

dwellers,^{lxiv} thereby helping rural families retain their land and livelihoods.

A few examples of this burgeoning form of tourism already exist in the region.

- *The Blue Heron* restaurant in Sunderland, MA has events and classes centered around sustainable cooking.
- *Sholan Farm* in Leominster, MA is a community-owned 169-acre farm focused on apple production; it also hosts a number of education conferences and workshops, in addition to festivals, hayrides, and live entertainment.^{lxv}
- *Active By Nature* is an adventure tourism business based in Hubbardston, that specializes in trips “that seek to enhance the body, mind, and spirit of its participants. Offering personal growth experiences through physical activity, hands on learning, and being immersed in nature, all which fosters the human spirit.”^{lxvi}

● **The Quabbin Byway Trail.** A proposed trail between Worcester and North Quabbin – and beyond (maybe the Turners Falls Discovery Center) – would use existing road infrastructure to create a route for drivers and bikers wishing to experience rural Central Massachusetts. This backroads tour would highlight historic, cultural, recreation, and farm-related points of interest. To really make this idea exciting and universally accessible, a smartphone application could help users find points of interest. Moreover, a concise brochure would be distributed by local gas stations, restaurants and stores.

One demographic to market the Byway Trail to is the population of young urban professionals in Boston looking for day-trip ideas.

Key stops to feature might include:

- Breweries/wineries/bars
- Historic sites
- Antique/thrift shopping
- Farms and orchards
- Farm stands
- Nice drives and views
- Places to rent outdoor equipment
- Bed & Breakfasts
- Nature centers
- Trail heads
- Native American heritage sites
- Renewable energy facilities

The points of interest would build off information available through the Massachusetts Association of Roadside Stands and Pick-Your-Own, and the Mass.gov/agr site, to create a comprehensive map.

A large component of the trail would be marketing for Bed and Breakfast stays. There are a number of towns in the Greater Quabbin that are existing B&B destinations, such as Petersham. The wealth of beautiful scenery and potential for more tourists means that more B&Bs and unique hotels could be supported. Moreover, the B&Bs, unique hotels, and budget accommodations could be connected by a *pedestrian and bike* trail network. In Northern England, there is a walking tour that connects to different towns; we could use that model to do something similar here. This type of proposal has been in the works for over 30 years, when individuals envisioned a walking trail system between Bed & Breakfasts, based on the walking trails throughout England.^{lxvii} The trail network would be supported by the thousands of acres of already protected land.



The Central MA Rail Trail has potential to connect Western and Eastern MA, but there is no existing trail across the North Quabbin, only trails going from north to south. While there is a “Massachusetts Route 2 Historic Self-Drive Tour,” it only mentions a few North Quabbin destinations.”^{lxviii}

More generally, the region would benefit from an updated, comprehensive tourism website. In 2013, the need for accessible, comprehensive and well-designed web promotion has never been more crucial. The North Quabbin Woods has an impressive website with information on outdoor recreation and local artisans. This could be the basis for creating a Greater Quabbin Tourism website.

Resource-based enterprises. A handful of community development entities in the region would be integral partners in providing a low-interest loan program to help jumpstart natural resource-based enterprises. Johnny Appleseed Country has already agreed to better market its low-interest lending program. Another opportunity is the creation of an enterprise fund to help cutting edge natural resource-based enterprises needing an initial capital investment.

Examples of a natural resource based businesses might include:

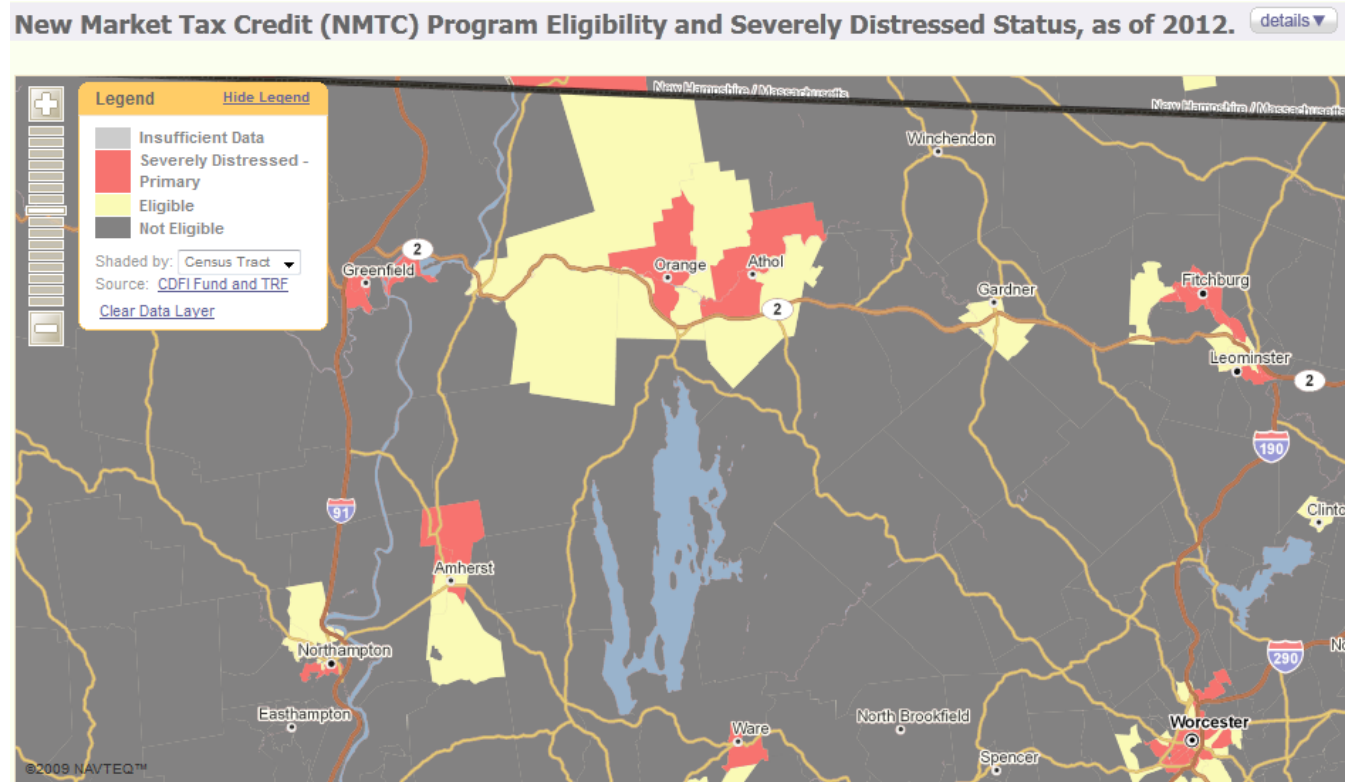
- Value-added wood product businesses
 - Timber frame construction
 - Artisanal wood products
- Value-added food product businesses
 - Aquaculture
 - Wineries
 - Specialty products (for example, the Real Pickles company in Greenfield got its start from low-interest lending by Franklin County CDC).
- Outdoor Recreation
 - Ziplining or tree canopy tours
 - Fishing excursions
- Nature retreat conference center
- Native plant landscaping company



10 New Markets Tax Credits for Innovative Business Development + Conservation

New Markets Tax Credits (NMTCs) are federal tax benefits that encourage the investment of private capital in communities with high poverty and unemployment. Investors receive a tax credit against their federal income tax in exchange for their investment in a designated Community Development Entity. In 2006, Congress authorized money to rural as well as urban communities.

Screenshot of NMTC Eligibility by Census Tract, www.novoco.com



As indicated by the yellow and red census tracts on the map above, the region has a number of concentrated areas of poverty and disinvestment.^{lxix} Similar to the Northern Forest Zone, the Greater Quabbin has a struggling forest products economy and a need for more investment in conservation-related endeavors. The region could really benefit from an impactful NMTC-backed undertaking.

