

August 15, 2009

Dear Steve:

The comments of the MAGIC Alliance of May 24, 2009 were directed to logging in Green Ridge State Forest. The evidence we presented pointed out that 1) DNR was losing money on logging; 2) logging causes environmental damage; and 3) that logging contributes to global warming by releasing CO₂ which would remain sequestered in an unlogged, old-growth forest. This letter responds to your e-mail of July 30, 2009.

Over the past three fiscal years, gross revenue from logging in Green Ridge never exceeded \$160,000. Your letter does not deny that the cost to prepare for and conduct a sale and to monitor post-sale execution **exceeds** the revenue the State gains from selling Green Ridge stumpage rights. Despite this fact, you say that the “revenue” from logging can be used for “eradicat[ing] invasive species and enhancing habitats for native wildlife.” However, *if the State loses money every time it conducts a Green Ridge sale, there is no net revenue from logging.*

The two examples you mention for the use of logging “revenues” are particularly ironic. Logging exacerbates the invasive species problem and degrades animal habitat. Without logging, the number of invasive species would be reduced. As demonstrated by Cunard and Lee, competition for light and nutrients limits the ability of invasives to persist in late successional forests.¹ Logging invites invasive species to the forest both by opening the tree canopy and permitting logging trucks to rumble through the forest, with harmful species attached to the tires and undercarriage. Further, as discussed in the PNW Weed Management Handbook, “Many invasives are spread by machines, including logging equipment and various motor vehicles. One of the most important conduits for invasives is roads. Road graders, ditch cleaners, bulldozers, car tires, log trucks, and many other types of machinery that travel along roads pick up seeds and vegetative structures and move them to new areas.”²

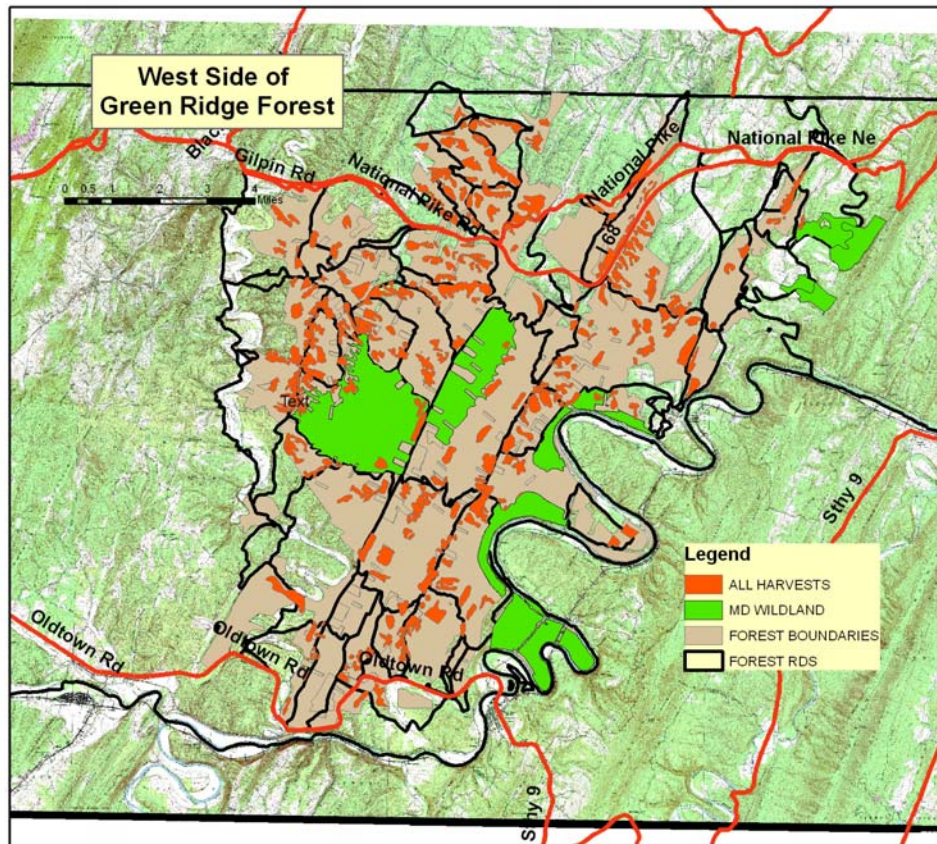
Logging also depletes and degrades habitat for native wildlife by fragmenting the forest. You mentioned that the only evidence of fragmentation in Green Ridge is roads and in-holdings. That view is quite dated. Research has demonstrated, and it is now well-accepted, that logging is also a form of fragmentation. “Logging and road building carve up otherwise intact expanses of forest into small and isolated islands (forest fragmentation), creating a perimeter of abrupt forest edge where ecological changes take place.”³ The attached maps of Green Ridge, created as part of MAGIC’s Forest Mapping

