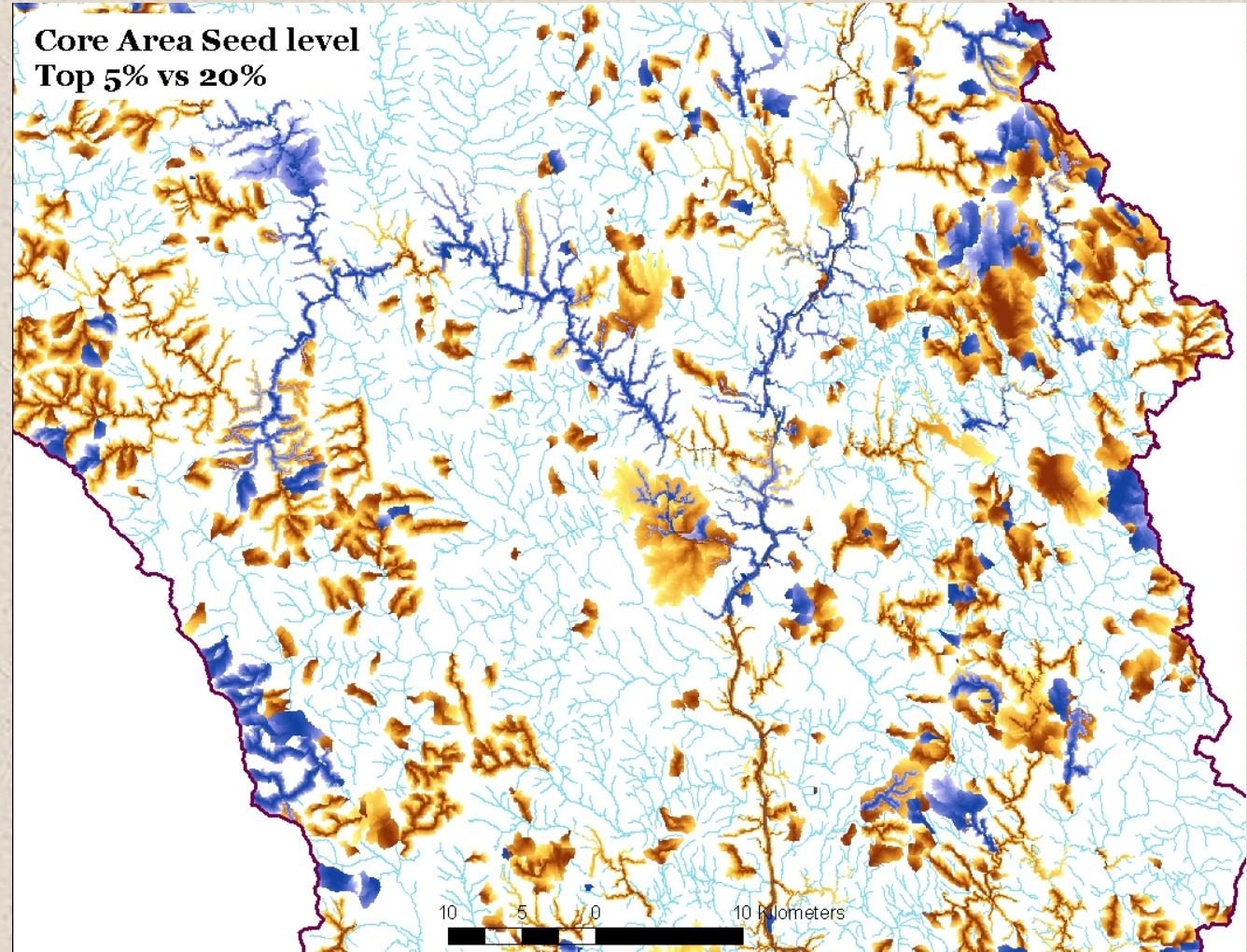


Landscape Conservation Design

Step 2: Design Conservation Network

3. Core area seeds: slice level

- **Example 2**

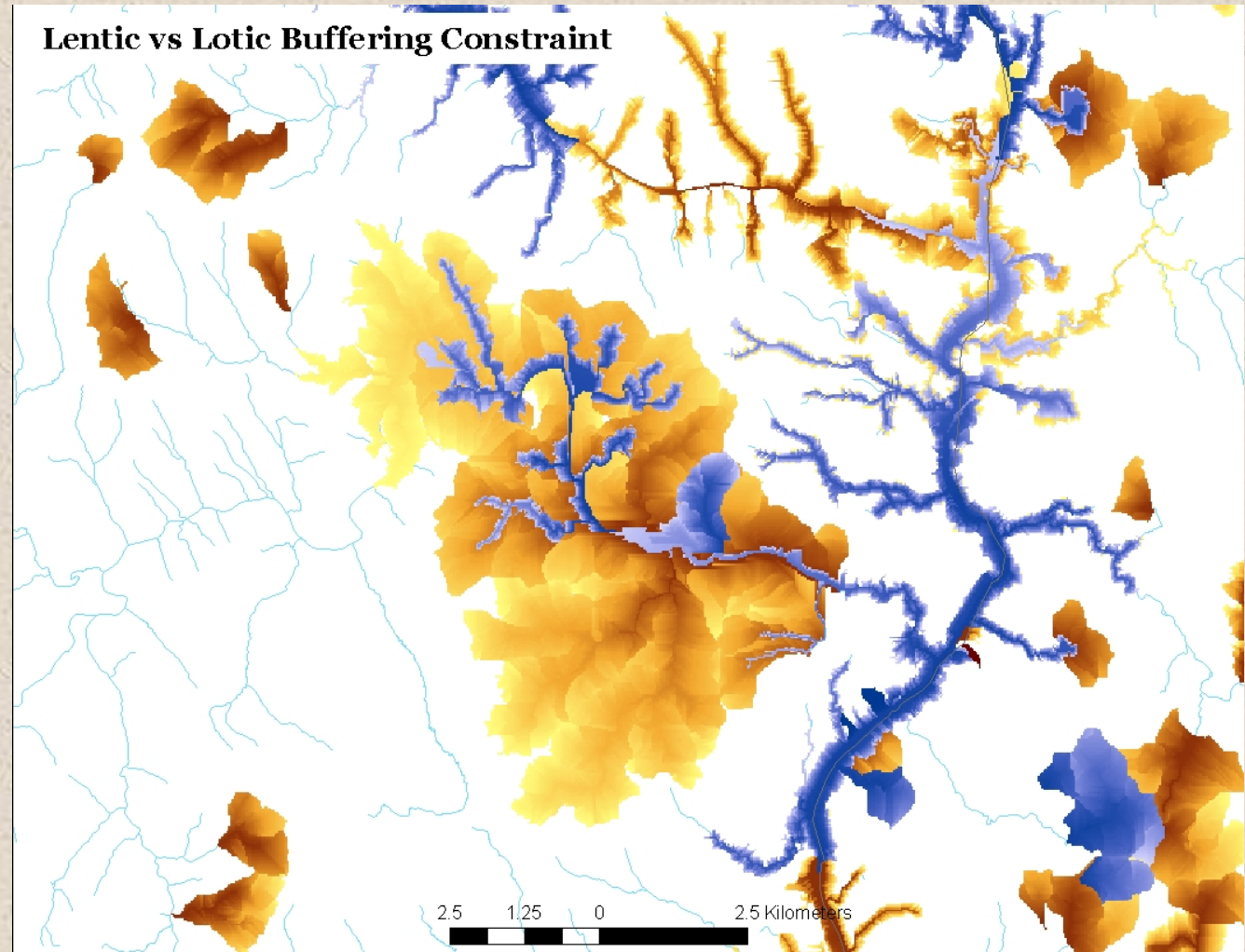


