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COMPREHENSIVE PLANNING FRAMEWORK

June 19, 2013

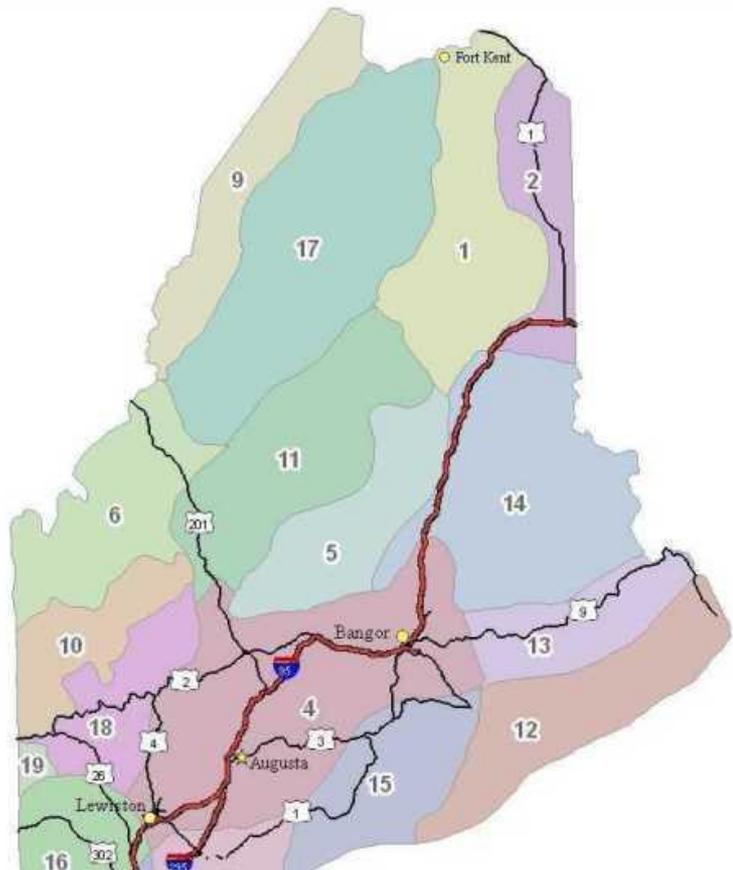
RUTH M. LADD, PWS
NEW ENGLAND DISTRICT
U.S. ARMY CORPS OF ENGINEERS



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SERVICE AREAS (33 CFR 33.28)

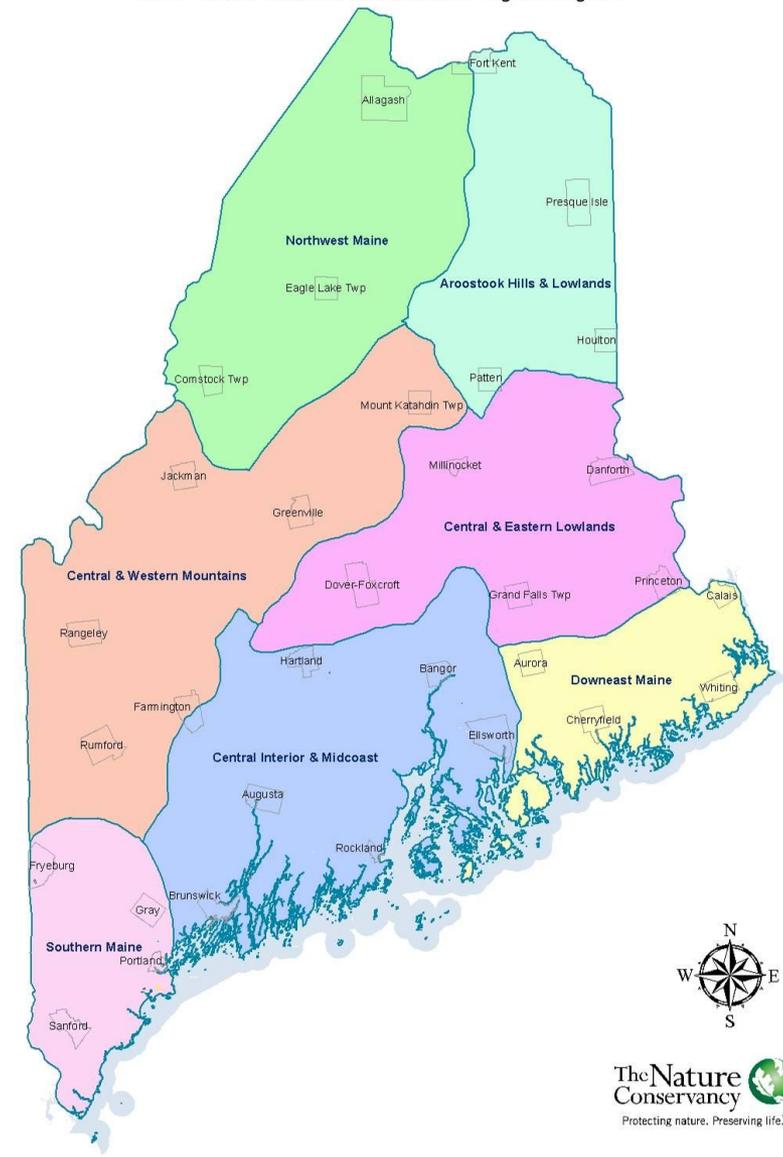
- "...the geographic area within which impacts can be mitigated at ... an in-lieu fee program, as designated in its instrument." (33 CFR 332.2)
- Watershed, ecoregion, physiographic province, etc.
 - "...must be appropriately size to ensure that the aquatic resources provided with effectively compensate for adverse environmental impacts across the entire service area."
 - "The economic viability of the ... in-lieu fee program may also be considered in determining the size of the service areas."



