

## A Letter To Preppers

### *Purpose*

The elephant in the living room of traditional preppers is the big “now what?” when their stash of goodies runs out. A more practical solution is to become as locally sustainable as possible. This may be hard to visualize for urban Americans, but this concept of “war gardens” was widely practiced during World War II. It alleviated wide-spread shortages and empowered people to improve their quality of life through their own efforts.

As an aid to visualizing and deploying useful technologies, open and save [technosmith.com/contents](http://technosmith.com/contents). Clicking any of the eighty-plus links on this file will take you to information related to their descriptive titles. These files may be simply read, or downloaded and saved. I would recommend accumulating a library of these writings (plus projects from other sources) for your personal library of sustainability techniques.

### *Biosphere 2*

In 1987 construction began on the world’s largest terrarium, consisting of 3.14 acres of greenhouse. They called it “Biosphere 2,” (since Earth itself was considered to be Biosphere 1). It cost of over \$150 million, and contained seven different ecosystems with their respective plants and a few animals. Before sealing, it was also populated by eight humans who had agreed to remain in it for two years – plus a few chickens, goats, and pigs who signed no such agreement.

An unanticipated problem with oxygen consumption forced them to admit outside air long before the two years was up, so at least in this respect their experiment failed. But with the exception of the moisture in this outside air, the water conservation was total. The water was recycled for gardening and domestic use on an endless basis. The electrical power however, was provided by a fossil-fueled energy source outside, so the project was never truly sustainable.

The gardens that fed them during this time produced up to five times as much per square foot as typical gardens elsewhere, and the fruits and vegetables selected provided an extremely healthy diet. All of this was done without further deteriorating the surrounding desert environment. For whatever practical value the above experiment may offer, adding locally produced energy to this type of project might have made a sustainable existence possible.

The value of this project to us, is to help us visualize needing little from beyond a few miles of wherever we happen to be. This could reduce reasons to worry about economics, politics, environment, and material shortages. On the other hand, we would be free to engage (or not), on our own terms.

Such dreams can at least provide direction. If the steps we take now remain compatible with a sustainable future, they can at improve our security and reduce our damage to the world around us.

### *Meanwhile, in our own backyards:*

So at this point we need only to focus upon our next few steps, and for these we would be wise to return to the “now what?” question raised at the beginning of this article. Here are a few of these actions that could relieve some of the pressures today, while progressing towards a more desirable future:

\* Optimize household level sustainability. A food garden may seem the most obvious, but what if the existing water crisis is compounded by everybody trying to do this at once? The garden itself must include all possible means of water conservation.

\* Minimize competition for decreasing natural resources, to free us from the effects of shortages. A generator isn’t going to keep running on best wishes, but a modest 12 volt solar electric system could support LED lighting, charge cell phones, and intermittently power a laptop. As for transportation, reduce your need to travel.

- \* Protect and enhance the environment. This would be a byproduct of increasingly depending upon our local environments, and of no longer depending upon things from far away places.
- \* To the degree possible, expand these benefits to the neighborhood or barrio levels. This would provide a greater level of security to everyone.

### *Water*

Water is the most critical commodity upon which all else depends. Biosphere 2 had a bottom under it that prevented its water supply from disappearing into the desert sand. Item #03040 on the above contents list describes an experiment in which I buried a membrane under a garden area for conserving water. A sump in the bottom of this membrane is fitted with drain pipe buried in sand or gravel. A riser on one end of this provides access to monitor and adjust the water. The photos provided in this entry brag upon its results.

In lieu of building a greenhouse over it, you can place pavers on the surface to prevent much of the water from evaporating – and cut back on the amount of weeds as well. Item #03070 describes a method of using cement stepping stones that are staggered slightly to allow spaces for planting things.

With these on the surface and a membrane beneath, we have an extreme level of water conservation. Being able to monitor and pump out the water through the riser will also be important if rainwater catchment should bring the level up to where plants could be endangered.

From here, the possibilities expand in many directions – consider:

- \* If you had one or more similarly equipped gardens on the property, you could perform some level of hydroponics by raising the water level to near the surface, and then pumping it all into another garden.
- \* You could monitor the nutrients in the water, and amend them as necessary.
- \* The rainwater catchment, combined with the subterranean storage, could be a major source in itself.
- \* This might be combined with an aqua feature to improve the nutrients, and possibly raise tilapia or some other fish for food.
- \* It might be possible to purify and recycle some components of domestic water to contribute to the system.
- \* If an adequate cistern were added to the central part of this system, it would be possible to see the garden through periods of severe summer water restrictions. This would also make it possible to haul in and store water from any other regional source that might be available.
- \* With a suitable distillation and filtering system, this cistern could serve as emergency water backup for domestic use.