

As go the Maine woods...

...so go the Maine lakes



Questions?

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WORKING AT SCALE

Investing in Land Conservation for Source Water Protection

2016 RCP Network Gathering

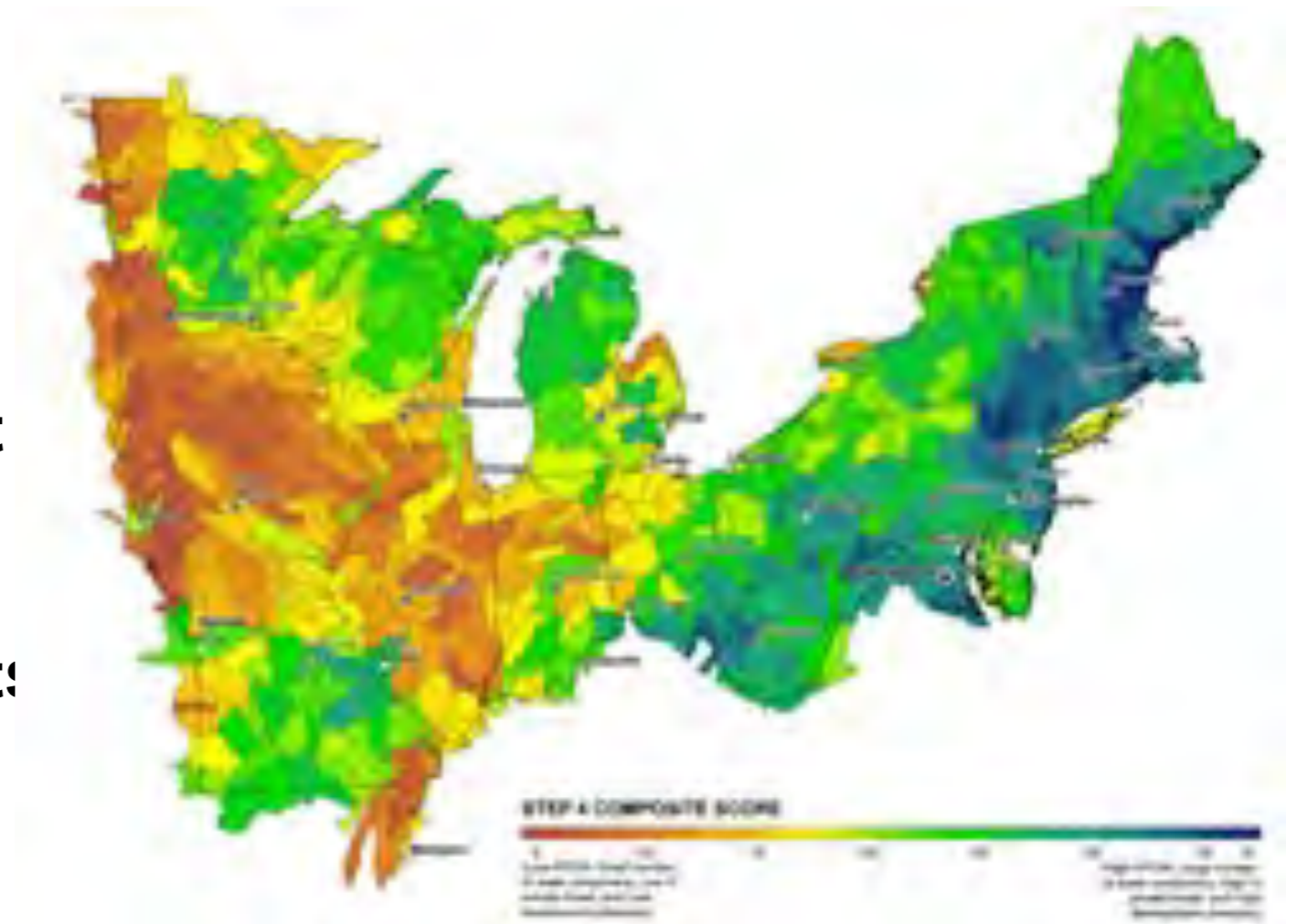
**Marcy Lyman
Harvard Forest Fellow
marthawlyman@gmail.com**

THE BIG IDEA

Building the case for new capital and capacity to support land conservation for source water protection