Biophysical Regions of Maine

- | | |
|---|--|
| 1 - Aroostook Hills Subsection | 11 - Maine Central Mountains Subsection |
| 2 - Aroostook Lowlands Subsection | 12 - Maine Eastern Coastal Subsection |
| 3 - Casco Bay Coast Subsection | 13 - Maine Eastern Interior Subsection |
| 4 - Central Maine Embayment Subsection | 14 - Maine-New Brunswick Lowlands Subsection |
| 5 - Central Maine Foothills Subsection | 15 - Penobscot Bay Coast Subsection |
| 6 - Connecticut Lakes Subsection | 16 - Sebago-Ossipee Hills and Plain Subsection |
| 7 - Gulf of Maine Coastal Lowland Subsection | 17 - St. John Upland Subsection |
| 8 - Gulf of Maine Coastal Plain Subsection | 18 - Western Maine Foothills Subsection |
| 9 - International Boundary Plateau Subsection | 19 - White Mountain Subsection |
| 10 - Mahoosuc Rangeland Lakes | |

Maine Natural Resource Conservation Program Regions

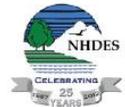
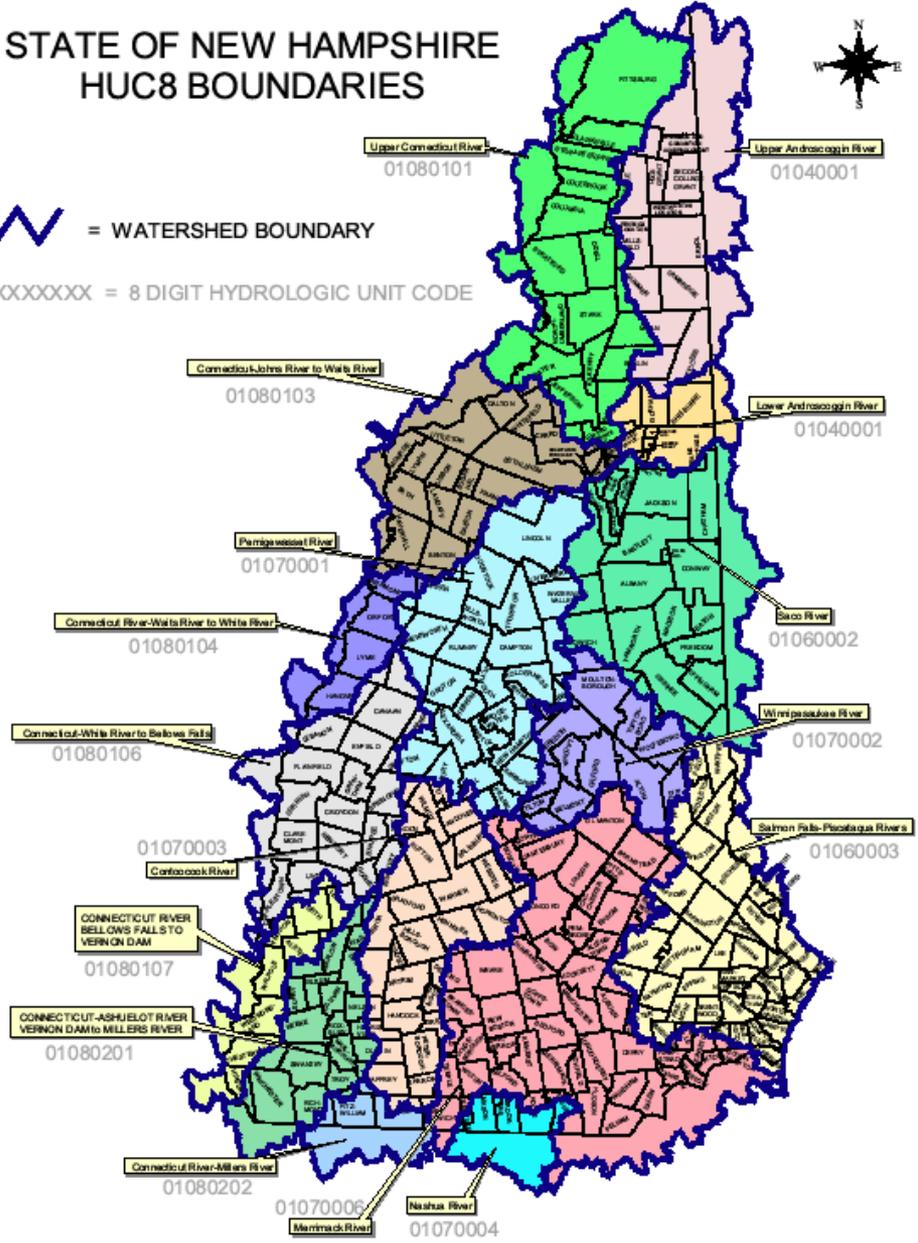


