

New Solutions



Community, a solution for saving the environment and conserving resources with equity for all.

Cuba: Life after Oil

Community Service Executive Director, Pat Murphy, and Community Service Trustee, Faith Morgan, took two study trips to Cuba in 2003 before the recent (2004) U.S. ban on educational travel to that country. They wanted to know how Cuba survived after the loss of oil imports when the Soviet Union collapsed in 1990. They found a people, optimistic and hopeful, who live with less but understand and appreciate the importance and inter-relatedness of community.

In this issue of New Solutions, Pat and Faith share their observations of this post-industrial society living with greatly reduced oil.



We recently reviewed the fall 2003 issue of *The Land Report* from Wes Jackson's Land Institute. It included a wonderful ten-verse poem entitled "Some Further Words" by Wendell Berry, a few verses of which are repeated here. (Wendell Berry and Wes Jackson are key leaders amongst those who value small local communities.)

(Verse One)

"Let me be plain with you, dear reader. I am an old fashioned man. I like the world of nature despite its mortal dangers. I like the domestic world of humans, so long as it pays its debts to the natural world, and keeps it bounds. I like the promise of Heaven. My purpose is a language that can repay just thanks and honor for those gifts, a tongue set free from fashionable lies."

(Verse Five)

"I would like to die in love as I was born, and as myself, of life impoverished, go into the love all flesh begins and ends in. I don't like machines, which are neither mortal nor immortal, though I am constrained to use them (Thus the age perfects its clench.) Some day they will be gone, and that

will be a glad and a holy day. I mean the dire machines that run by burning the world's body and it's breath. When I see an airplane fuming through the once-pure sky or a vehicle of the outer space with its little inner space imitating a star at night, I say, 'Get out of there!' as I would speak to a fox or a thief in the henhouse. When I hear the stock market has fallen, I say, 'Long live gravity! Long live stupidity, error, and greed in the palaces of fantasy capitalism!' I think

What is Peak Oil?

- Peak Oil is the year in which oil production reaches its maximum.
- Peak oil is the point in time at which half the oil in the world will have been burned.
- After that year there will be a continuous decrease in production until all oil has been consumed.
- Peak oil does not mean "running out of oil," but rather a steadily decreasing supply, increasing costs and major changes to the lifestyle to which we have become accustomed.

an economy should be based on thrift, on taking care of things, not on theft, usury, seduction, waste and ruin."

(And part of verse six)

"I don't believe that life or knowledge can be given by machines. The machine economy has set afire the household of the human soul and all the creatures are burning within it."

In this same issue of *The Land Report*, an article was included that discussed Peak Oil. Seven key points were listed and we quote numbers 2, 3 and 4:

2. In the near future, discoveries of oil will no longer keep pace with increased demand. Our consumption of energy-rich carbon makes this the most unusual period of human history. A person born in 1936, two-thirds of a century ago, has been alive while 97.5 percent of all the oil ever pumped has been burned.
3. No alternative technology matches the quantity and convenience of liquid fossil fuels.
4. The recent food supply of humanity has depended, to a large degree, on such fuels.

Past Peak Oil – Lessons from Cuba

There are more and more articles that show a growing awareness of oil depletion. More books on this subject are being published, some by people we know and for whom we have the greatest respect. The Association for the Study of Peak Oil (ASPO) reports they are getting 20,000 hits per month on their Web site.

To continue our study of this issue, we will travel to the third annual ASPO conference in Berlin, at the end of May. This conference will focus on trying to determine the most accurate date when

oil production will peak, after which we will be on the downhill side of the production curve. We are already on the downhill side of discovery and have been since the 1960s.

As interest and awareness in this subject grows, there is increasing concern about the future. What will our world look like with far fewer of the machines to which Wendell Berry refers in his poem? How will society reshape itself? There are dozens and dozens of questions to be asked and answered and the task is a formidable one.

Many people despair and write forebodingly about “die-off,” a population reduced dramatically in numbers by violence and hunger. Fortunately for us,

...we looked to one example, Cuba, the only country that has successfully passed through its own artificial “peak oil.”

we believe there are solutions, so the mood of discouragement has passed us by. But we do feel the enormity of what is facing humanity and the pressure of time being short. So we looked to one example, Cuba, the only country that has successfully passed through its own artificial “peak oil,” caused by the collapse of their sponsor, the Soviet Union.

What Cuba has dealt with and is doing is a secret from U.S. citizens because our government has made it illegal for us to go there. Last year we went there on study visas to investigate and learn about how they had survived. But at the beginning of 2004, the U.S. government tightened the travel ban on Cuba, so that ordinary Americans who want to learn about the country, its culture, and the way it has dealt with the loss of oil are not allowed to do so. The mind boggles at the craziness of this. Here is one tiny country that has prematurely experienced a sudden decline in oil supplies and is dealing with it successfully, and we are not allowed to visit it. We asked ourselves, “How can 12 million people who are very poor be such a threat to us?”

The two trips that Faith and Pat took to Cuba last year were through Global Exchange’s study visas. This year Global Exchange had prepared another trip by joining with an organization which had an exception to the new more onerous restrictions. Thus we had been scheduled to attend the 6th Annual International Conference on renewable energy, “CubaSolar” on April 9th. Pat was to speak on “Peak Oil and America’s Response” at this conference. One week before departure the State Department pulled the permit and canceled the visa. We had been looking forward to attending the conference in order to learn about Cuba’s low cost renewable energy generating technologies.