Importance of Region's Forests for Drinking Water

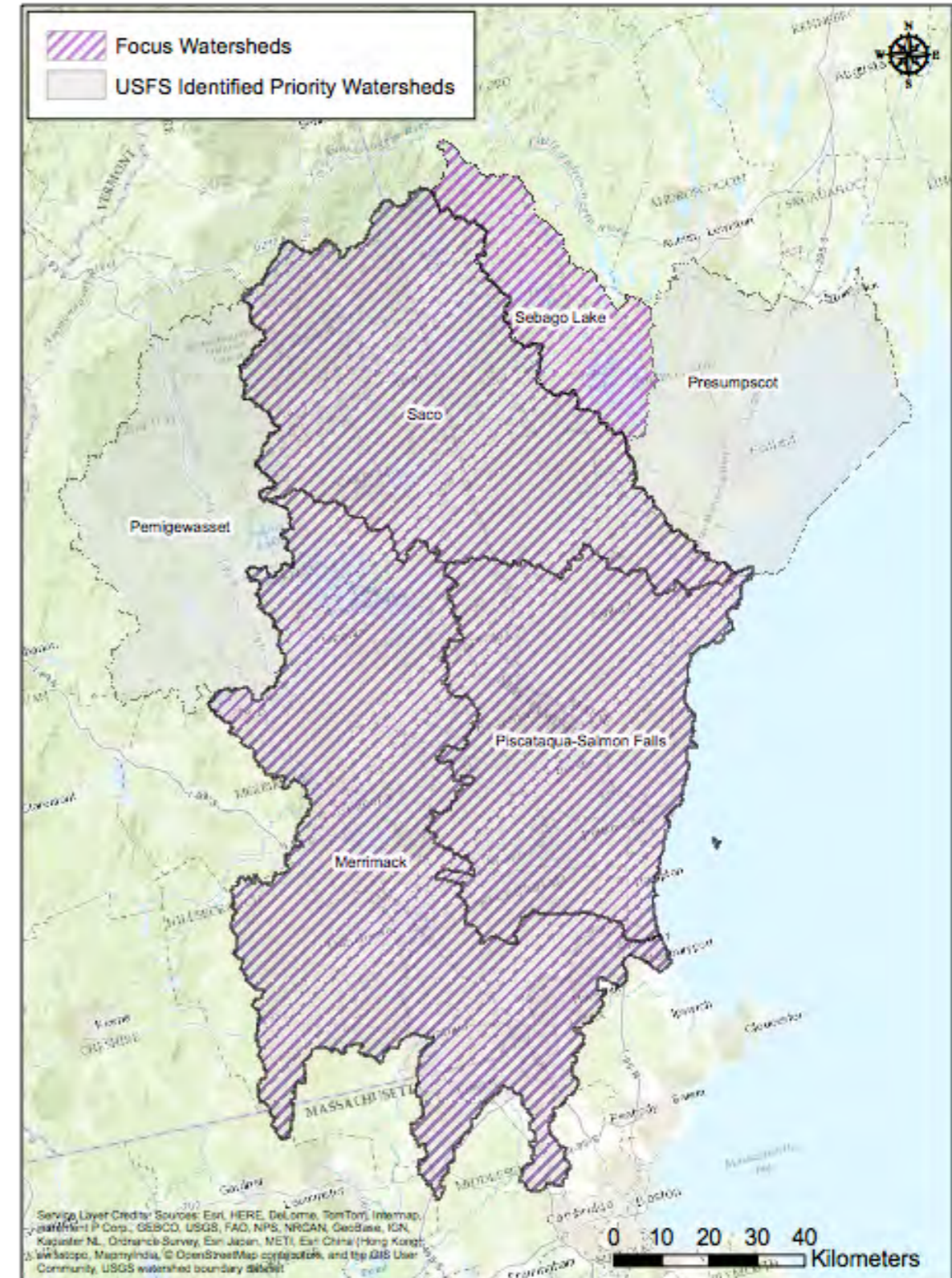
- **USFS Reports**
- **Priority watersheds**
- **Issue: Risk of development and vulnerability of degradation in drinking water supplies from impacts of development**



Focus Watersheds

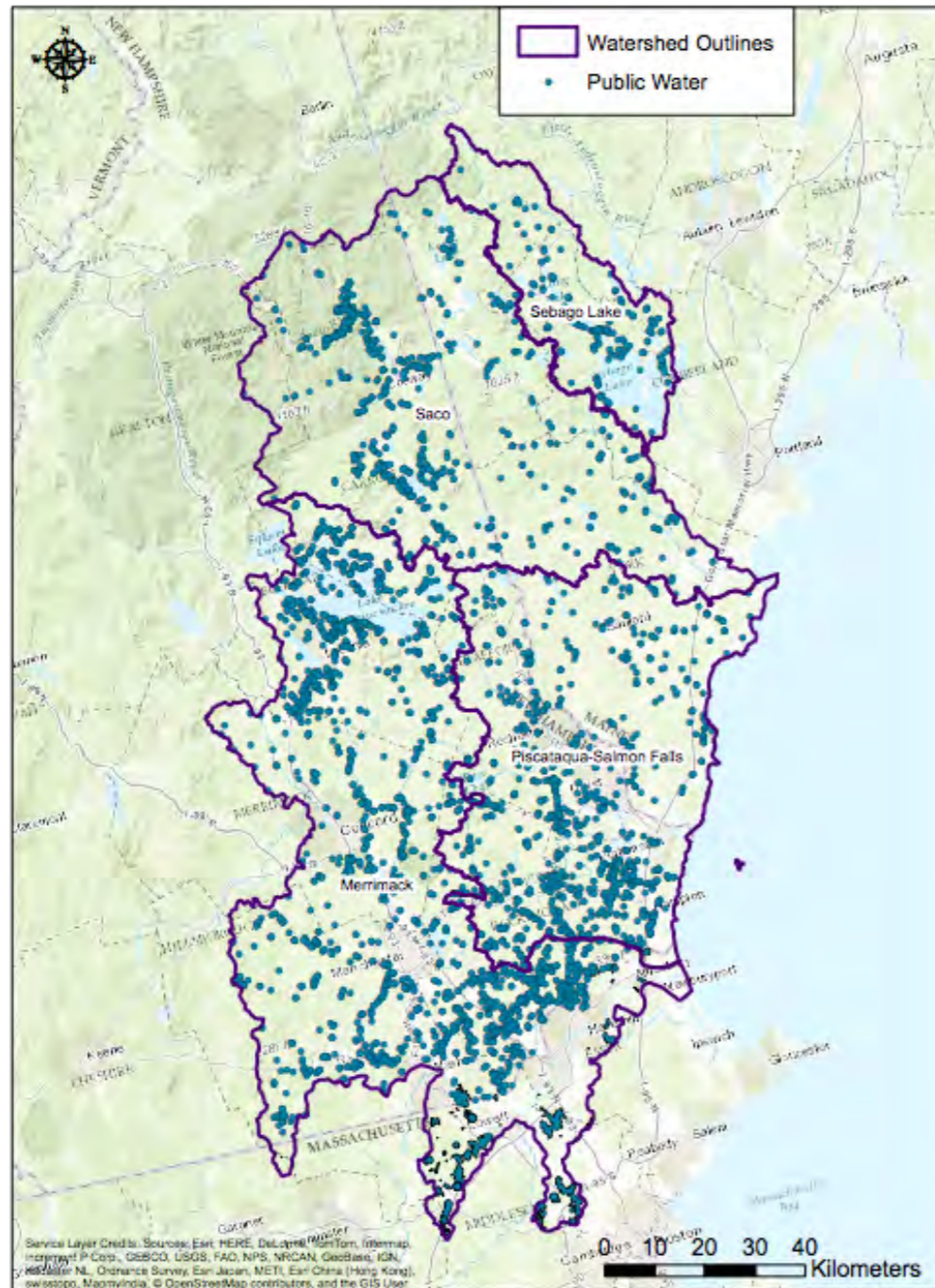
- **Sebago Lake/Crooked River (Presumpscot)**
- **Saco**
- **Piscataqua/Salmon Falls**
- **Merrimack**