Landscape Conservation Design

Step 2: Design Conservation Network

4. Lentic vs lotic buffering constraint

- **Example 1**

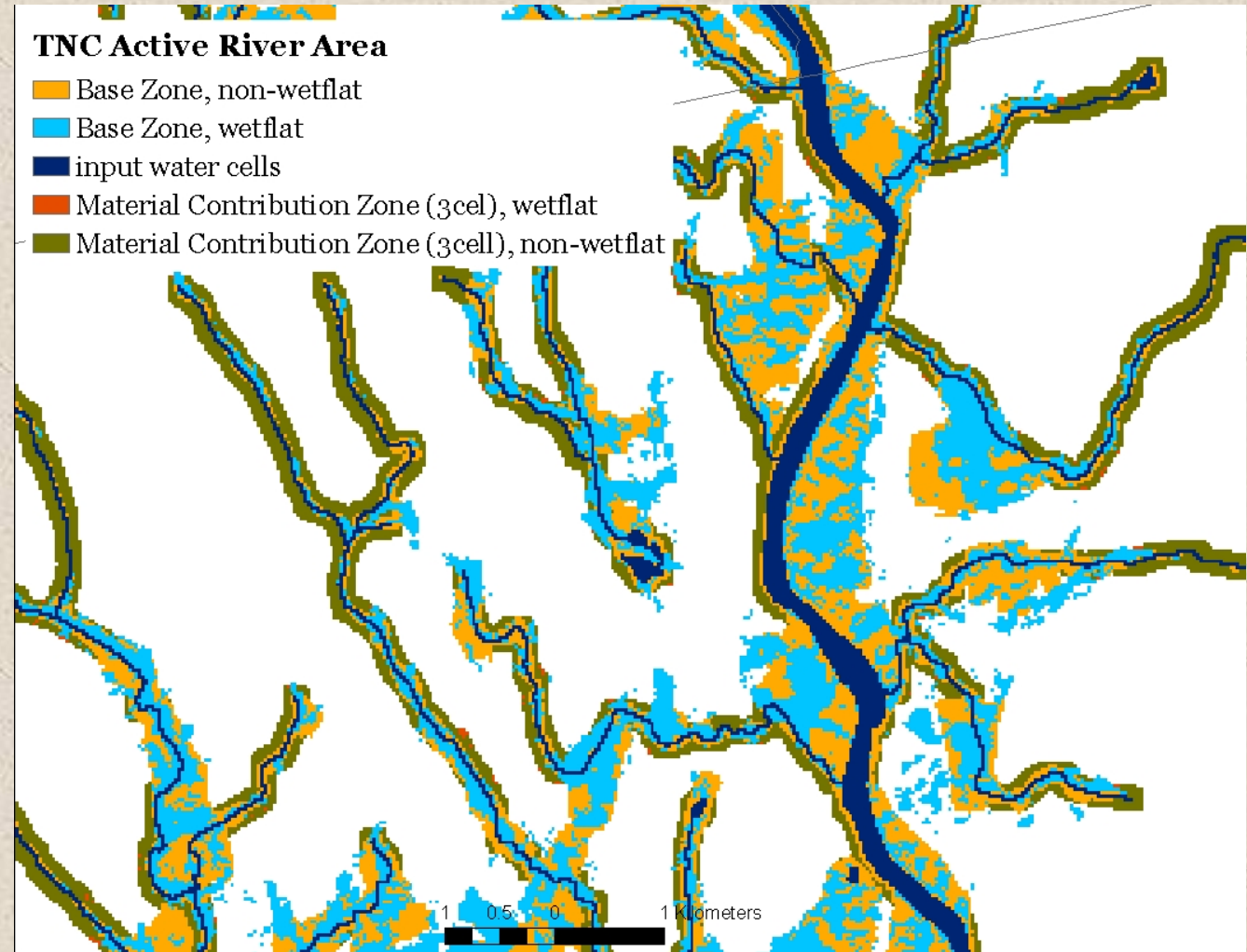


Landscape Conservation Design