STATE OF NEW HAMPSHIRE HUC8 BOUNDARIES



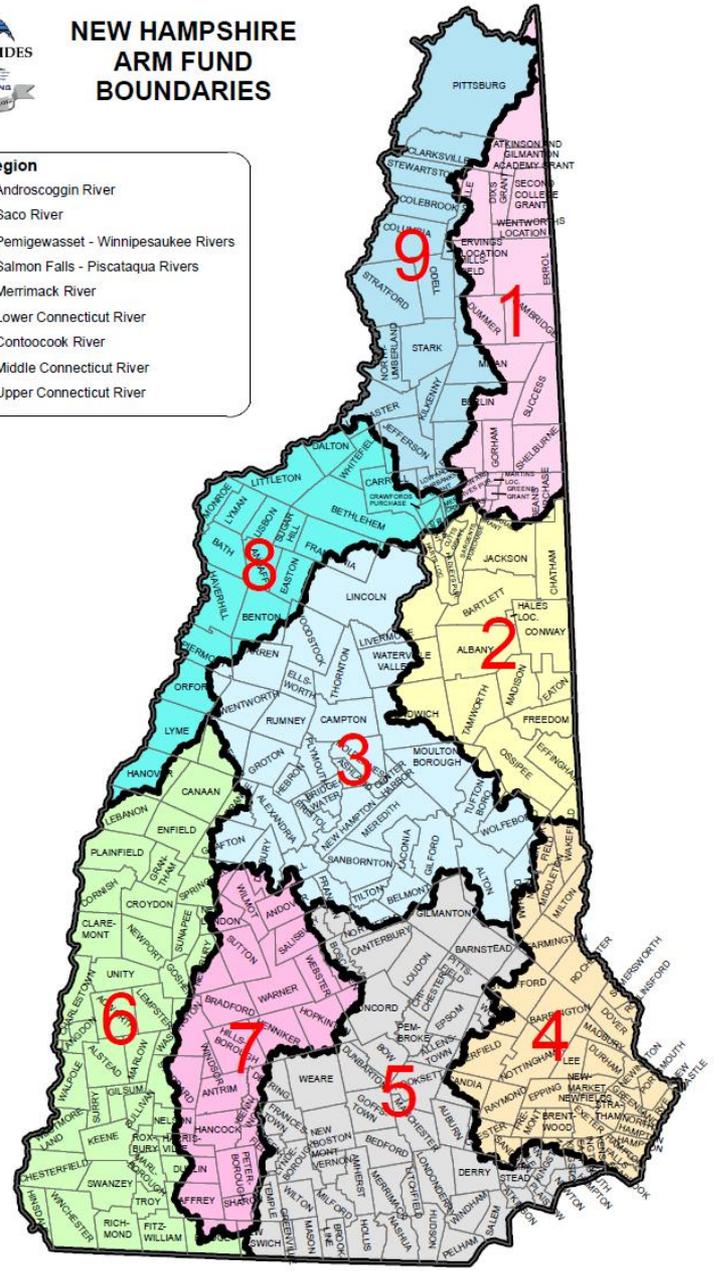
= WATERSHED BOUNDARY

XXXXXXXX = 8 DIGIT HYDROLOGIC UNIT CODE



NEW HAMPSHIRE ARM FUND BOUNDARIES

- ARM Region**
- 1 - Androscoggin River
 - 2 - Saco River
 - 3 - Pemigewasset - Winnepesaukee Rivers
 - 4 - Salmon Falls - Piscataqua Rivers
 - 5 - Merrimack River
 - 6 - Lower Connecticut River
 - 7 - Contoocook River
 - 8 - Middle Connecticut River
 - 9 - Upper Connecticut River