Potential Watersheds

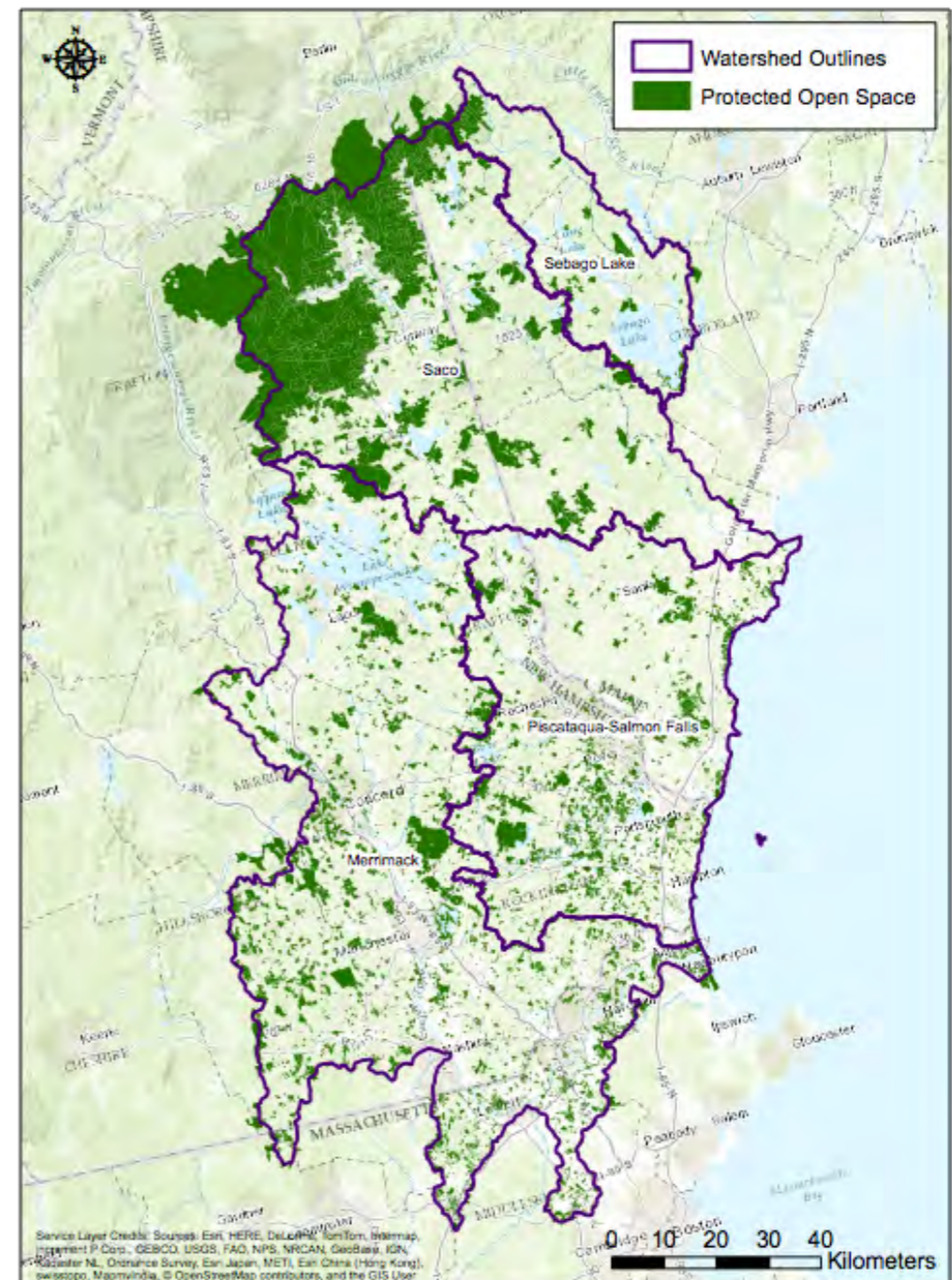


WATER SUPPLIES AND LAND CONSERVATION

Designated Water Protection Areas



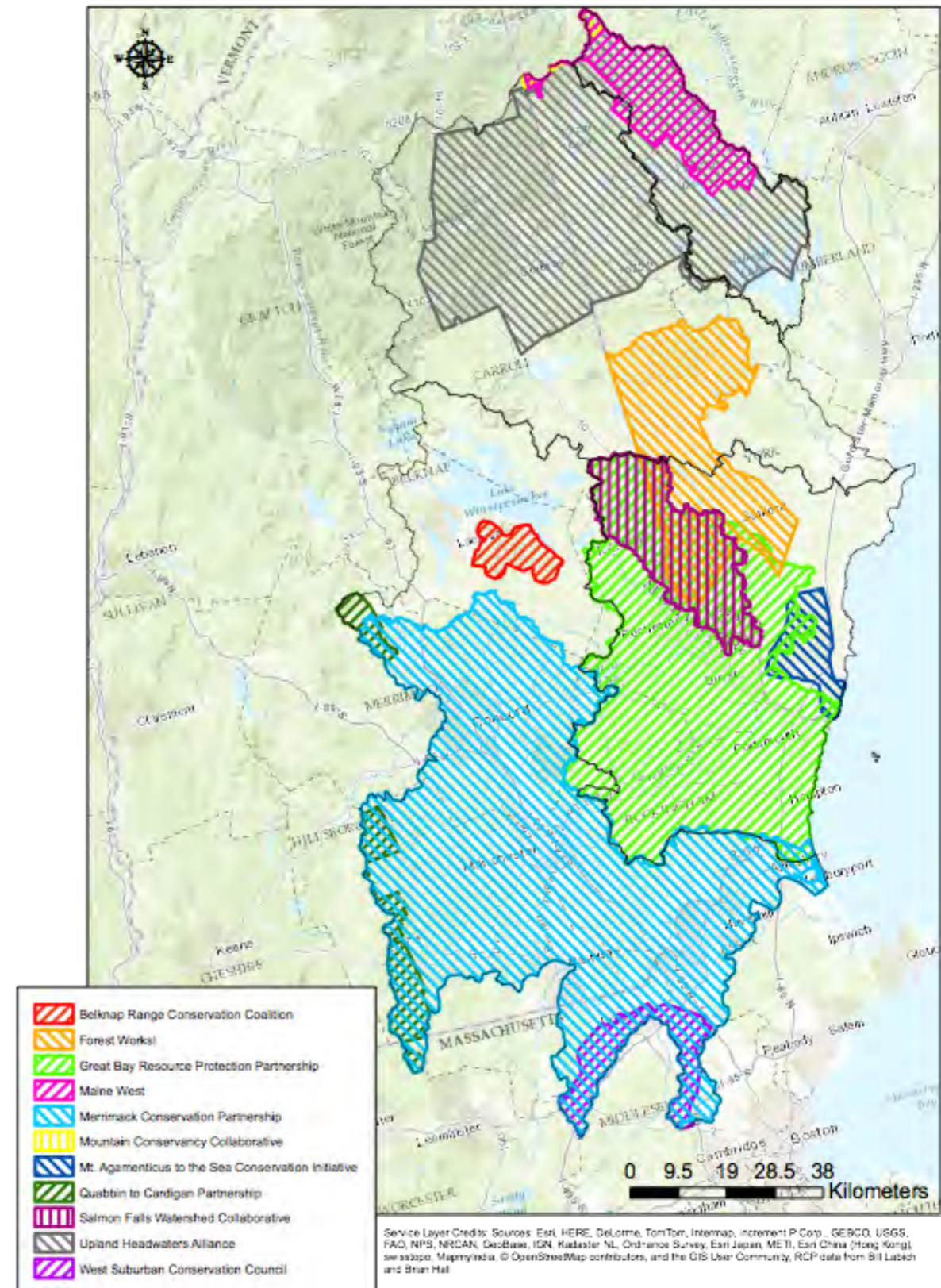
Protected Open Space in Potential Watersheds