¹ Chelsea Cunard, Thomas D. Lee. (2009) Is patience a virtue? Succession, light, and the death of invasive glossy buckthorn (*Frangula alnus*). *Biological Invasions* **11**:3, 577-586. Available at: <http://tinyurl.com/op8nuf>

² http://weeds.ipcc.orst.edu/pnw/weeds?20W_FOR03.dat

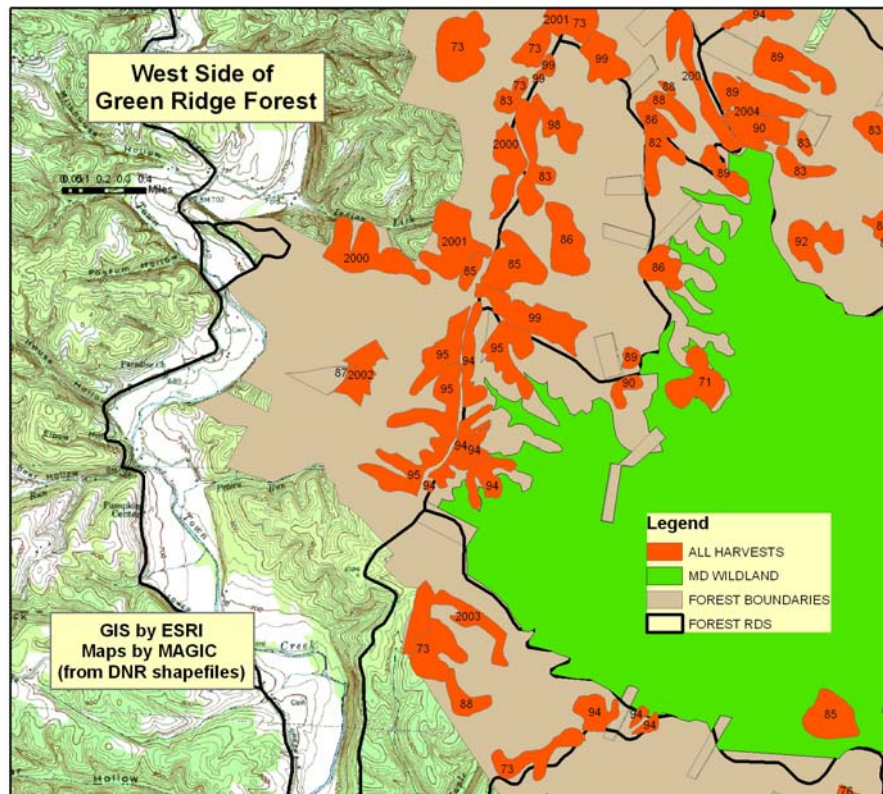
³ Claude Gascon, et. al, Receding Forest Edges and Vanishing Reserves, *Science* **288** (5470), 1356. Available at: <http://www.sciencemag.org/cgi/content/summary/288/5470/1356>.

Project, show the dense patchwork of logged areas over the past 20 years. The resulting fragmentation makes its difficult for animals to breed and forage.⁴



You say that logging “[is] a tool to enhance the overall health and vitality of the [forest.]” Fifty percent of Green Ridge is in a protected “no logging area.” We know of no evidence that this 50 percent is unhealthy or devoid of “vitality.” In fact, the Wildlife and Heritage Service has recently proposed that an additional 12.5 percent be added to the protected area. Your office is currently considering a policy to protect additional old-growth acreage in Green Ridge. The proposed additions to the no-logging acreage support the view that logging is not required to maintain a healthy forest in Green Ridge.

⁴ See J.T Cronin, “Habitat edges, with-in patch dispersion of hosts, and parasitoid oviposition behavior,” <http://esameetings.allenpress.com/2008/P11148.HTM> (“edge-averse behavior is commonly reported in the literature); S.K. Robinson et. al “Regional forest fragmentation and the nesting success of migratory birds,” Science Vol 267 pp 1987-1990 (March 31, 1995); S.L. Pimm, “Ecology: The forest fragment classic,” Nature 393, 23-24 (May 7, 1998).