The *Northern Forest Center* (based in Concord NH), for example, has facilitated four NMTC projects that have involved financing forestland conservation (315,000 acres) and promoting the rural economy, including:

- 13 Mile Woods Community Forest (2005) – NMTCs made possible the acquisition of 5,269 acres to create a Community Forest in Errol NH.
- East Grand Woodlands project used Forest Legacy funding plus NMTC financing to protect thousands of acres and also to make *small grants* (\$5,000 – \$50,000) available for qualified businesses in the region, particularly those involved in the forest economy.

The idea of using the tax credits for investments in natural-resource based businesses in the region is certainly an idea worth pursuing. In addition, the Working Group has come up with some compelling proposals for the use of New Markets Tax

Credits. Each contains a proposed business or community facility, in addition to funding for land conservation. The following proposals are just some options; there may be others.

- **Sawmill + Education Center**—In an eligible NMTC zone (e.g. Athol or Orange), the community could create a place to teach traditional skills in a working sawmill facility. It would also serve as a forestry “hub.” Just as *food hubs* provide low-rent space for food-related microenterprises, the sawmill center could provide space for wood-related artisans and craftsmen. As more people, particular younger generations, seek hands-on experiences (farming, woodworking, etc), there is likely a demand for an educational center that teaches these skills. Similar to a “back to the land” mentality, more people see the value in acquiring practical, survival-type skills. Sawmills are important components of the region’s economy. The Sawmill + Education center could reinvigorate the industry, put the region on the map for innovation and education, and provide a unique community service.
- **Rot-Resistant Wood Treatment Facility**— Some of the wood produced in Massachusetts is not ideal for use in exterior home construction due to its relative tendency to rot. One way to increase use of native wood products is to invest in environmentally-friendly rot-resistant heat modification technology. Heat treatment (HT) is an emerging natural preservation technology that uses heating and steam to make wood impervious – and thereby rot-resistant – by heating it to the point of changing the cell structure.^{lxx} The technology is being pioneered in Canada. Lashway Lumber in Williamsburg, MA may be one of the first sawmills in Massachusetts to install a heat treatment kiln. With a \$300,000+ price tag, bringing this technology to Massachusetts could be successfully carried out with the help of NMTCs. Once the HT facility is set up in Massachusetts, we can produce ThermalWood, which would be 100% grown and manufactured in the state. ThermalWood is the most environmentally friendly option in wood preservation.^{lxxi} As an added bonus, the heat treatment produces darker colored wood, meeting the consumer half-way between their taste for exotic Mahogany and their desire to support the local economy.
- **Cross-Laminated Timber (CLT) Facility** – Like heat treated wood, Cross-Laminated Timber manufacturing could also spur the local timber market by providing a high quality building product. As a wood composite material, Cross-Laminated Timber (CLT) has insulation qualities that help reduce heating and cooling costs. In addition to its thermal efficiency, CLT is non-toxic, light-weight, and appropriate for modular construction. According to the Massachusetts Executive Office of Energy & Environmental Affairs, CLT makes sense for a flexible, small-scale production: “this operating structure is ideally suited to small-scale operations and forest landowner cooperatives....and will allow value-added products to be produced closer to our forests, providing economic incentives where they are most needed.”^{lxxii} CLT has potential to spur investment in local wood but also to bring about more passive design, zero-net energy homes.
- **Water Bottling Enterprise**—Protecting forestland and ensuring adequate water supply go hand-in-hand. Healthy, intact forests play a critical role in slowing the rate of runoff in a watershed, reducing soil erosion, and most importantly, filter contaminants. This is why major metropolitan areas choose to invest in watershed-scale forest conservation (Quabbin Watershed in Massachusetts, Catskills Watershed in New York) rather than invest many times that amount in water filtration plants.^{lxxiii}



The same forest conservation principles apply for private water bottling companies. A water bottling venture in the Greater Quabbin could profit from bottling clean water from protected lands, and further make a positive impact by donating a certain percentage of the proceeds to fund land conservation.

The value of clean water will only increase as the population grows. With the right marketing and branding, Massachusetts water could be marketed to New England and beyond. Even a small percentage of profits going toward a conservation fund would be a direct benefit for the future of land conservation in the region. As public-sector funding sources in the Commonwealth are becoming less secure, this public-private strategy for financing forest conservation has some great potential.