State of the Art

Regional Conservation Partnerships

- **Strategic planning**
- **Capacity**
- **Financing**

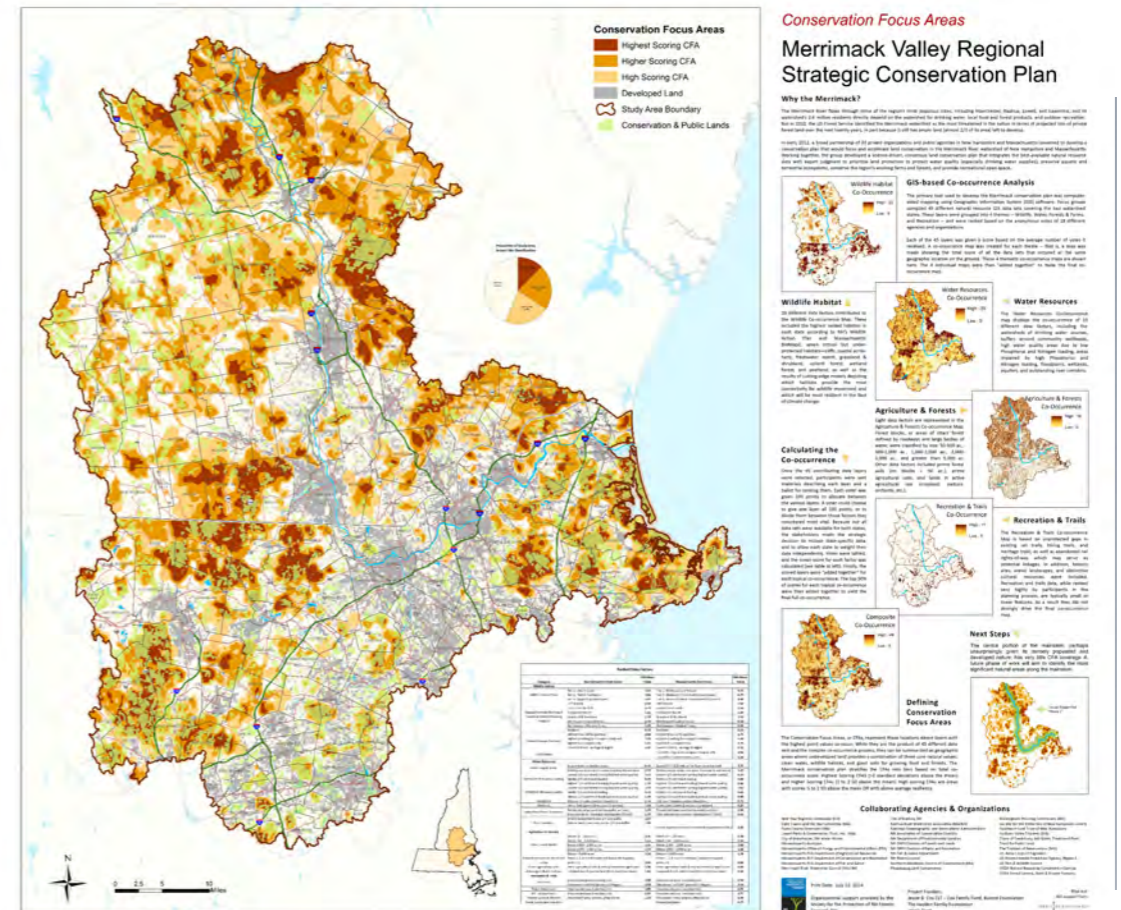


How much is enough?