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THREATS

- Stressors to aquatic resources
 - Scope
 - Severity/level of impairment
 - Irreversibility
- By service area
 - May address for entire program area, then provide specifics
- GIS-based with BPJ of experts/stakeholders
- How ILF program will help offset (see also goals/objectives)



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THREATS: Examples

- Population pressures
 - Habitat fragmentation
 - Direct loss of habitat
- Altered hydrology
- Nutrient enrichment/pollution
- Invasive species
- Pests/pathogens
- Forest conversion
- Sedimentation
- Loss/impairment of riparian zones
- Recreational use
- Climate change/sea level rise



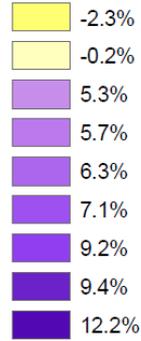
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Population Change 2000 -- 2010

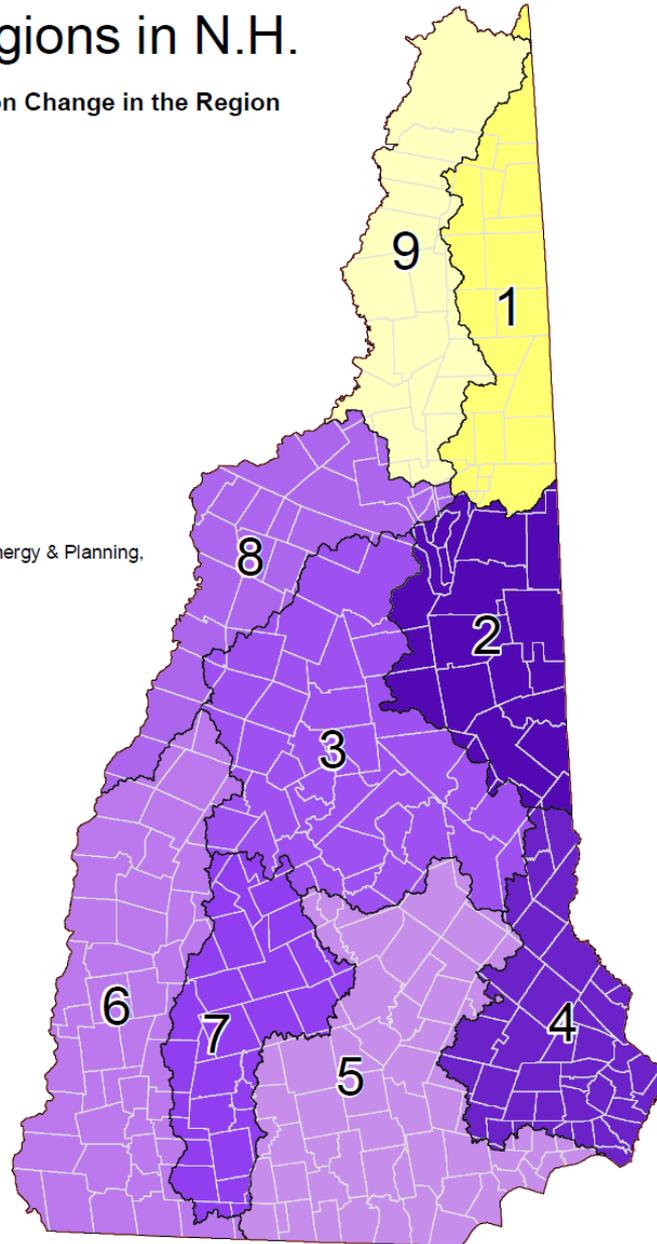
ARM Regions in N.H.



Percent Population Change in the Region



Data Source: NH Office of Energy & Planning,
State Data Center, 2011



Map prepared by the Forest Society Land Protection Department



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HISTORIC IMPACTS

- Clue: hydric soils but no wetlands
- GIS: detail available state-specific
 - Altered stream and wetland buffers
 - Hydric soils in agriculture or development
- Past permit history (state and/or federal)
- Historic aerial photos/maps
 - NRCS, USGS



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CURRENT CONDITIONS

- NWI and/or state wetland maps
- Land cover maps
- State reports
- EPA wetland condition reports
- Non-profit organizations
- NRCS



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GOALS & OBJECTIVES: GENERAL

- Increase extent & quality of compensatory mitigation over that of permittee-responsible
- Integrate ILF projects with other conservation activities whenever possible
- ID/protect wetland systems of statewide significance