Step 2: Design Conservation Network

5. Active River Area data

■ Example 1

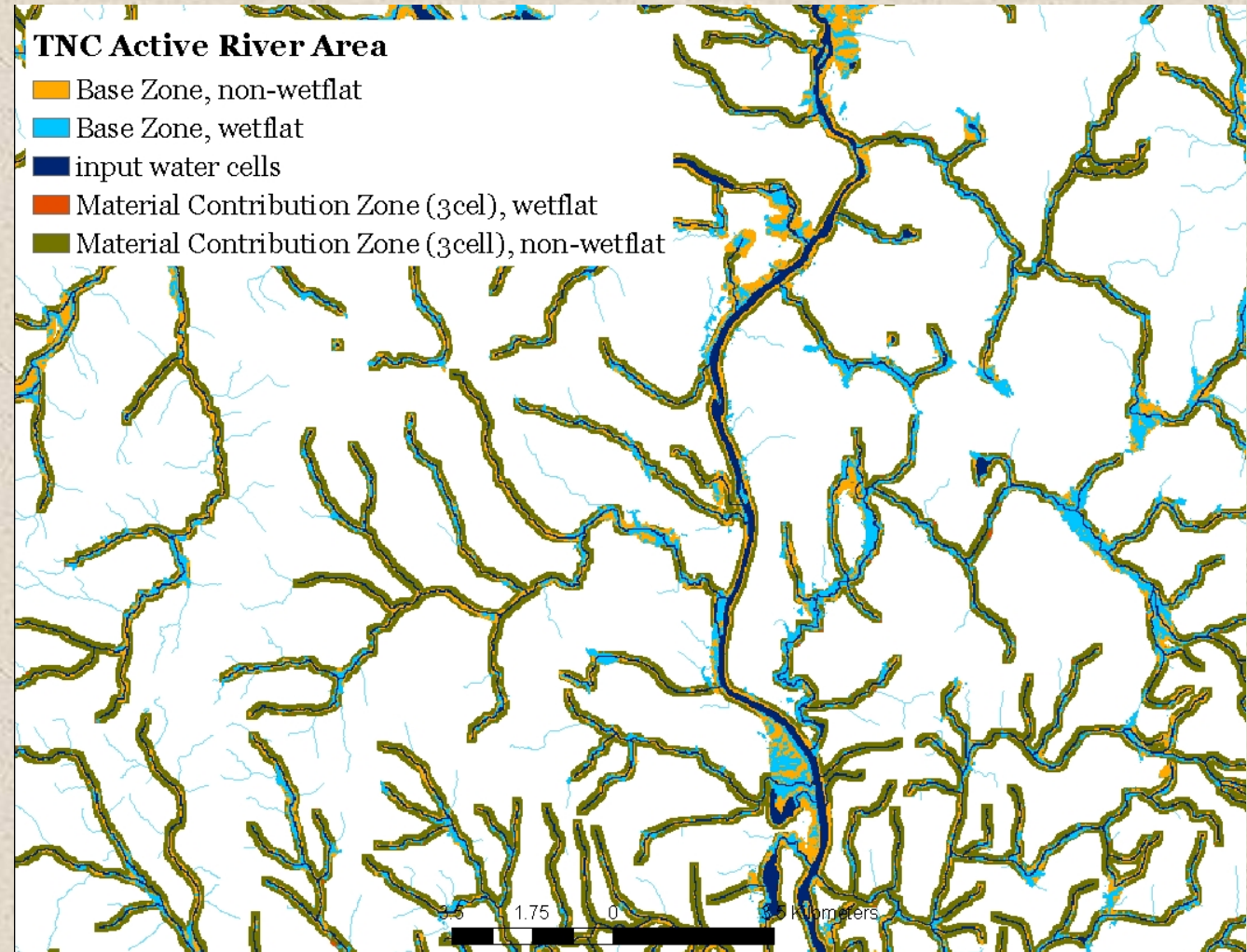


Landscape Conservation Design

Step 2: Design Conservation Network

5. Active River Area data

