

Vermont Agency of Natural Resources

BioFinderTM



BIOFINDER GOAL



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- Identify the lands and waters supporting high priority ecosystems, natural communities and habitats
- Make the data broadly available through an interactive map.

WHY BIOFINDER?



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- To conserve Vermont's natural heritage!
- To show heritage & biodiversity priorities in one place
- To respond quickly to policy makers & other Agencies who drive landscape-level change
- Required by statute §127 (2011 "Energy Bill")

BIOFINDER IS 21 COMPONENT DATASETS



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Landscape

- Habitat Blocks
- Grasslands & Shrublands
- Physical Landscape (Rare & Representative)
- Landscape Connectivity
- Riparian Connectivity
- Road Crossings

Aquatic

- Surface Waters & Riparian Areas
- Representative Lakes
- Exemplary Surface Waters

Rare Species & Natural Communities

- Rare species
- Uncommon Species
- Rare Natural Communities
- Natural Communities (uncommon & common)
- Vernal pools (and potential pools)
- Wetlands
- Mast stands

WEIGHTING THE 21 COMPONENTS



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7 Habitat Blocks

3 Grasslands & Shrublands

9, 4 Physical Landscape (Rare & Representative)

7, 4, 3 Landscape Connectivity

8 Riparian Connectivity

4 Road Crossings

6 Surface Waters & Riparian Areas

4 Representative Lakes

8 Exemplary Surface Waters

Tier 1 Rare species

6 Uncommon Species

Tier 1 Rare Natural Communities

6, 3 Natural Communities (uncommon/common)

7, 5 Vernal pools (and potential pools)