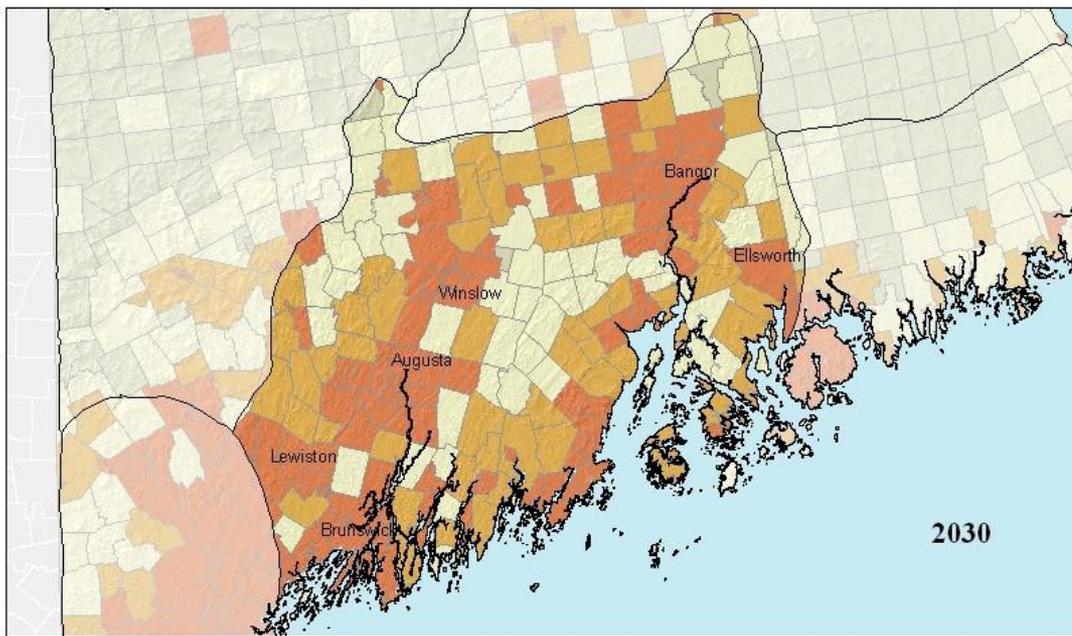
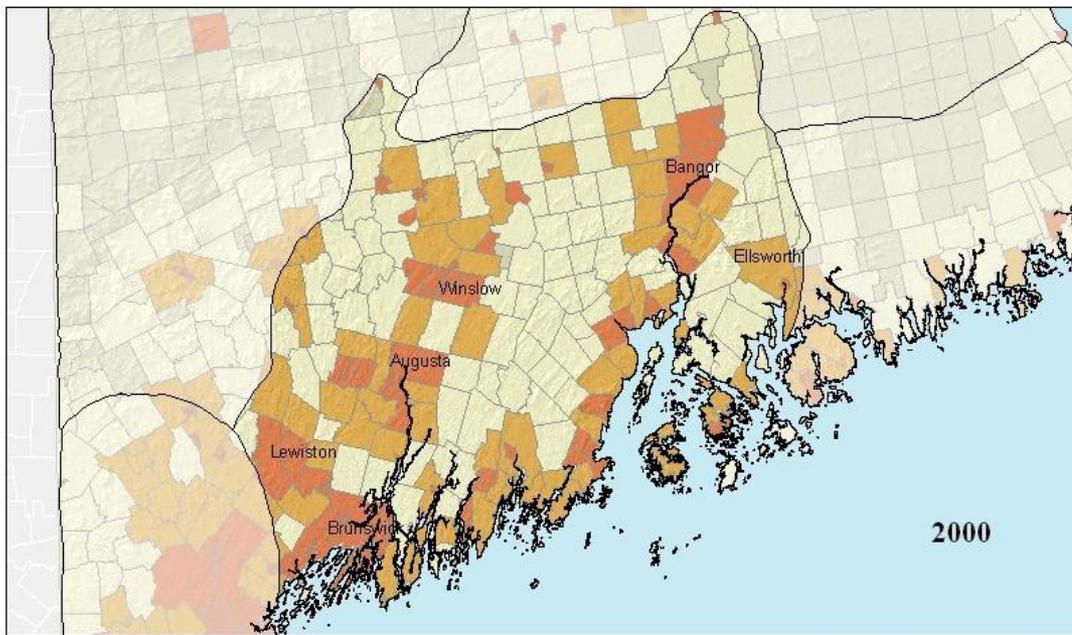
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GOALS & OBJECTIVES: SPECIFIC