■ Example 2

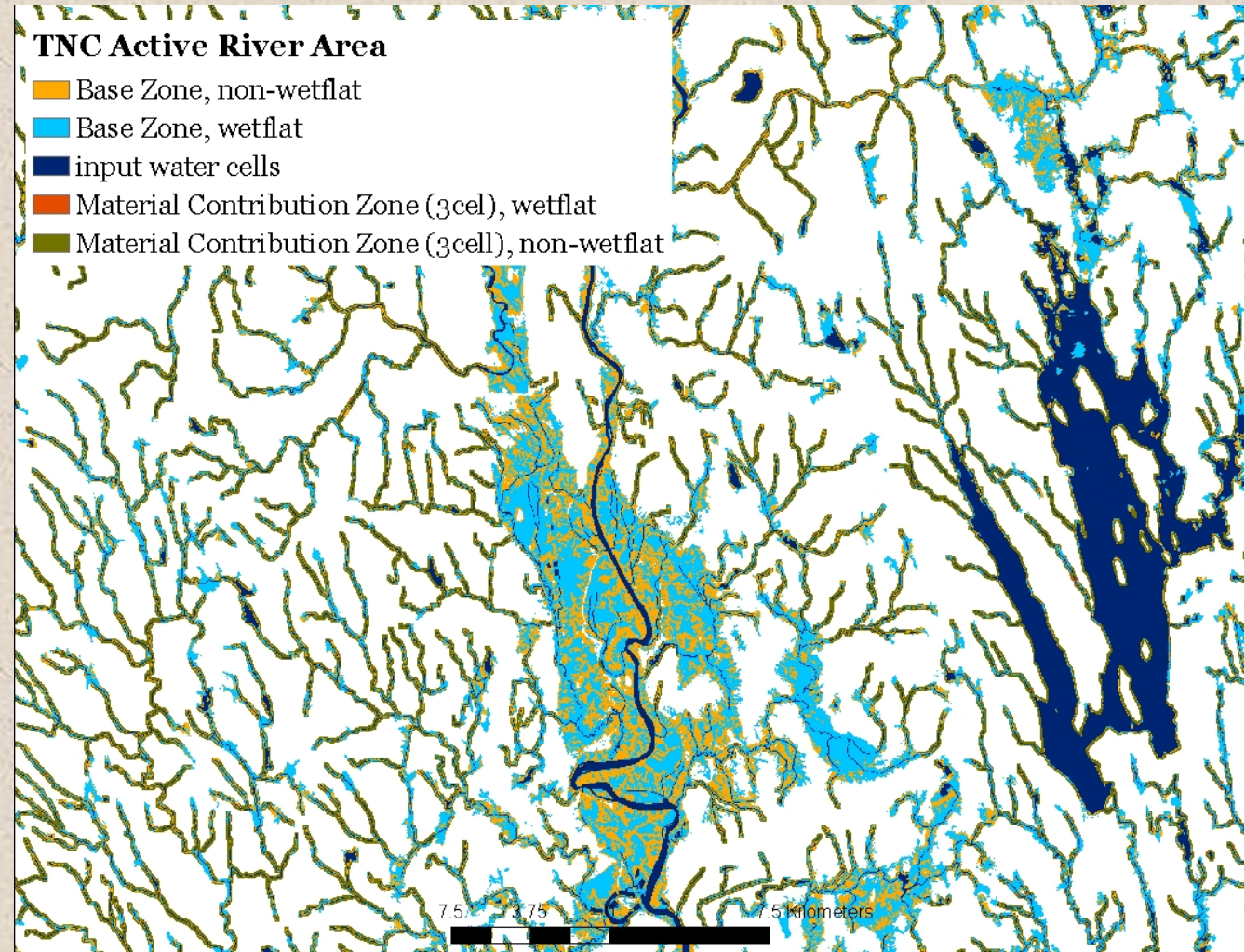


Landscape Conservation Design

Step 2: Design Conservation Network

5. Active River Area data

■ Example 3



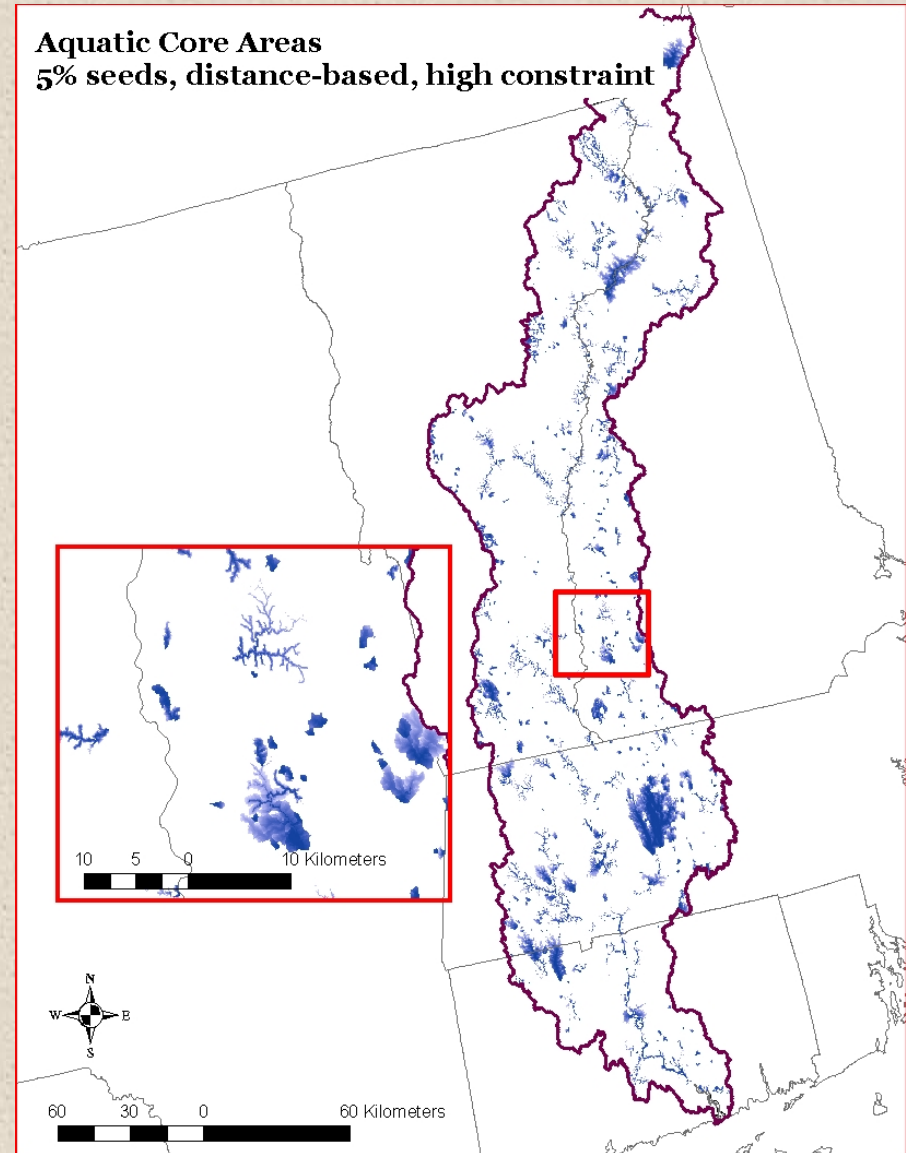
Landscape Conservation Design

Step 2: Design Conservation Network

- **Aquatic buffer-cores:**
 - Watershed-based buffers



How much area should we allocate to aquatic buffered cores?