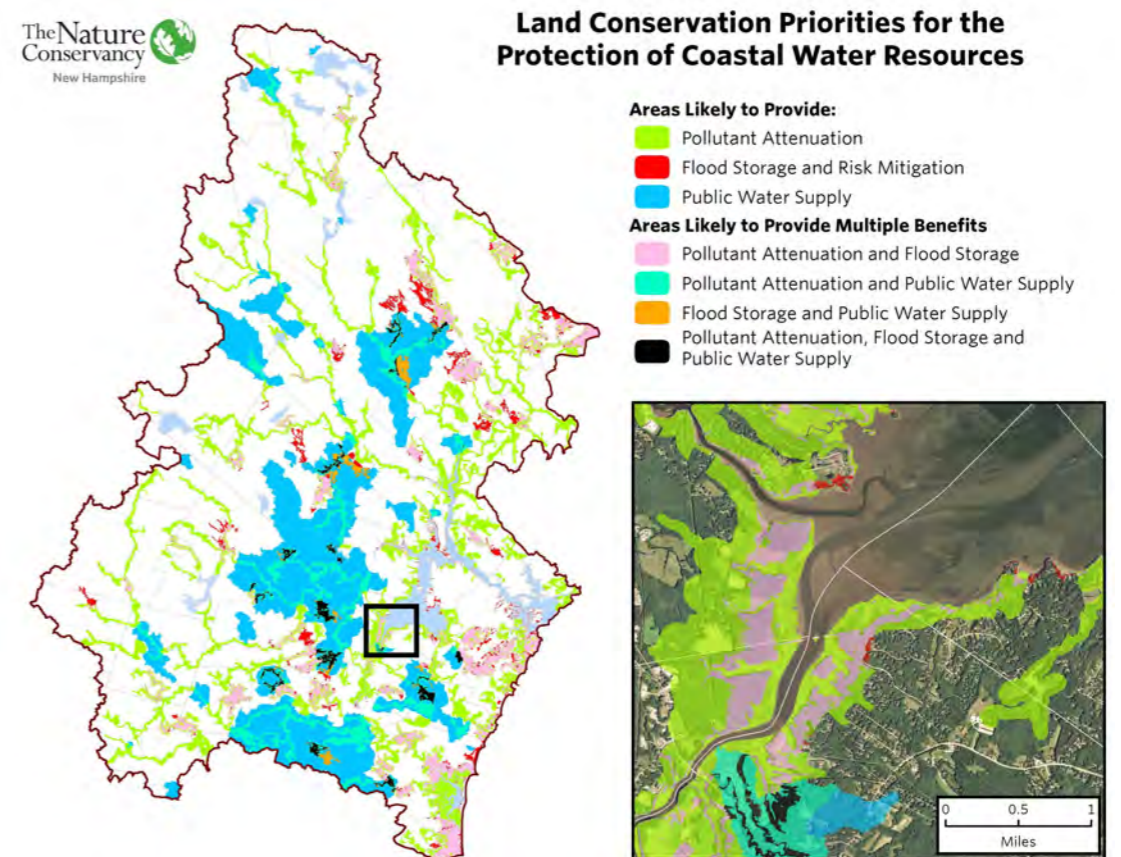
	Sebago Lake/ CrookedRiver	Saco	Piscataqua/ Salmon Falls	Merrimack
Impervious Surface	1.3%	1.2%	4.2%	7.3%
Developed	7.0%	5.5%	14.5%	19.6%
Protected	10.1%	34.7%	13.1%	15.0%