- **Wood Pellet Plant** – The closest wood pellet plant is located in Jaffrey, New Hampshire. There is an opportunity to bolster the local wood economy through the creation of a facility in the Greater Quabbin. This proposition would need extra feasibility studies, as the production of wood pellets is relatively energy intensive. Wood pellet plants are also prone to fires, as the wood dust is highly flammable.^{lxxiv} However, wood pellets are a renewable, clean-burning fuel source that more and more homeowners are making the switch to. With financing from New Markets Tax Credits, a wood pellet producing facility could potentially utilize solar power to partially operate the factory. Another idea expressed – but not fully vetted – is to use existing mills along the Millers River, in Athol for example, to take advantage of hydropower *and* to help reinvest in post-industrial communities like Athol.^{lxxv}

CONCLUSION

Finding synergy between economic development, tourism, land conservation, residential development, and mitigation is no easy task. Yet the the world is moving toward an integration of multiple disciplines and the most promising way to effect change is through collaboration and “outside the box” thinking. A hybrid approach to building community resiliency is undoubtedly the most effective approach for the Greater Quabbin Conservation Investment Zone.

We hope this report will serve as a catalyst for coordination among conservation, zoning, and rural economic development.

The time is now to innovate and to bring some life back to the region, economically and culturally. The *foundations* for ideas like smarter land development and enhanced eco-tourism *are* here. Plus, our proximity to major metropolitan centers, wealth of natural resources, and quaint New England charm will continue to draw people to visit, live, and invest in the region.

The existing conserved land in the Greater Quabbin, from the Connecticut River to the Nashua River Watershed is the building block for a sustainable region. By protecting ever more vulnerable landscapes, the region can strive to create corridors of conserved land, suitable for wildlife habitat, wildlife migration, and outdoor recreation. As the various threats of climate change are becoming ever-present in the Northeast, ensuring the fortification of resilient ecosystems is vital to the survival of all species, including our own.

Forest conservation is tied to smarter land development codes that allow cluster housing by-right. Although not a perfect system, EOEEA’s model bylaw has tremendous promise to guide future housing developments in the right direction. Instead of sprawling, large acre lots that are all too common around New England, the Greater Quabbin can be the pilot area for compact residential communities that safeguard ample open space, preferably open space where active forestry can persist. These same developments are ideal locations for district heating through biomass, an energy efficient system powered by a local fuel source. Incentives for biomass would include more site plan flexibility for the developer. Ultimately, protecting land through compact development can protect scenic value and maintain community character.

Reinvigorating the forest products industry is related to the zone’s conservation value in a number of ways. By adding value to low-grade wood—biomass and new wood products – there is more incentive to practice selective cutting and to manage forests sustainability. Native high-quality wood used for architectural features is on the verge of becoming more noticed, with the emergence of the Commonwealth Quality Program for Massachusetts grown products, but there are still opportunities to



Mount Grace Land Conservation Trust

spread the word about the benefits of buying local. Homeowners, architects, and contractors, are an important sector to market to. As the markets for low-grade wood and high-quality wood expand, forest land values increase, forestry jobs become more secure, and the sustainable management of forests is more easily piloted.

Working Group Recommended Next Steps

The region is facing an immediate opportunity to participate in dam relicensing negotiations. Through the Connecticut River Watershed Council's (CRWC) 2002 model, citizens have the power to influence the outcome of current negotiations by requesting a Conservation Fund to mitigate the environmental impacts of two dams on the Connecticut River. The Fifteen Mile Falls Mitigation and Enhancement Fund is a good model for using dedicated funds to make grants to a variety of land protection projects. A citizen group like CRWC might be an appropriate group to tackle the issue of FERC negotiations in our region moving forward.