8 Wetlands

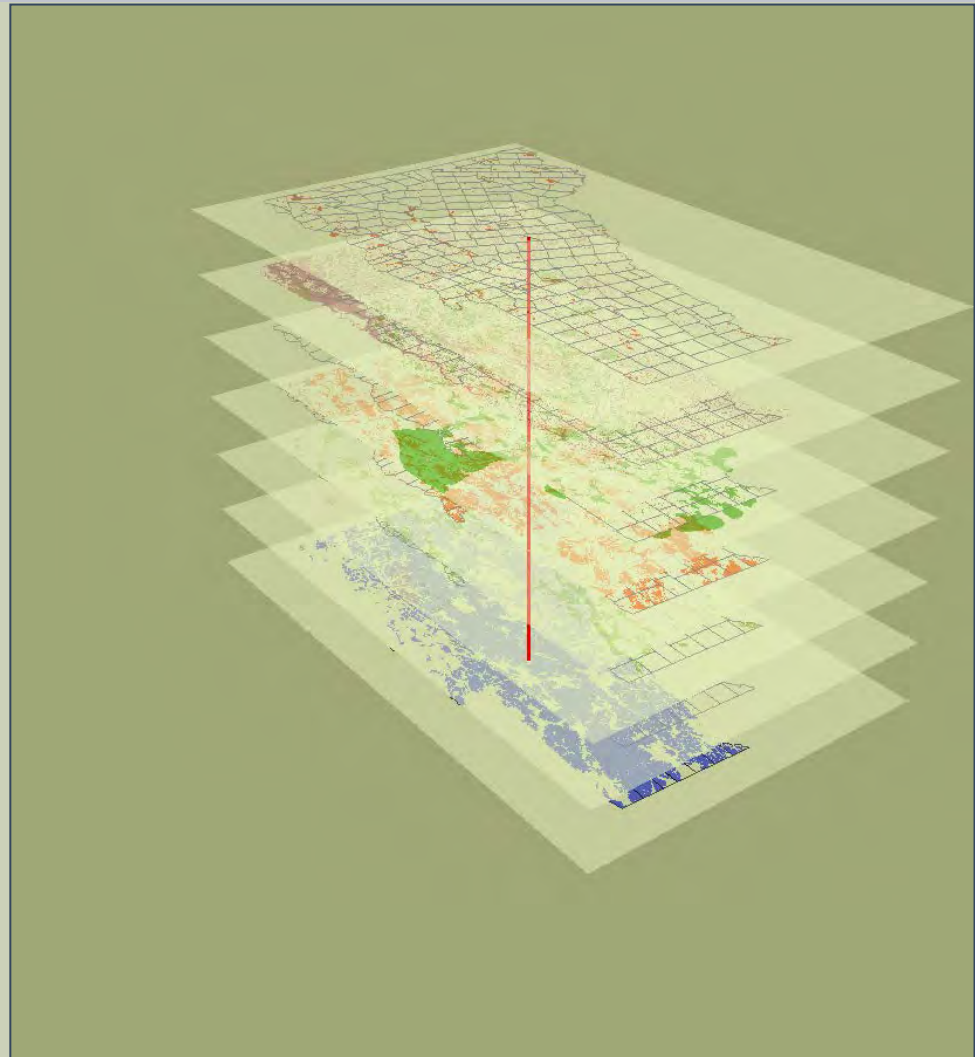
4 Mast stands

Weighting adjusts for

- Scale differences
- Ecological importance
- Some concepts in several component datasets

CO-OCCURRING FEATURES

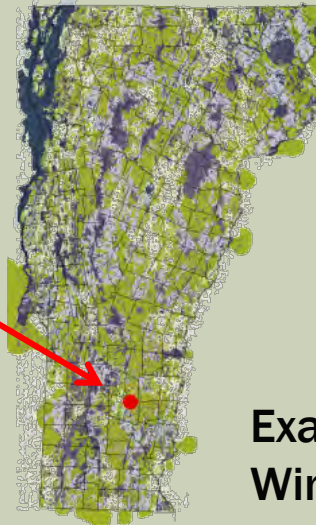
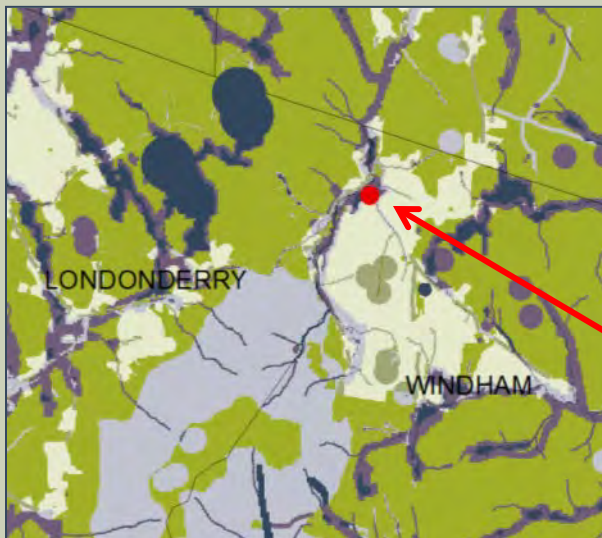
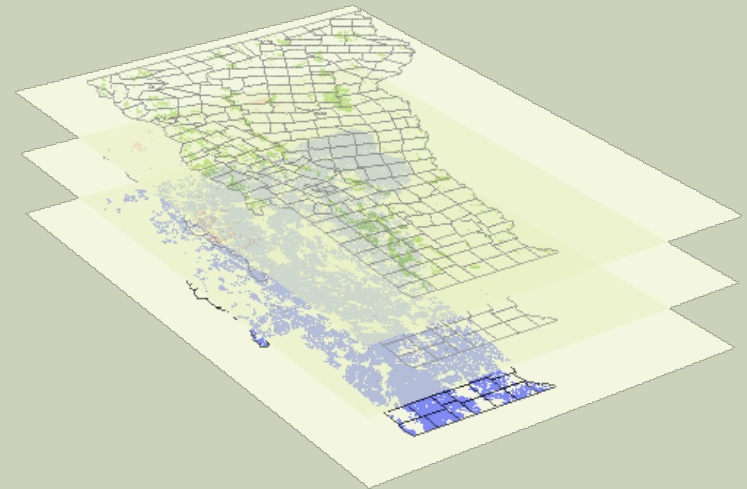
1. “Stack” all 21 Component datasets
2. For each pixel, sum the weight of each component present (within the pixel)



CO-OCCURRING FEATURES

Pixel value = The sum of the component weights

Riparian Connectivity	8
Road Crossings	4
Surface Waters & Riparian Areas	6
Total Pixel Score =	18