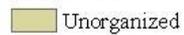
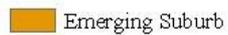
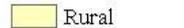
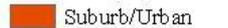
- Restore marginal or non-productive ag land to priority resource types
- Restore fish passage in Penobscot River watershed
- Preserve vernal pools and associated critical terrestrial habitat; headwater streams
- Remove barriers to inland migration of coastal wetlands
- Conservation of WAP Tier 1 and 2 habitats to connect existing protected lands
- Implement BMPs that reduce nitrogen loading to the Great Bay
- Salt marsh restoration
- Manage and re-vegetate riparian buffers

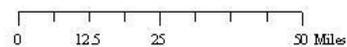


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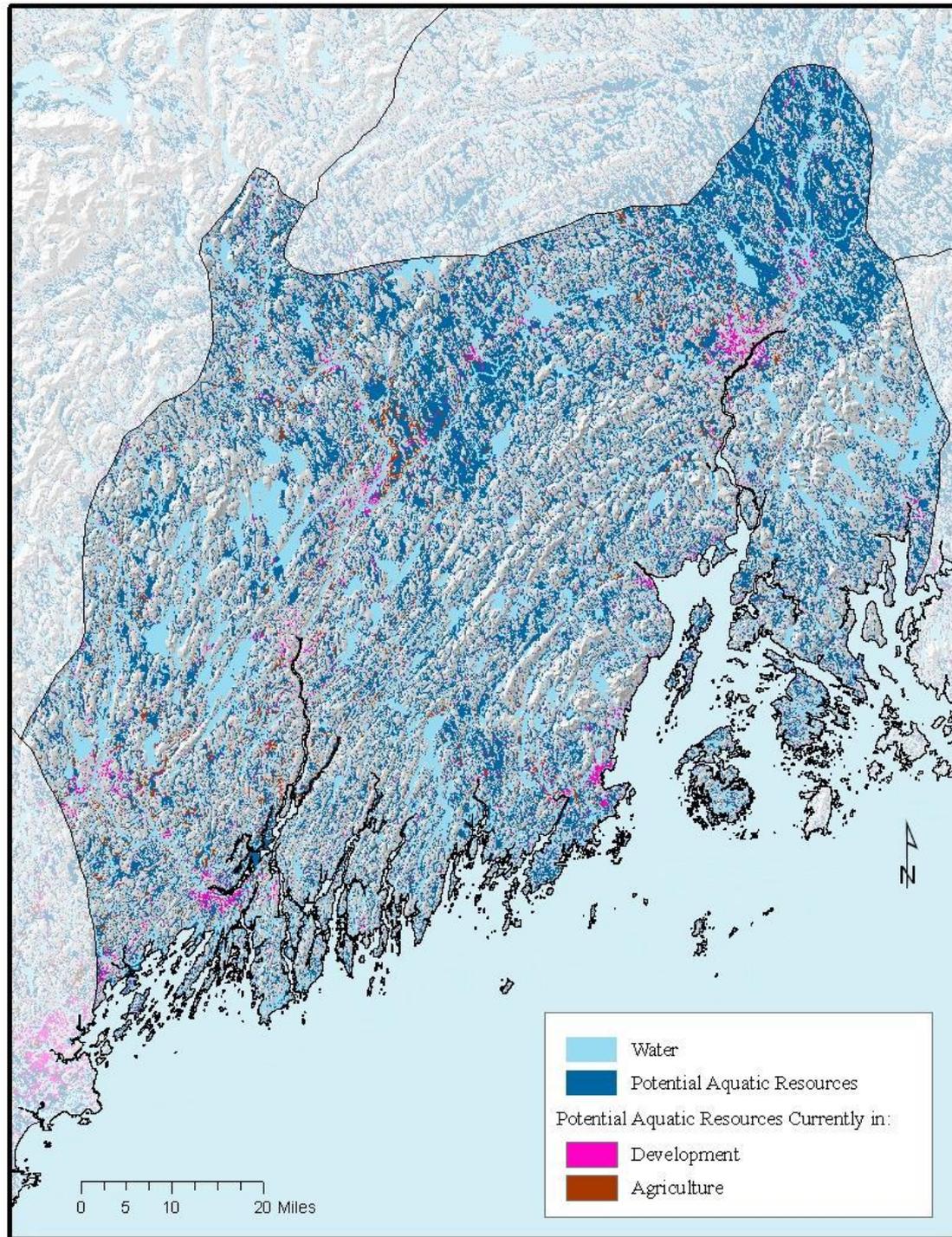
Town Status