Another signature Conservation Investment Zone project we think has great potential is the Quabbin Byway Trail. This is a way to raise the profile of local businesses while highlighting the beauty of the highly intact Greater Quabbin landscape through a Quabbin Byway driving and biking trail, complete with a smartphone "app," that allows visitors to discover all the region has to offer. City dwellers in Boston and Worcester would be eager to take an easy day (or two) trip to the Greater Quabbin to find fresh food at farm stands, stumble upon museums like Fisher Museum at Harvard Forest, indulge in wineries and restaurants, and learn about the natural and industrial history of the region. This route coupled with the proposed Bed & Breakfast trail network, could do much to bring tourists to the Greater Quabbin. Indirectly, more tourist money flowing into the region would increase the capacity for land conservation.

As a strong demonstration of the relationship between economic development, recreation, and conservation, the Quabbin Byway Trail idea could be orchestrated collaboratively by a subsequent working group. This collaboration would include regional planning agencies such as MRPC and CMRPC, regional tourism councils like Johnny Appleseed Country, and town planners and business leaders within the region, along with land trusts, other conservation organizations and home-based businesses.

The examples and recommendations in this report illustrate significant potential for increasing economic opportunities and raising awareness about the role of the conserved natural and working landscape in the regional economy. To more fully realize the region's potential, we recommend a more thorough, town by town, assessment of the economic and natural resources that exist here to reveal more potential synergies for sustainable economic development. This might be accomplished for the region as a whole or in clusters of towns, depending on interests of local participants and potential funders for this work.

With existing organizational capacity for landscape-scale aggregation projects, land trusts like Mount Grace are poised to further the conservation vision of the Greater Quabbin. By partnering with the state Landscape Partnership program and federal Forest Legacy program, landscape-scale conservation in the Greater Quabbin region is being solidified. As community needs are evolving, the mission and role of land trusts can broaden. They are a key partner for promoting compact development model codes, influencing mitigation outcomes, promoting local food and wood, and mobilizing rural economic development strategies in tourism. Synergies between conservation and economic development will help strengthen the mission of land trusts, state agencies, regional planning entities, business leaders, economic development organizations, and communities.

References

- ⁱ The Massachusetts Environmental Trust, <http://www.mass.gov/eea/grants-and-tech-assistance/grants-and-loans/mass-enviro-trust/met-overview.html>
- ⁱⁱ Greener Prospects: Information about Randall Arendt, <http://www.greenerprospects.com/bio.html>
- ⁱⁱⁱ The Northern Forest Center, http://www.northernforest.org/the_center_the_region.html
- ^{iv} Sustainable Northwest, “Dry Forest Investment Zone.” <http://www.sustainablenorthwest.org/what-we-do/success-stories/dry-forest-investment-zone>
- ^v “Central Appalachian Forest Zone,” Mountain Association for Community Economic Development, <http://www.maced.org/foi/cafa.htm>
- ^{vi} Levitt, James., and Youngblood, Leigh, eds. Report of the Massachusetts Commission on Financing Forest Conservation, July 2011. Recommendations Summary. July 2011.
- ^{vii} *Ibid.*
- ^{viii} *Ibid.*
- ^{ix} *Ibid.*
- ^x Nudel, Martha. “Better Conservation through Partnership.” *Exchange: The Journal of the Land Trust Alliance*, Spring 2003. Vol. 22., No.2.
- ^{xi} Commissioned by US Forest Service (USFS)
- ^{xii} The New England Governor's 2009 Blue Ribbon Commission on Land Conservation "Keeping Forests as Forests"
- ^{xiii} Jay Rasku, Q2W Forest Legacy application
- ^{xiv} “Farm Conservation: Leyden Neighbors to Conserve 800 Acres.”
- ^{xv} Wells, Sarah. Leyden Initiative Memo.
- ^{xvi} “Morgan Memorial Fresh Air Camp (Athol).” Mount Grace web publication.
- ^{xvii} “Ernie Gould Woodlot Conservation Acquisition Project.” Harvard Forest publication. http://harvardforest.fas.harvard.edu/sites/harvardforest.fas.harvard.edu/files/publications/pdfs/Gould_lot.pdf
- ^{xviii} Interview, Robert Clark, February 2013.
- ^{xix} “Students’ high-level conservation research aids public reporting.” *Clark University, News Hub*. 18 November 2011. <http://news.clarku.edu/news/2011/11/18/students-high-level-conservation-research-aids-public-reporting/>
- ^{xx} Interview, Robert Clark, February 2013.
- ^{xxi} Interview with Lt. Tony Wolski during OHV Advisory Committee meeting, February 2013, Sutton MA.
- ^{xxii} North Quabbin Regional Landscape Partnership, “Due Diligence Small Grant Program,” Project Summary, June 2011.
- ^{xxiii} Levitt, James, and Leigh Youngblood, eds. *Report on the Massachusetts Commission on Financing Forest Conservation*, 2011.
- ^{xxiv} The opponents felt that a mitigation bank would justify the filling in of too many important wetlands because developers could just pay their way out and wetlands would be created somewhere else. However, it would not have been that drastic; the “avoid, reduce, and then mitigate” rules would take superiority.^{xxiv}
- ^{xxv} Conservation Finance Program, http://www.conservationfinanceforum.org/EnMit_FinForConsrpAp2.pdf
- ^{xxvi} *Ibid.*
- ^{xxviii} RGGI Model Rule, February 7, 2013. http://www.rggi.org/docs/ProgramReview/FinalProgramReviewMaterials/Model_Rule_FINAL.pdf
- ^{xxix} “CO2 Offsets.” <http://www.rggi.org/market/offsets>