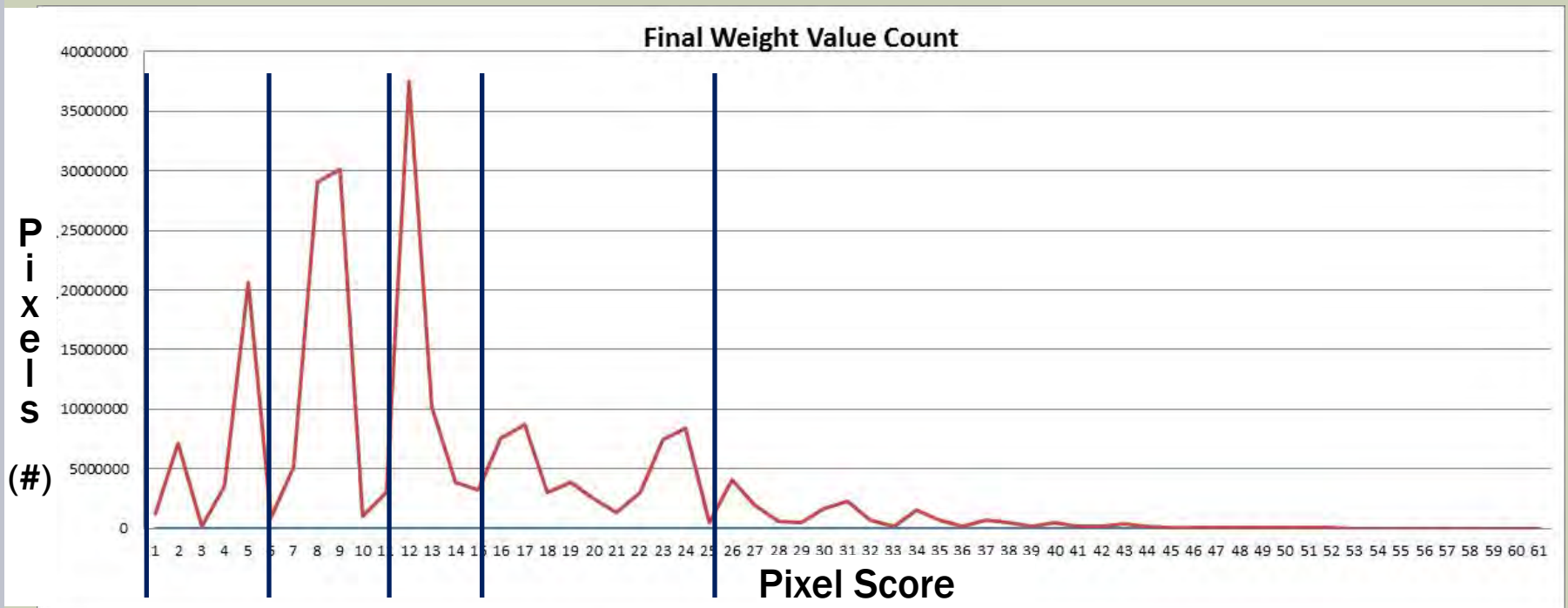


**Example:
Windham, VT**

Co-Occurring Features



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Tier 6

Tier 5

Tier 4

Tier 3

Tier 2

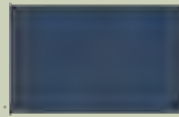
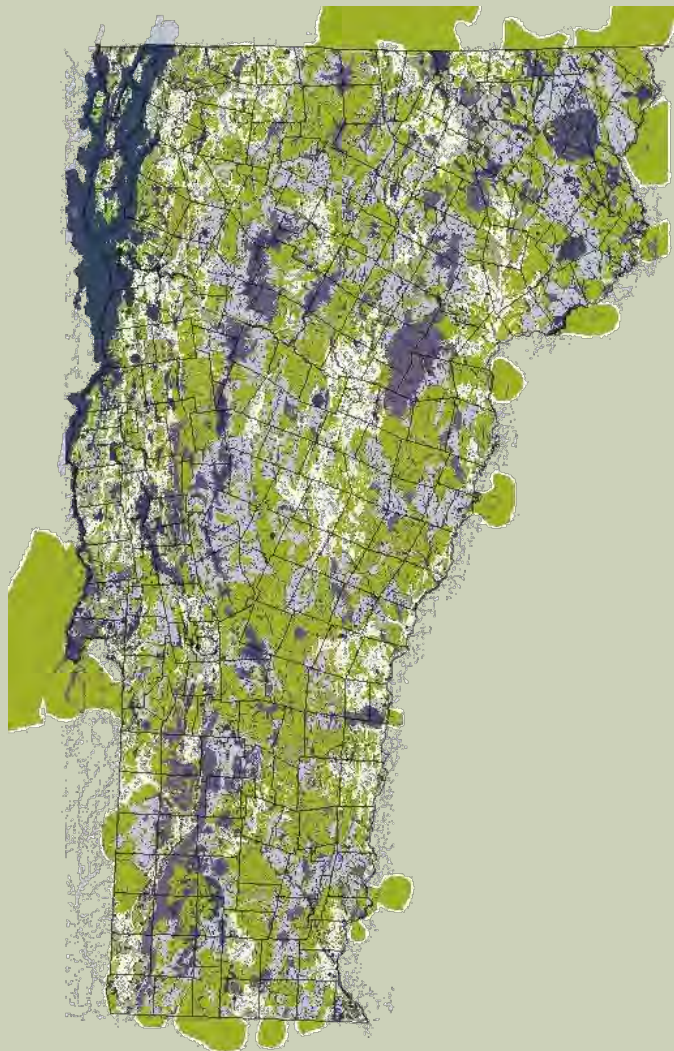
Tier 1