Strategic planning

- scientifically informed plans
- cost/value

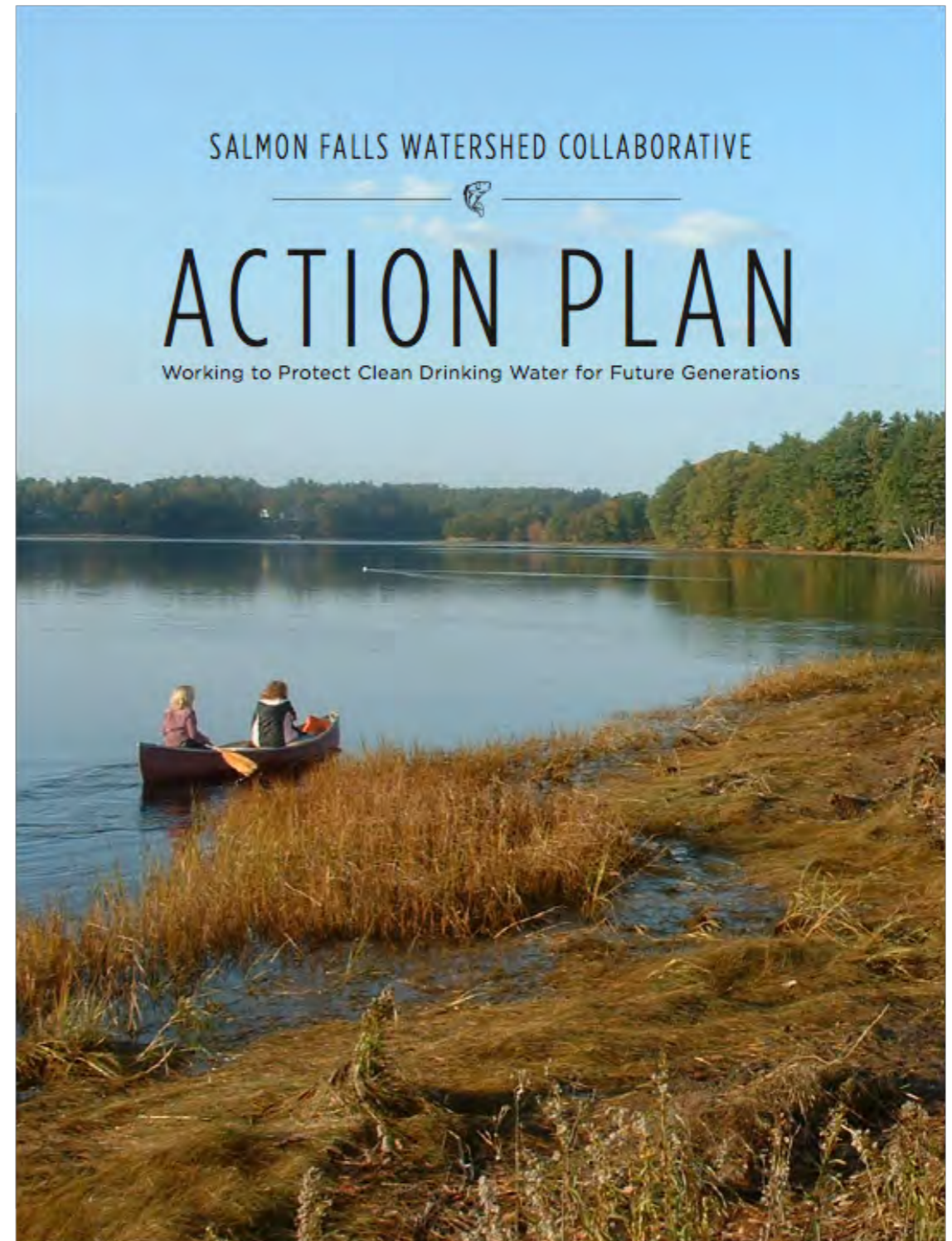


Conservation Priority Index InVest Greenprints



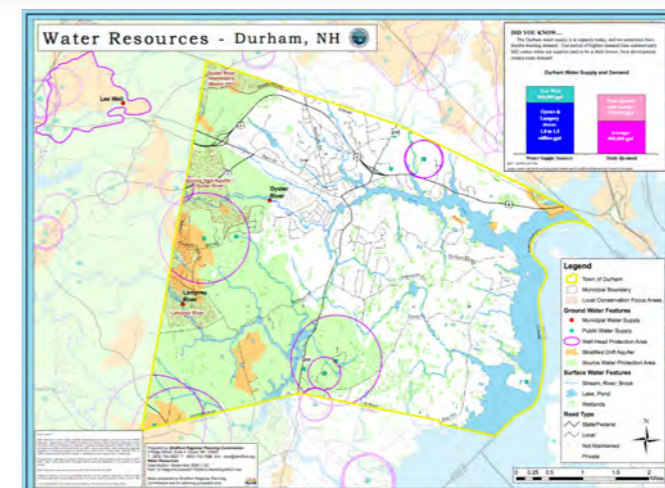
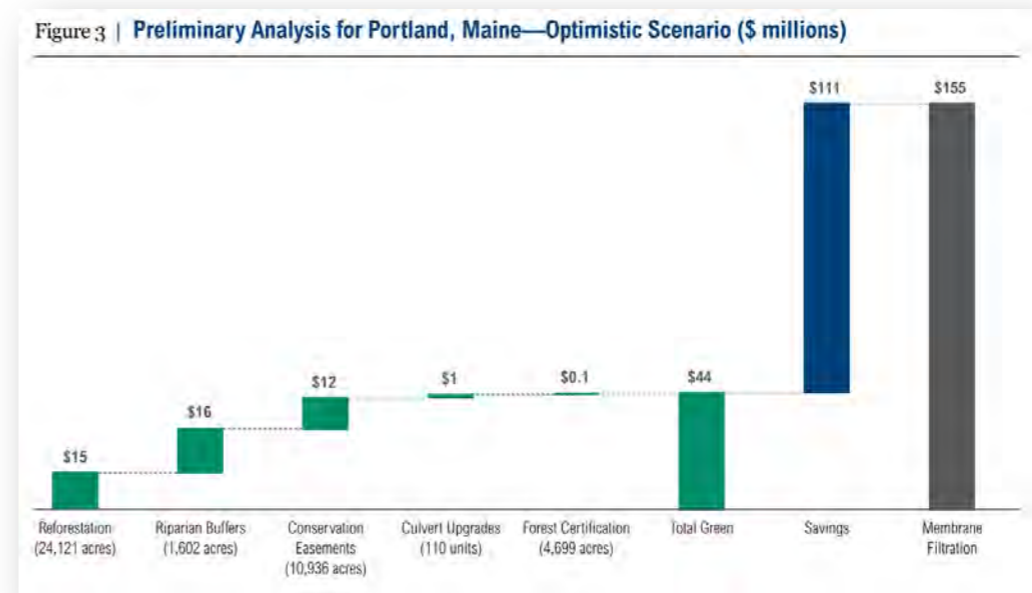
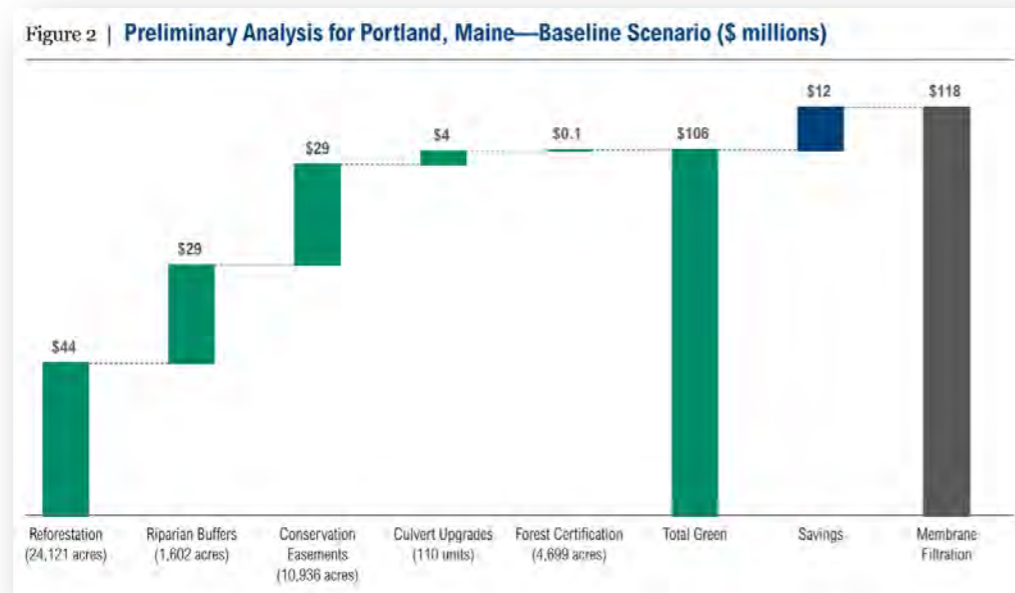
What's The Plan?