^{xxx} Beane, Julie. "Selling Forest Carbon: A practical guide to developing forest carbon offsets for Northeast forest owners. *Manomet Center for Conservation Sciences*, September 2012.
(http://www.manomet.org/sites/manomet.org/files/Selling%20Forest%20Carbon_Final.pdf)

^{xxxi} Ibid.

^{xxxii} http://www.ctriver.org/programs/advocacy/hydro_power/index.html

^{xxxiii} Upper Connecticut River Mitigation and Enhancement Fund. "Grant Application Guidelines." New Hampshire Charitable Foundation & Vermont Community Foundation. http://www.ctriver.org/documents/MEF_application_guidelines_rev_07-07.pdf

^{xxxiv} Ibid.

^{xxxv} Marks, Christian O., et al. Ecologically important floodplain forests in the Connecticut River watershed. *The Nature Conservancy*, October 14, 2011.

^{xxxvi} DeNormandie, James. "Losing Ground: Beyond the Footprint." *Fourth Edition. Mass Audubon*, May 2009.

^{xxxvii} DeNormandie, James. "Losing Ground: Beyond the Footprint." *Fourth Edition. Mass Audubon*, May 2009.

^{xxxviii} Ibid., p. 8

^{xxxix} Heidi Ricci (Mass Audubon) April 25, 2013. Presentation given at Open Space Design Workshop sponsored by MA Audubon, at Harvard Forest in Petersham, MA.

^{xl} "What is Natural Resource Protection Zoning?" Jeff Lacy, AICP. 2013.

^{xli} Archambault, Mark, AICP. Open Space Residential Design: Comparison of bylaws prepared in Massachusetts and New Hampshire." April 25, 2013. Presentation given at Open Space Design Workshop sponsored by MA Audubon, at Harvard Forest in Petersham, MA.

^{xlii} Interview with Steve Wallace, Town of Westminster Planner, February 2013.

^{xliii} Town of Westminster, Zoning Regulations Chapter 205 § 205-38." Exception for cluster developments." Amended in 2005.

^{xliv} Archambault, Mark, AICP. Open Space Residential Design: Comparison of bylaws prepared in Massachusetts and New Hampshire." April 25, 2013. Presentation given at Open Space Design Workshop sponsored by MA Audubon, at Harvard Forest in Petersham, MA.

^{xliv} Manomet Center for Conservation Sciences. 2010. *Massachusetts Biomass Sustainability and Carbon Policy Study: Report to the Commonwealth of Massachusetts Department of Energy Resources*. Walker, T. (Ed.). Contributors: Cardellicchio, P., Colnes, A., Gunn, J., Kittler, B., Perschel, R., Recchia, C., Saah, D., and Walker, T. Natural Capital Initiative Report NCI-2010-03. Brunswick, Maine.

