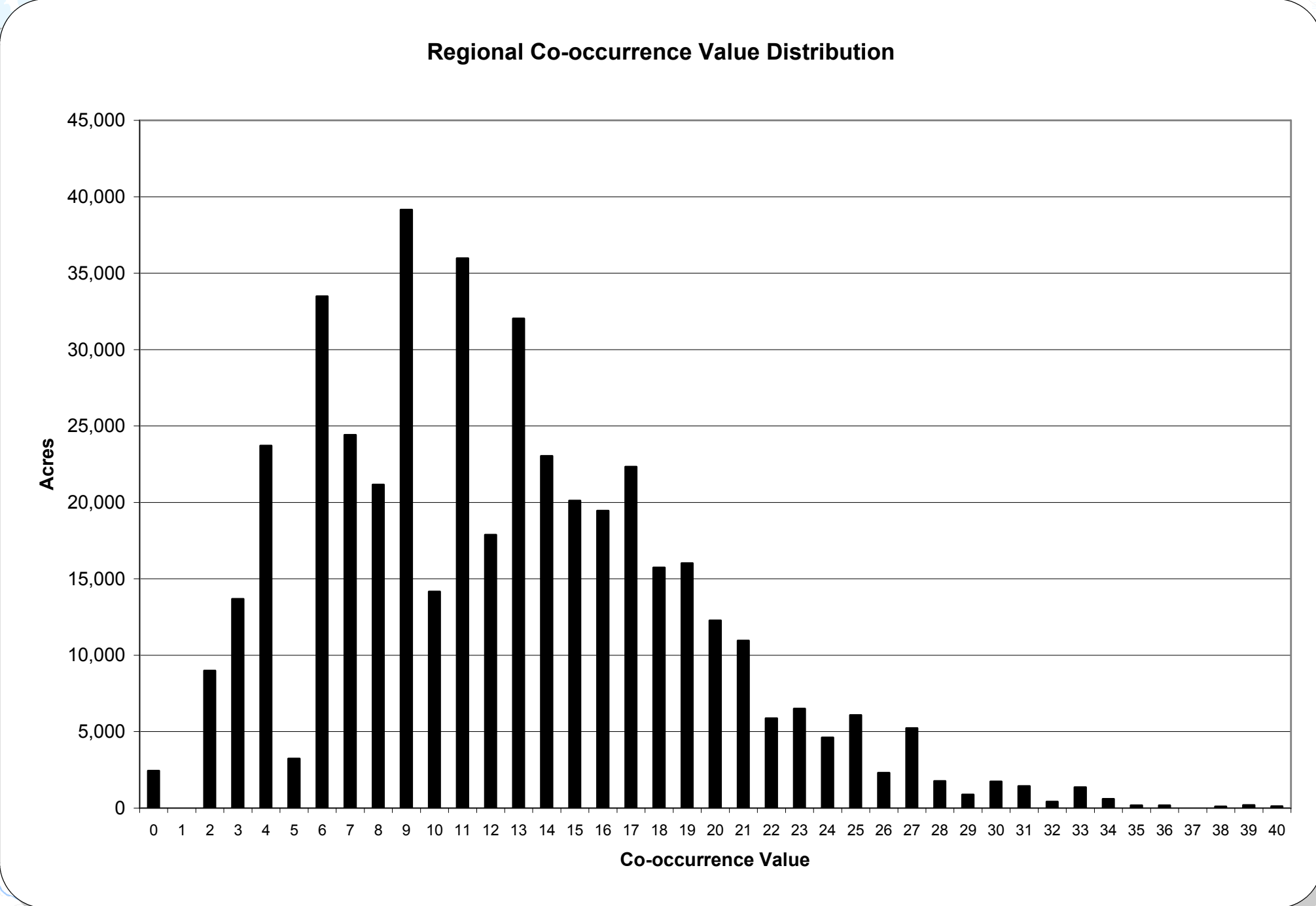


# New Hampshire Coastal Watersheds Natural Resource Co-occurrence Model



**NH Coastal Watersheds**

- Conservation and Public Lands
- Municipal Boundaries
- State Boundaries
- Roads
  - Major (interstate / turnpike)
  - Minor (state / US)
  - Local Roads
  - Unimproved (Class VI)
- Surface Water
- Wetlands (NWI)
- Streams