- **New partners**
- **Building the business case**
- **New capital**



Municipalities and Water Suppliers

- Savings from avoided costs of treatment for water quality



- Protecting new sources for future

Public Health

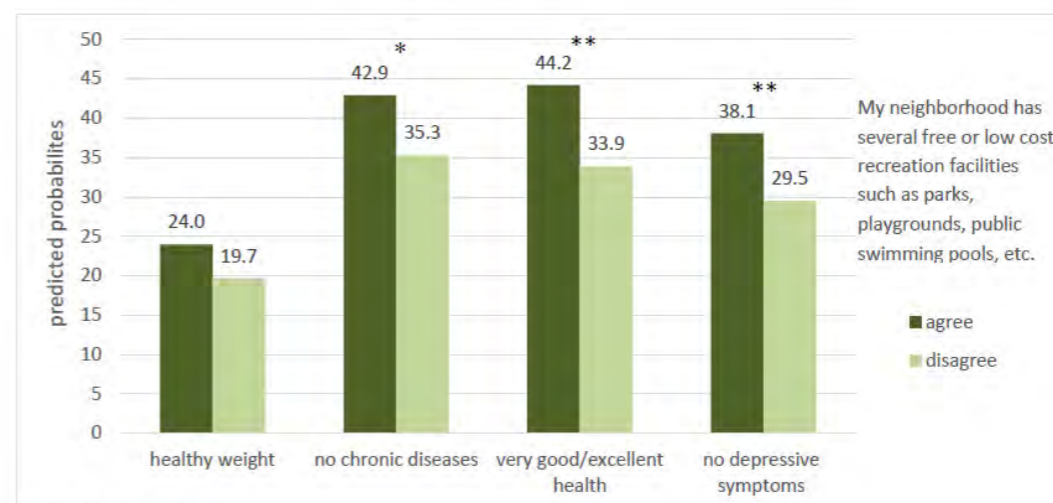
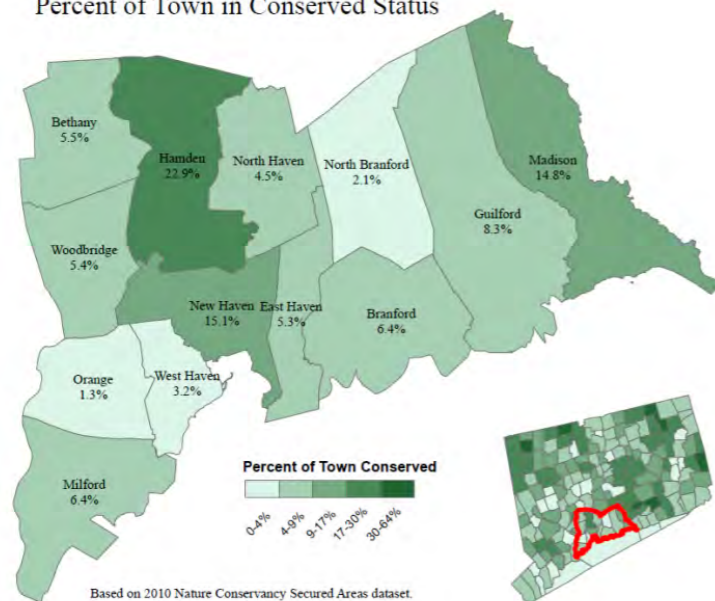
Open Space Mitigates Chronic Disease Costs

	Probability of Disease		Potential with Increased Access		With Access		Without Access		Annual		Projected	
	Sample %	Population	%	%	% Reduction With Access	Standard Error % Reduction	Avoided Cases With Access	Annual cost/ person ²	Annual Avoided Cost	Projected Avoided Cases	Projected Annual Savings	
Population		464,037	71.1%	28.9%								
Asthma ¹	14.7%	68,176	15.4%	12.8%				\$ 2,709				
Depression	33.6%	156,142	32.3%	37.3%				\$ 4,580				
Diabetes	9.9%	45,817	8.5%	13.5%	5.0%	0.7%	1,402	\$ 7,666	\$ 10,749,294	905	\$ 6,939,418	
Hypertension	27.1%	125,822	23.3%	37.2%	13.9%	1.3%	10,679	\$ 2,669	\$ 28,503,245	6,936	\$ 18,511,241	
Heart Disease	7.0%	32,519	5.6%	10.5%	4.9%	0.8%	912	\$ 8,312	\$ 7,579,165	693	\$ 5,757,197	
Obesity	25.2%	117,124	24.0%	28.6%				\$ 6,405				
									\$ 46,831,704		\$ 5,757,197	
									8.29%		1.02%	

¹ Difference between those with and without access was not significant

² The average annual cost per person for Other Chronic Diseases is weighted based on the expected number of cases and cost for each disease. See Table 2.

Percent of Town in Conserved Status



Ickovics et al., in review

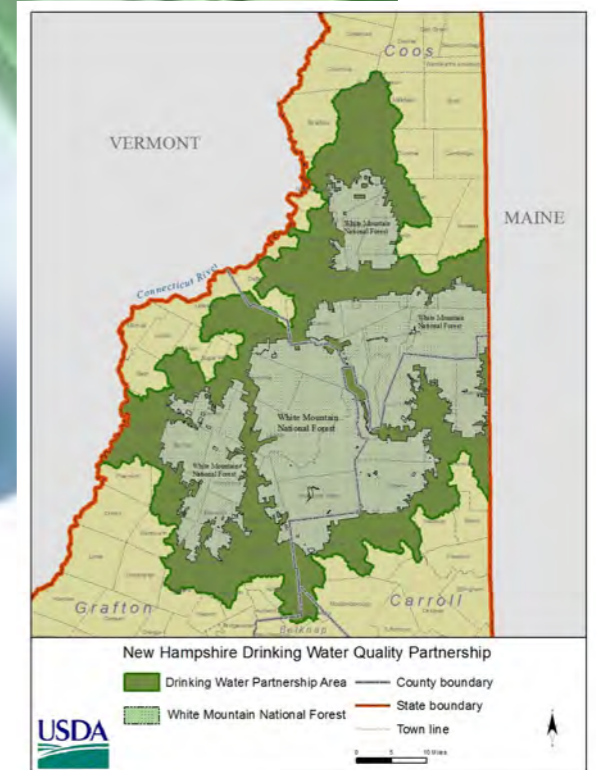
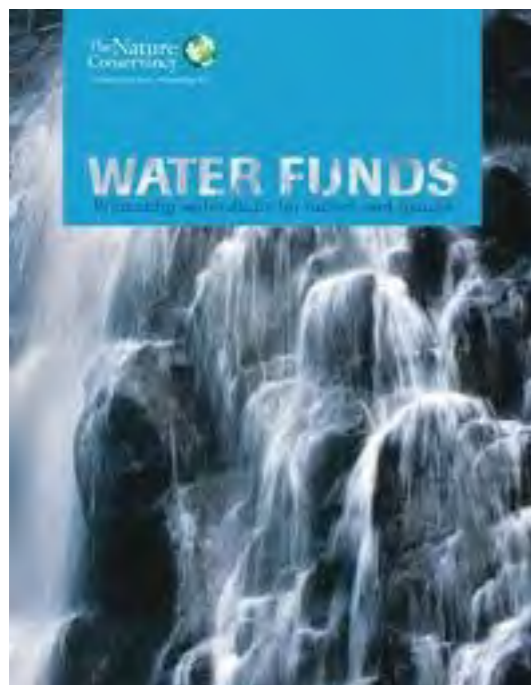
Businesses