- | | |
|---|---|
|  Unorganized |  Emerging Suburb |
|  Rural |  Suburb/Urban |





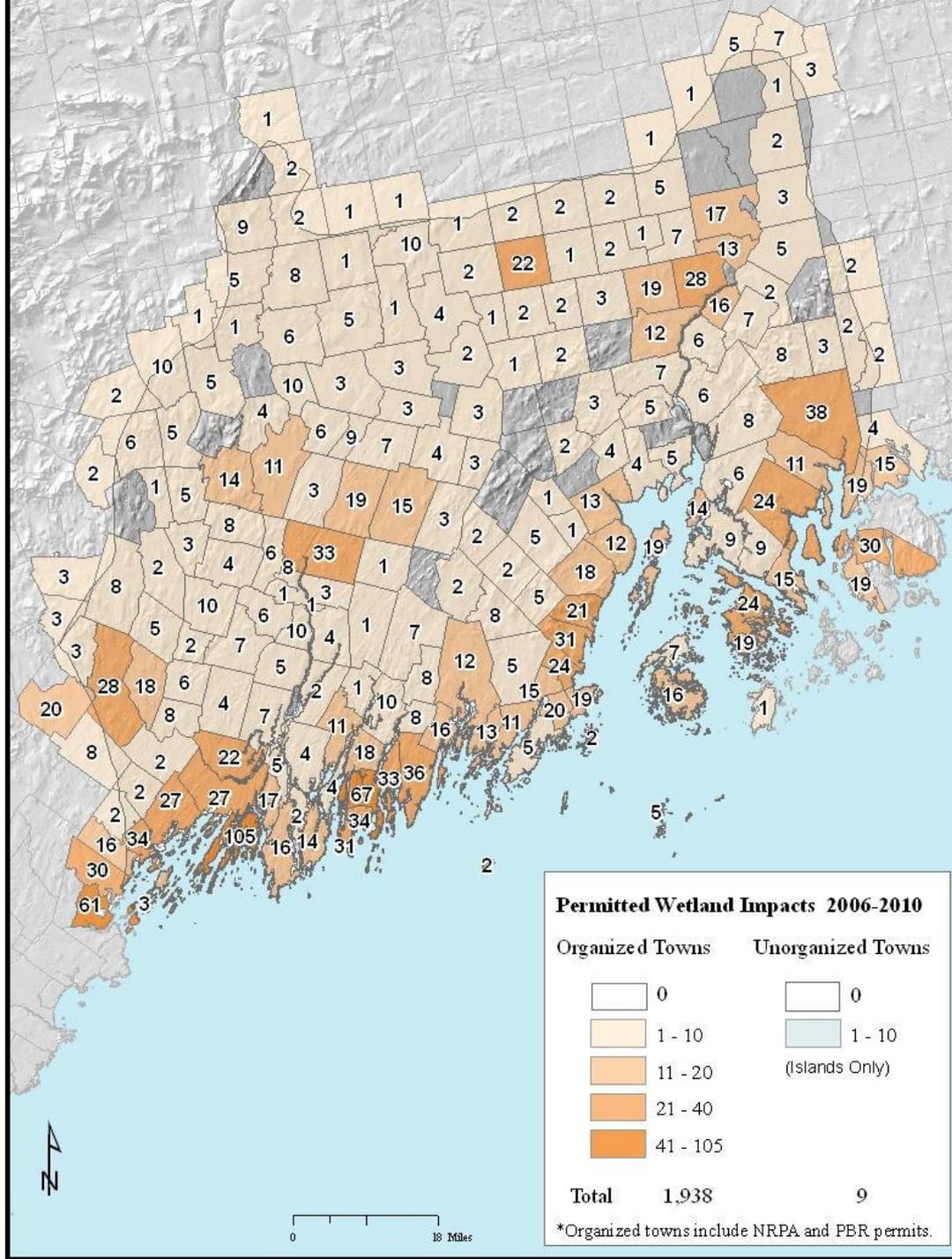
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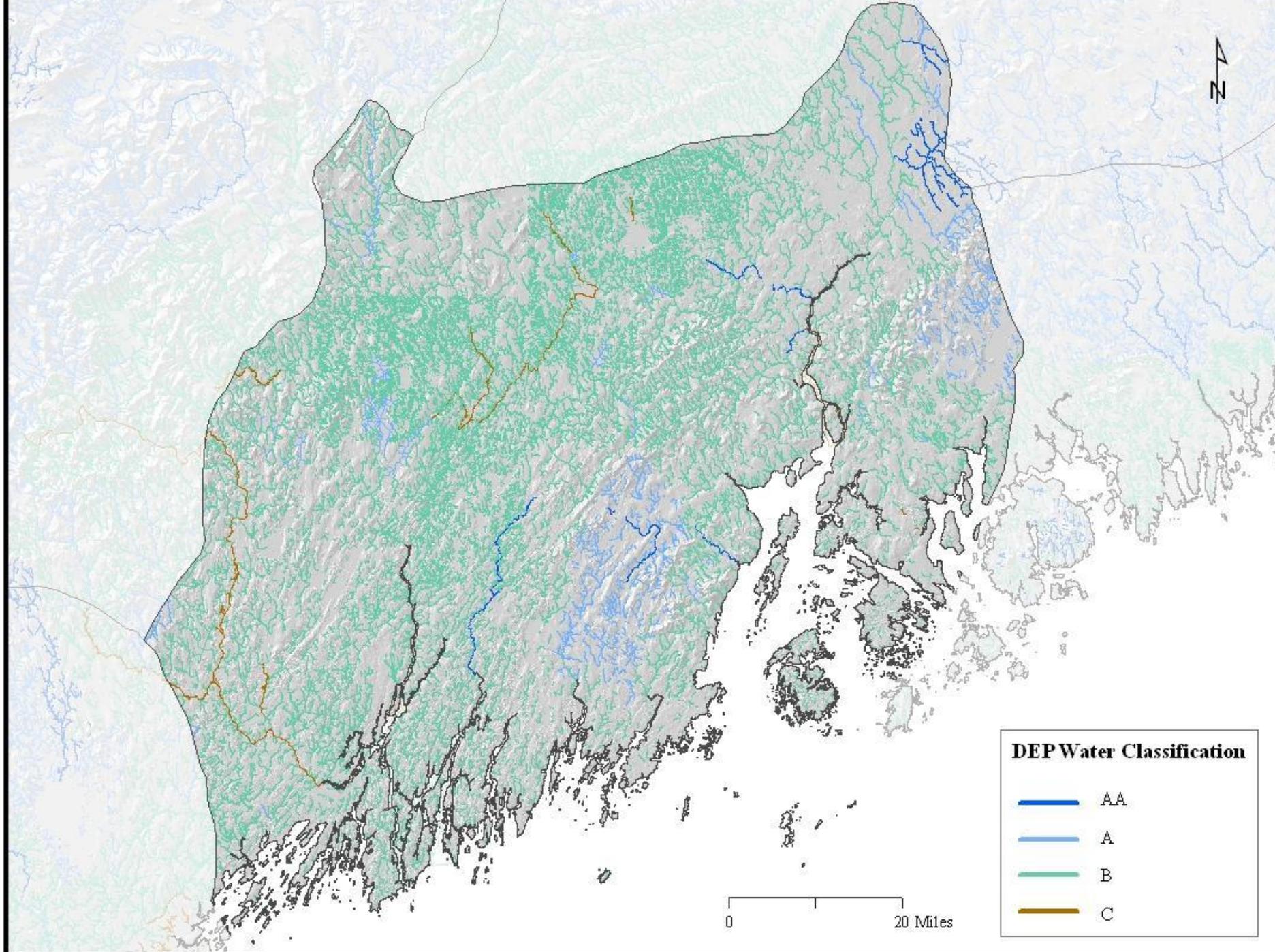