**Co-occurrence Model**

Value Range	Classification
0 - 8	Low Value
9 - 11	
12 - 15	
16 - 17	
18 - 20	
21 - 22	
23 - 25	
26 - 28	
29 - 32	
33 - 40	High Value

Classification or Grouping	Value
<b>Forest Systems Composite</b>	
Intact Forest Blocks >10,000 acres	5.5
5,000 to 10,000	4.5
1,000 to 5,000	4.8
500 to 1,000	3.5
250 - 500	1.9
Aggregated Forest Blocks >40,000 acres	4.1
20,000 to 40,000	3.3
10,000 to 20,000	2.7
2,500 to 10,000	2.1
<b>Freshwater Systems Composite</b>	
High Quality Stream Watersheds Tiers 1&2: Most pristine & rural low density	7.7
Tiers 3&4: Rural medium & rural high density	5.3
Important Stream Reaches Containing aquatic species of concern	5.1
Riparian Zones Freshwater streams & rivers	6.7
<b>Coastal &amp; Estuarine Systems Composite</b>	
Undeveloped coastline Within 1,000' buffer of marine coast	3.9
Riparian zones Estuaries & tidal rivers	5.5
Tidal wetlands	4.1
Forest blocks >500 acres within tidal catchments	5.1
<b>Critical Plant &amp; Wildlife Habitat Composite</b>	
NH Wildlife Action Plan habitat composite layer	6.6
NH Wildlife Action Plan Appalachian-Oak Hickory matrix forest	3.8
1 <sup>st</sup> priority rare & exemplary plant, wildlife and natural community occurrences	6.6
2 <sup>nd</sup> priority rare & exemplary plant, wildlife and natural community occurrences	4.3
3 <sup>rd</sup> priority rare & exemplary plant, wildlife and natural community occurrences	2.9

In the *Land Conservation Plan for New Hampshire's Coastal Watersheds* we have mapped 22 significant features in four resource areas: forest ecosystems, freshwater systems, irreplaceable coastal and estuarine systems, and critical plant and wildlife habitat. This co-occurrence model assigns value based on the density and importance of the resources at a place. It does this by identifying areas with multiple conservation values where several resource values coincide and overlap, signaling locations deserving higher priority for protection.

In order to establish relative importance values, an expert panel of natural resource professionals, community planners, and scientists participated in a consensus-oriented "Delphi" process. Each participant assigned a numeric importance value to each data factor according to best professional judgment and agency or organizational mission-driven perspectives. Mean scores were then calculated for each of the 22 factors and combined in a final GIS datalayer comprising all the evaluated resources - the co-occurrence model. In the color scheme displayed here darker colors indicate higher cumulative conservation values.

The histogram above and to the left represents the distribution of values across the coastal watersheds. The mean value falls between 12 and 13; values above 16 approximately represent the top 25% by area; values above 21 approximately represent the top 10%.

**Data Sources:**  
Base datasets provided by NH GRANIT, a partnership between the Office of Energy and Planning (OEP) and the University of New Hampshire Complex Systems Research Center (CSRC), compiled, maintained, and distributed geographic data for the state of NH.

**Additional datasets:**  
Co-occurrence Model: Produced for the Land Conservation Plan for New Hampshire's Coastal Watersheds by The Nature Conservancy and the Society for the Protection of New Hampshire's Forests with input from project partners, conservation stakeholders, and scientific experts from around the watershed.

NH Coastal Watersheds: Based on watersheds generated by NH Coastal Program and USGS SPANROW water quality model.

NH Conservation and Public Lands: Produced by NH GRANIT, January 2006 with updates provided by Rockingham Planning Commission, Strafford Regional Planning Commission, the Society for the Protection of NH Forests, and The Nature Conservancy.