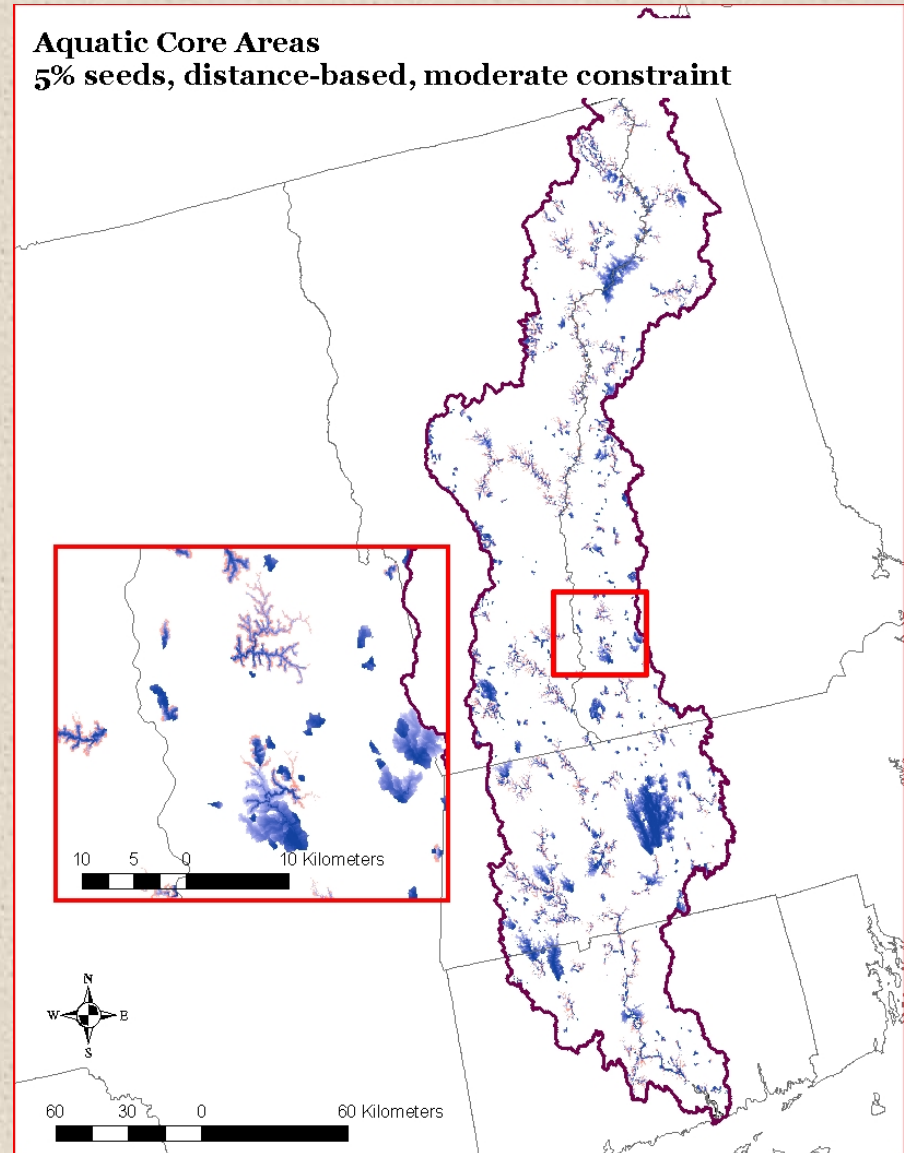
Landscape Conservation Design

Step 2: Design Conservation Network

- **Aquatic buffer-cores:**
 - Watershed-based buffers



How much area should we allocate to aquatic buffered cores?



