

REFCLT Ecological Auditing Agreement

Intent:

One of the goals of Red Earth Farms is to provide an environment that encourages the exploration of positive ecological choices. The aim of our ecological auditing process is to measure the results of our choices and provide a framework for comparative analysis. The most important point of comparison is with ourselves over time. We also assume that there is a lot to learn about the auditing process itself and expect to modify the process according to new ideas/information. An additional goal is that the process should be as accurate as possible without being onerous.

Ecological footprinting:

An ecological footprint is the measure of biologically productive land and water area an individual uses to produce the resources it consumes and to absorb the waste it generates with today's technology and resource management practices. An ecological footprint that is less than or equal to the average of biological productive area is a necessary element of sustainability but not an indicator. Biodiversity, resource management, social well-being and other dimensions of sustainability require consideration of factors beyond the footprint. (footprintnetwork.org)

Unfortunately existing ecological footprinting tools are too simple for our purposes. In particular they often fail to record the level of detail or differentiate between categories we feel are important. We also hope to eventually use our data to examine deeper issues of sustainability such as biodiversity, social issues, etc. that are not covered by simple footprinting.

REF ecological auditing:

Following is the Red Earth Farms ecological auditing process. It consists of two parts 1) data collection and 2) analysis.

1) Data collection:

* Input:

- Food:

- o Production (seeds, plants, livestock, etc.): costs
- o Consumption: costs

- Mobility:

- o Automobile: person/miles (e.g. a car with 4 people going 500 miles = 125m/person) and costs
- o Train: miles and costs

- o Plane: miles and costs
- o Buses: miles and costs
- o Boats: miles and costs
- Infrastructure (buildings, earthworks, etc.): all costs
- Goods:
 - o Power and fuels (kerosene, gridtricity, firewood, etc.): quantity converted to kilowatts and costs
 - o Tools and machinery: costs
 - o High-technology and communications (electronics, power systems, ISP, phone bill, etc.): costs
 - o Other: costs
- Services:
 - o Medical (hospitalization, insurance, supplements, etc.): costs
 - o Education: costs
 - o Taxes:
 - . Federal: costs
 - . State (including sales tax guesstimate): costs
 - . Local: costs
 - o Other: costs
- Costs incurred on your behalf:
 - o Medical services via insurance or subsidy: value of medical treatment minus cost of insurance
 - o Education via public subsidy or scholarship: value
 - o Material gifts or services valued over \$100: categorized as per above and value

* Output:

- Landfill: estimated volume (photos encouraged)
- Recycling: estimated volume (photos encouraged)

* Site assessment:

- Description: Photographs taken during the growing season covering as much as possible of one's site or a written description of the site itself. Try to indicate populations of flora and fauna native and introduced, land forms, areas of human activity and its effects.
- Changes: Approximately one page description of major changes to the land both natural and induced. Natural changes would include fires, floods, wind damage, temperature extreme damage, observed species increase/decline, etc. Induced changes would include changes in the vegetation due to planting or disturbance, earthworks, buildings, livestock/agricultural practices, etc.

Notes on data collection:

The Other categories in Goods and Services should be expanded into proper categories if consistent and substantial entries are made.

It is important to note that data on existing sustainable practices is not recorded. (e.g. food you grow and eat, shelter built in part or whole from local materials, energy from sun/wind and local biomass, walking/biking, story telling, etc.) In a sense the data we are collecting is a negative measurement in that it represents our level of local unsustainability. The more locally sustainable we become the smaller the numbers.

Additional categorization is encouraged in areas where it seems apparent that the difference in impact is significant. (e.g. food purchased from a neighbor that grew it all by hand organically) These categories should be expanded into proper categories if consistent and substantial entries are made.

Output does not record exported resources (e.g. timber/biomass, agricultural products, etc.). This may be a category we need to add if these exported resources become significant and/or non-local.

2) Analysis:

Detailed analysis of our collected data is important to us. At the same time the creation of a computer based tool and gathering the necessary ecological coefficients to do this will be a time consuming process. In particular we hope to have a way to relate each element to each other categorically. For example, looking at *dinner and a movie*, how do the actual ecological costs of the trip, the dinner, and the movie relate to each other? Which costs more? What are the social costs?

Until we have such tool created, simple comparisons of the data itself will be our primary form of analysis. By comparing the relative amounts of the different categories over time progress or the lack of should become apparent. In particular the Site Assessment should provide a visual but non-quantifiable comparison of the effects our choices are having on the environment.

Specific requirements of Red Earth members (those who have signed the Membership Agreement) in regards to the ecological auditing process:

- Accurately collect and record the data, including time spent off site.
- Submit a yearly audit report to the group which will be due April 1st.