^{xlvi} "Woody Biomass Energy: Local Renewable Fuel for Commercial, Institutional, and Industrial Facilities. *Massachusetts Sustainable Bioenergy Initiative*. Revised June 2008.

^{xlvi} "A Local Success Story of Biomass Energy: Quabbin Administration Building, Belchertown." DCR, DOER, July 2008.
<http://www.mass.gov/dcr/stewardship/forestry/utlmark/Quabbin%20Success%20Story.pdf>

^{xlvi} Constance T.F. de Brun, ed. The Economic Benefits of Land Conservation. *The Trust for Public Land*, 2007. "The evidence clearly indicates that preserving open space can be a less expensive alternative to development."

^{xlvi} Boyce, Gordon. Marketing and Utilization Forest, Massachusetts Department of Conservation and Recreation. Interview, February 2, 2013.

ⁱ Markowski-Lindsay, Marla, et. al. "Forest-based biomass supply in Massachusetts: How much is there and how much is available." *Journal of Environmental Management* 106 (2012) 1-7.

ⁱⁱ "Wood Pellet Boiler Program Offers Discounts for High-Efficiency Boilers." Massachusetts EOEAA. Press Release, March 1, 2013.
<http://www.mass.gov/eea/pr-2013/discounts-for-high-efficiency-wood-pellet-boilers.html>

ⁱⁱⁱ Ibid.

ⁱⁱⁱ Massachusetts Department of Conservation & Recreation

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- ^{liv} Webber, Suzanne. Strategies to Increase Markets for Low-Grace Wood and Raise Public Awareness about the Benefits of Good Forest Management in Southern New England." 28. Sept 2009.
- ^{lv} Conversation with Tom Chalmers, architect; Chris Riddle (Kuhn Riddle Architects) during Forest Forum XIII May 5, 2010.
- ^{lvi} Webber, Suzanne. Strategies to Increase Markets for Low-Grace Wood and Raise Public Awareness about the Benefits of Good Forest Management in Southern New England." 28. Sept 2009.
- ^{lvii} Ibid.
- ^{lviii} Ibid.
- ^{lix} See the Northern Forest Center's success with biomass: http://www.northernforest.org/default/renewable_energy_biomass.html
- ^{lx} Northern Forest Center: Model Neighborhood Project (website). http://www.northernforest.org/model_neighborhood_project.html
- ^{lxi} Vermont Fuels for Schools. "About." An initiative of the Biomass Energy Resource Center. <http://www.biomasscenter.org/images/issues/pdfs/VFFSfactsheet.pdf>
- ^{lxii} <http://www.communitybiomassenergy.com/AboutCBE.html>
- ^{lxiii} Louv, Richard. *The Nature Principle: Reconnecting with Life in a Virtual Age*. Chapel Hill: Algonquin Books. 2011.
- ^{lxiv} Ibid, p. 277
- ^{lxv} http://sholanfarms.com/documents/2013_Winter_Sholan_Farms_Newsletter.pdf
- ^{lxvi} http://www.activebynature.com/index_home.html
- ^{lxvii} Conversation with Congressman John Olver
- ^{lxviii} <http://www.massachusettsroute2.com/>
- ^{lxix} One potential problem is that there really aren't any strong Community Development Entities in the Quabbin. The Northern Forest Center in NH administers all the research etc. for their CIZ and also NMTCs.
- ^{lxx} "Natural Wood Preservation." *Advantage Environment* blog, June 2012. <http://advantage-environment.com/byggnader/natural-wood-preservation/>
- ^{lxxi} Boyce, Gordon (Mass DCR); ThermoWood handbook (2003).
- ^{lxxii} EOEEA, unpublished document on Cross-Laminated Timber (from Celia Riechel).
- ^{lxxiii} Johnson, Nels., White, Andy., and Daniele Perrot-Maitre. "Developing Markets for Water Services From Forests: Issues and Lessons." Forest Trends, World Resources Institute, and the Katoomba Group.
- ^{lxxiv} Interview with Peter Gerry, May 10, 2013.
- ^{lxxv} Interview with Bruce Spencer.