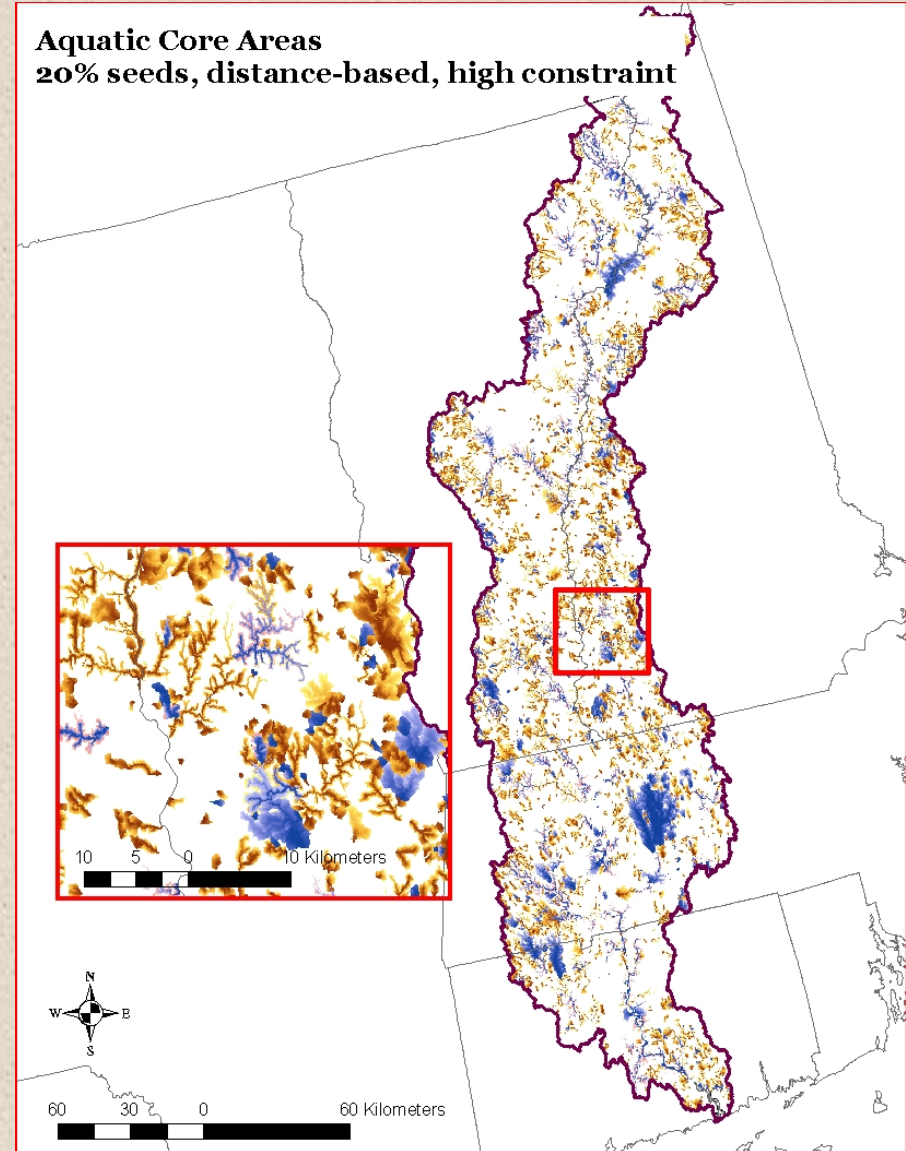
Landscape Conservation Design

Step 2: Design Conservation Network

- Aquatic buffer-cores:
 - Watershed-based buffers



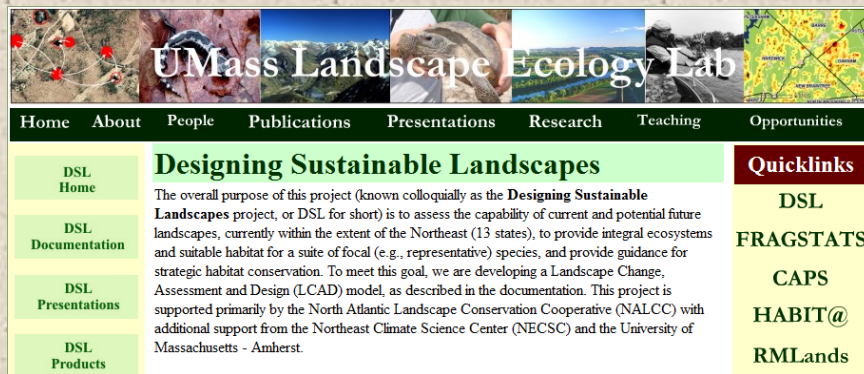
How much area should we allocate to aquatic buffered cores?



For More Information

- Project website:

www.umass.edu/landeco/research/dsl/dsl.html



Feedback:

- **Manager online survey**

North Atlantic Landscape Conservation Cooperative Designing Sustainable Landscapes (DSL) Project

UMass Landscape Ecology Lab: Kevin McGarigal, Brad Compton, Ethan Plunkett, Bill DeLuca, Liz Willey and Joanna Grand.

Manager Feedback and Questionnaire

This document is intended primarily for participants of the sub-regional workshops being held with partners of the North Atlantic Landscape Conservation Cooperative (NALCC) to review the results and provide feedback on phase 1 of the DSL project, although any NALCC partner is welcome to provide feedback. Specifically, this document includes a set of questions posed to partners concerning how best to package the landscape design information resulting from the Landscape Change, Assessment and Design (LCAD) model applied to the entire Northeast in phase 2.

Criteria for Feedback

The DSL project aims to provide regionally consistent information pertaining to biodiversity conservation planning and management across the Northeast. With this aim in mind, it is important to recognize the following criteria when providing feedback: 1). All LCAD data products must be regional (i.e., Northeast) in extent. There are lots of data that would be useful to LCAD, for example digital parcel land use zoning data, if they were available across the Northeast, but we are restricted to the use of digital data that are consistent across the Northeast. 2). Approaches for modeling landscape change, assessment and design must be technically feasible given available data and current computing resources. There may be ideal approaches that are not computationally feasible given available data and/or computing resources.

General topics

1) When the LCAD model is extended to the entire Northeast in phase 2, what is the best set of geographic ties (units) for rescaling ecological integrity and summarizing the model results?

- By state
- By watershed (indicated preferred HUC level in the comment box below)
- By ecoregion (indicated preferred ecoregion classification and level in the comment box below)
- Other (describe alternative tiling scheme in the comment box below)

Links to products:

- **Overview**
- **Technical docs**
- **Presentations**
- **Results**

- **Personal contact:** mccgarigalk@eco.umass.edu
413-577-0655