You argue that eliminating logging on Green Ridge would increase logging on private land. You stated that this is undesirable because loggers on State lands are more qualified than those on private lands due to having passed the Maryland Master Logger Program. However, logic dictates that the same qualified Master Loggers, finding Green Ridge unavailable, would bid on private land. If you believe that logging on private lands is not done in an environmentally acceptable manner, the appropriate remedy is to ask for additional legislation or funding for additional education. The proposed remedy to increase logging on the only Maryland land that has potential to become 46,000 acres of an old-growth forest is both short-sighted and lacking in logic. You say you need to use Green Ridge to demonstrate good forestry practices. Yet DNR has considerable forest land in Garrett County that it could use for this purpose. MAGIC questions whether logging 200 acres per year is necessary for demonstration purposes.

You argue that logging in Green Ridge is required for creating early successional forests because we are losing these types of forests, which are necessary for certain species of game birds. In fact, in the three counties of western Maryland, early successional forests have actually increased during the 1990s, as discussed on page 117 of the Woodcock Conservation Plan. MAGIC acknowledges that Green Ridge has been very active in taking early pioneer land (like the Kirk Orchard) and developing it into early successional forest. But this is clearly an exceptional situation: the Kirk Orchard tract did not contain 90-110 year old trees.

It is hard to believe that the Maryland DNR would favor the destruction of older-growth, carbon-sequestering trees in a naturalistic habitat that benefit **all** residents of the state for the purpose of increasing a population of birds intended to be hunted. Cutting down 100 year old trees to create an early successional forest would release significant green house gases. Further it is questionable whether Green Ridge, the driest point in the State with only 36 inches of average annual precipitation, would be desirable habitat for breeding woodcocks, which require moist soils offered by high elevation wetland complexes.⁵ Finally, as you know, there are alternative ways to create early successional forest. The current movement to reduce mowing, according to the State Highway Administration “will restore natural meadows and re-establish vegetation, forested areas and enhance the environment while maintaining safety.”⁶

Our next point concerned carbon sequestration. Your consultant, Dr. Weiland, does not endorse the concept that old growth forests sequester carbon. This is directly contrary to significant and very recent literature such as that of Keeton, et al., which we cited in our comment on logging in GRSF. These researchers, you will recall, found that “mean carbon sequestration was significantly ($\alpha = 0.05$) greater for no management compared to any of the active management scenarios.” (The complete abstract of this work is now available on line at <http://eco.confex.com/eco/2009/techprogram/P16910.HTM>). We would also direct your attention to the report by Luysaert, et al., published in the prestigious journal *Nature*, which emphasizes that old-growth forests accumulate large amounts of carbon for centuries, and that this carbon, including that in soil, will be released back to the atmosphere if these forests are disturbed.⁷ Further, contrary to the long-held (and incorrect) view that old-growth forests are carbon-neutral, these researchers demonstrate that old-growth forests can continue to accumulate carbon going forward.

We advised in our report that the Appalachian Lab should be asked to evaluate Dr. Weiland’s work, since it appears contrary to recent significant findings. We reiterate that recommendation.

Steve, when the ten-year plan for Green Ridge was released in October 1993, we were in a different era. Tree rotation was limited to develop good stock for timber. Global warming not on anyone’s agenda. Now the demand for lumber is down. (Lumber production tax receipts for FY 2006 generated \$345 million, while for 2008, receipts had fallen to \$173 million. Between February 2008 and 2009, revenue had dropped by 26%).⁸ The concern over global warming is real and growing worldwide. Logging Maryland’s Green Ridge State Forest is neither economically necessary nor environmentally wise, nor does it reflect the progressive nature of Maryland’s efforts to become a leader in the new Green Economy.

⁵ <http://www.dnr.state.md.us/publiclands/western/greenridge.html> (rainfall); Woodcock Conservation Plan pg 116 (moist soils)

⁶ <http://www.wtopnews.com/?nid=718&sid=1697450>

⁷ Sebastiaan Luysaert et al., Old Growth Forests Sequester Carbon, *Nature* **455**, 213-215 (Sept 2008). Available at: <http://www.nature.com/nature/journal/v455/n7210/full/nature07276.html>

⁸ <http://www.msa.md.gov/msa/mdmanual/01glance/html/forests.html>

Refraining from logging Green Ridge would continue to sequester carbon and combat global warming. In addition, it would create an old growth forest of over 40,000 acres, a unique legacy to those who walk this earth after us.

As you requested, our exchange of correspondence will be put on the MAGIC Alliance website.

Sincerely yours,

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