- Value and cost of clean water
 - Marketing
- Community Relations



New Capital

- Public financing
- Private capital
- Philanthropy



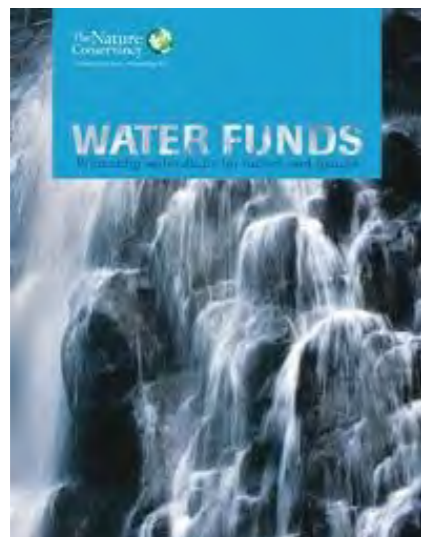
Resources



<http://www.wri.org/publication/protecting-drinking-water-source>



<http://www.wri.org/publication/natural-infrastructure>



http://www.naturalcapitalproject.org/pubs/TNC_Water_Funds_Report.pdf

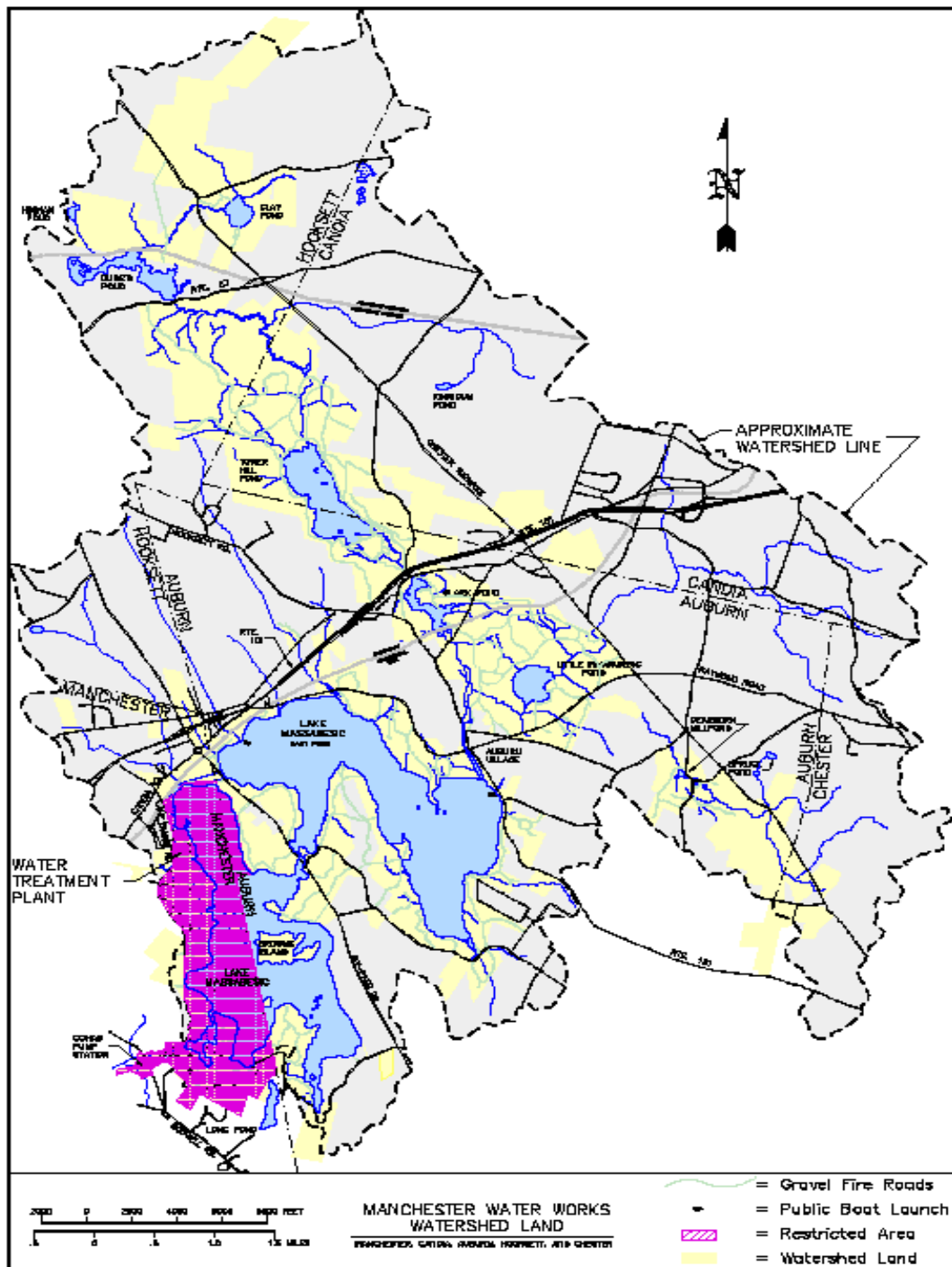
An aerial photograph of a large body of water, likely a lake or reservoir, surrounded by a dense forest. In the lower-left corner, a small building with a gabled roof and a prominent arched window is visible. The background shows rolling hills under a cloudy sky. The text is overlaid on the center of the image.

Manchester Water Works Land Conservation

John O'Neil
Watershed Forester

Battery Point Term Easement





RFP – Land Sale





Tower Hill Pond Project
1800 + Acres

Partnerships?



Questions?



