

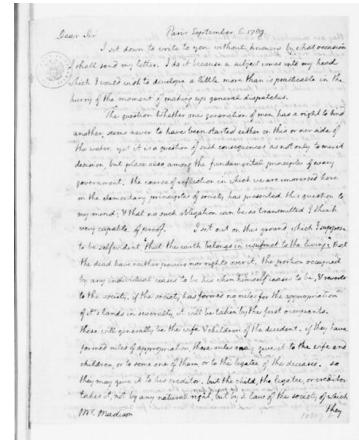
Jefferson and "Sustainability" Musings on the Mountaintop

by Liz Russell - March 5, 2014



An increased concern about the environment and our consumption of natural resources has popularized the terms "sustainability" and "green technology" in recent years. In regards to natural resources, sustainable practices are those that meet the needs of current generations without compromising the needs of future generations. While Jefferson could not have foreseen the technological advances that have resulted in many environmental issues today, he does express his thoughts on intergenerational obligations and the earth in his famous Rights of Usufruct and Future Generations (<https://founders.archives.gov/documents/Madison/01-12-02-0248>). In 1789, Jefferson wrote to James Madison:

"The question Whether one generation of men has a right to bind another . . . is a question of such consequences as not only to merit decision, but place also among the fundamental principles of every government. . . . I set out on this ground which I suppose to be self evident, 'that the earth belongs in usufruct to the living' . . ."

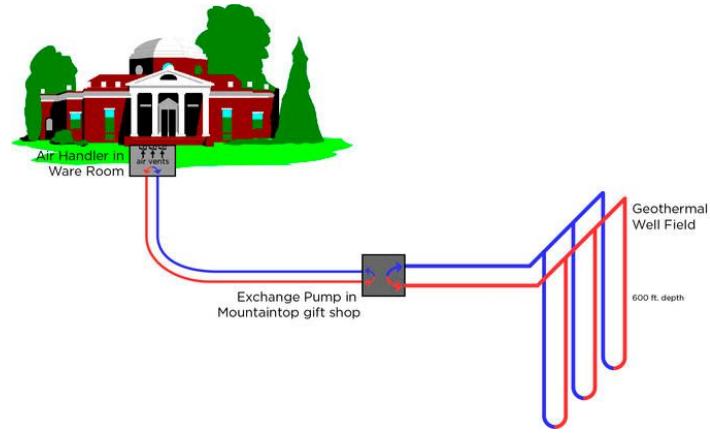


(<http://memory.loc.gov/cgi-bin/ampage?collId=mjm&fileName=04/mjmo4.db&recNum=192&itemLink=https://ammem.mjm:@field%28DOCID+@lit%28mjmo23633%29%29>) This letter was Jefferson's last in a two year correspondence with Madison on the proposed Bill of Rights. The term "usufruct" means the right to use something (property, land, etc.) without its destruction or waste. Jefferson saw the earth as a common and intergenerational right, and I posture that he would be very interested in the sustainable technologies taking place in the depths of his "little mountain."

This year, Monticello will install a ground source heat pump system and a geothermal well field on the Mountaintop. Hidden from view, this technology will allow for the elimination of boiler and chiller pumps and unsightly condensing units that currently serve the House.

(<https://monticello-www.s3.amazonaws.com/files/old/uploaded-content-images/geo.jpg>).

Geothermal systems take advantage of the earth's below-the-crust temperature of about 57° F, cycling water through a series of continuous loops of vertical pipes that lead to an exchange pump. Here, a separate loop of water is either heated or cooled to produce warm or cold air that the air handler then distributes through the ductwork of the House. The system uses the constant temperature of the earth to greatly reduce the energy needed to heat or cool the house. It allows for superior humidity control, critical to preserving both the building and its collections. It is essentially silent, reduces Monticello's consumption of natural resources, and has a payback period of 6-9 years.



Alongside the geothermal installation, the House will receive an upgrade to its controls system, which will allow for customized temperature and humidity set-points down to the degree, and variable by zone. Given what we know about Jefferson's interest in technology, the environment, and in... yes, sustainability, it is likely he would approve of the changes underway on the Mountaintop.

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