0 5 10 20 Miles



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PRIORITIZATION STRATEGY: SCORING SYSTEM

- **Maine**
 - Potential to meet program goals, landscape context, project readiness/feasibility, project sponsor capacity, cost effectiveness, other benefits
- **New Hampshire**
 - Potential to replace or protect functions & values, overall environmental significance, location relative to WAP highest quality habitat, overall mitigation potential, cost-effectiveness & partnership potential
- **Vermont**
 - Threats manageable, address multiple resource services, compatible with surrounding landscapes, high functional gain per dollar, address WQ issues



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PRESERVATION

- Acknowledgement of Rule's requirements for preservation-only
 - Threat?
 - Provide important functions for watershed?
 - Contribute significantly to ecological sustainability of watershed?
 - Permanently protected?
 - Appropriate & practical?
- Preservation associated with restoration, enhancement, creation
 - Permanently protected?



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STAKEHOLDER INVOLVEMENT

- Use of working groups in development of components of instrument
 - State, federal, local agencies; NGOs, industry, academics
 - Useful in finding data sources
 - Review CPF for completeness, accuracy



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LONG-TERM PROTECTION & MANAGEMENT

- Preservation documents
- Endowment, investments, or other financing mechanism
- Management plan
- Project agreement or contract
- In some states, state has 'third party' enforcement rights on all CEs



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EVALUATION AND REPORTING

- Annual reports (post on RIBITS)
 - Progress in each service area
 - Specific project progress
 - Successes/challenges/opportunities for improvement
- Assess program every 5 years
 - Status and trends
 - Progress toward goals in instrument
- CPF review and revision, if needed, every 10 years
 - Work with stakeholders again



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OTHER INFORMATION

- District-specific
- If joint with state, may have state requirements



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QUESTIONS?

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