Tiers set at natural breaks in the distribution

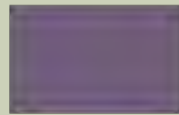
TIERED CONTRIBUTION TO BIODIVERSITY



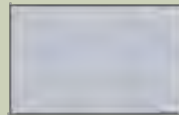
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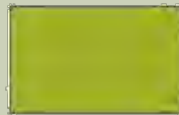
Tier 1-Greatest concentration of components or rarities



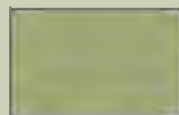
Tier 2: Very High ...



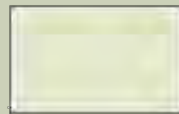
Tier 3: High ...



Tier 4: Moderate ...



Tier 5: Low ...



Tier 6: Insufficient data

TIERED CONTRIBUTION TO BIODIVERSITY

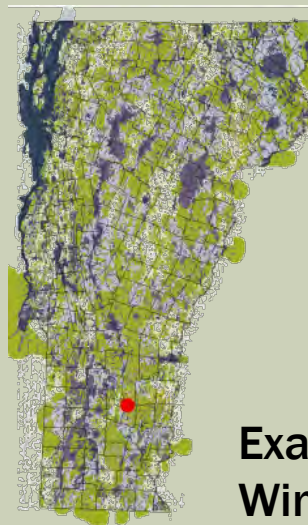
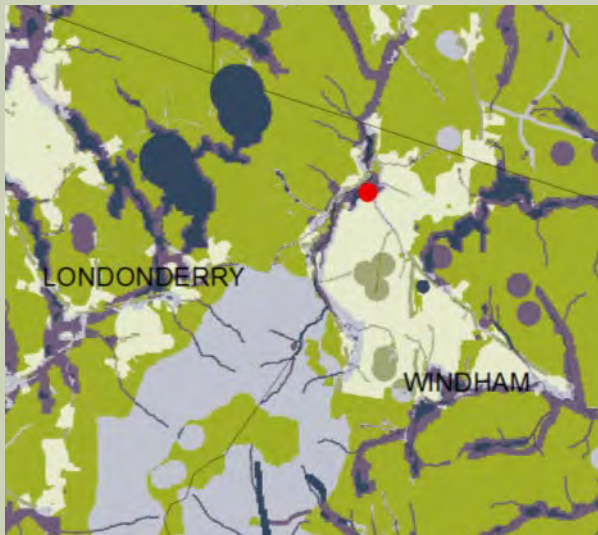


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Riparian Connectivity	8
Road Crossings	4
Surface Waters & Riparian Areas	<u>6</u>
Total Pixel Score =	18



Tier 2: Very high concentration of components contributing to biological diversity.



Example:
Windham, VT

BIOFINDER USES...& CAVEATS



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- Proactive planning context
- Landscape scale prioritization and development review
- To better understand the components and their contribution to biological diversity
- BioFinder does **not** replace site visits or site-specific data and analyses
- Areas mapped as “blank” or “low priority” may contain very important features

NEXT STEPS



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- BioFinder website and mapping tool go live on January 15.
- Complete report preparation and website updates
- Continue outreach and project use