Our first trip had given us a general introduction to Cuba, its history and culture plus an understanding of how it dealt with the sudden loss of Soviet oil. The second trip was a study of Cuban organic agriculture including their use of bio-pesticides to replace petroleum-based pesticides and oxen to replace tractors. This third trip would have shown us what Cubans have developed in terms of other alternatives to oil.

In our first visit, we talked to an economist who said Cuba couldn’t afford the million dollar wind machines and expensive photovoltaic cell systems except for use in isolated locations. Since it’s the high cost of these alternatives that has restricted their use, we were looking forward to finding out what options practical people on limited budgets had developed.

The first visit to Cuba helped us develop our ideas about, and see the importance of, community solutions as opposed to yet even more complex (and questionable) technological solutions to oil depletion. We spent ten days there, and it’s hard to summarize that much experience in a few pages. In this report, we will emphasize the highlights relative to medicine, education, housing, and transportation.

Free Medical with a Focus on Prevention

Cuba has always been a poor country, and recent oil shortages haven’t helped. Yet their medical system is incredible for a third world country, and health care is free to all.

Cubans are proud of what they are doing in this field, and the advantages of their health care system were constantly emphasized. All children are vaccinated against 13 childhood diseases, and the infant mortality rate in Cuba is lower than in the U.S. Cubans are poor but their life expectancy is the same as the U.S., and they die from the same diseases, not from communicable diseases like people do in much of the third world. Open-heart surgery and other complex procedures are performed in Cuba.

Prior to the revolution in 1959, there was one doctor for every 2000 people. Now there is a doctor for every 167 people. Cuba has an international medical school. Surprisingly there are hundreds of Americans in this school who attend at no charge under the condition that they



Doctors and nurses live in the community where they work and usually above the clinic itself. They try to keep people healthy rather than simply correct medical problems.

work in poor neighborhoods when they return to the U.S. Cuba accepts medical students from many other countries as long as they commit to serving the poor when they return home.

Cuba also provides Cuban doctors for other poor countries. These doctors go to



"Medicine is a vocation, not a job!" said this Havana doctor. She said that although Cubans are poor, their life expectancy is the same as in the U.S. and infant mortality is below that in the U.S.

remote areas, often risking their lives.

There are 20,000 Cuban doctors abroad doing this kind of work.

Being a poor country, Cuba cannot waste its medical resources, so it has placed a major emphasis on preventive medicine. This focus means that Cuban doctors try to keep the people healthy rather than simply correct medical problems.

A major effort is made to promote a good diet. Cubans eat a healthy, low-fat, nearly vegetarian, diet, although this is largely determined by food limitations rather than personal choice. They have a healthier outdoor lifestyle and a much less sedentary life than Americans. The lack of transportation leads to much more walking and bicycling.

In remote rural areas, three-story buildings are constructed with the doctor's office on the bottom floor and two apartments on the second and third floors, one for the doctor and one for the nurse. The focus in the rural areas is also

on preventive medicine.

In the cities, the doctors and nurses always live in the neighborhoods they serve. They know the whole family and try to treat people in their home environment. They are very aware of the stress caused by sending patients to distant hospitals.

We visited a local clinic in Havana where we spoke to the head doctor and several nurses. The clinic serves 900 inhabitants, and has access to specialists such as psychologists, pediatricians and

In the cities the doctors and nurses always live in the neighborhoods they serve. They know the whole family and try to treat people in their home environment.

experts in elder care. They also provide alternative treatment for the community, including acupuncture.

Cubans have done major research in vaccinations and, although limited by the

embargo, they have sufficient antibiotics. The doctor told us the main lack is needles, gloves and disposables.

All physicians are trained in internal medicine during their first six years of medical school, followed by three years of additional study. There are no midwives and 99 percent of child deliveries are in the hospital. Doctors normally have office visits in the morning and do house calls in the afternoon and evening. They try to help people die at home rather than in an institution. Sixty percent of the doctors are women.

An interesting occurrence was a discussion we had with two women doctors. One member of our party was a medical student at Harvard medical school, and also the daughter of a physician. She asked many questions about the economics of medicine from a Western doctor's point of view. The basic thrust of her question was, "Why become a doctor if there is no financial incentive?" It became apparent that there was a major cultural difference between the U.S. student and the Cuban doctors. As the line of questioning became more apparent to the two doctors, their faces began to take on a shocked look. Finally, after fully understanding the purpose behind the questions, one of them responded forcefully, "Medicine is a vocation, not a job."

It is this type of attitude that makes Cuba a model not only for the third world but also for the first world. When one considers that the life span of a Cuban is the same as that of an American, and that the country is quite poor, the attitude of the medical profession towards the people strongly supports their model and attitudes.

Although not a medical issue, part of a healthy life style is to not work oneself to death. Retirement age for Cuban men is 60 and for women 55, after 35 years of work, except for miners who retire earlier. In general, Cubans have a 40-hour workweek, although under the stress of the U.S. embargo many hold two jobs.

Education – A National Priority

Education is the most important social activity in Cuba, and 100 percent of the younger children are students. Primary, 1 through 9, and Secondary, 10 through 12, are compulsory for all. Even the smallest village has a schoolhouse, a VCR and a TV – used for instruction, not entertainment. All children get a minimum of 12 years of schooling. However, on a percentage basis there are far fewer college attendees than in the U.S.

Immediately after the revolution, 120,000 teachers were sent out to the hinterlands, and 700,000 people learned to read and write in a few months. Before the revolution, there was one teacher per 3,000 people. Today the ratio of teacher to population is one for every 42 people. The ratio of teacher to students is 1 to 16. These statistics are among the highest in the world.

Cuban media is limited, particularly TV, which serves principally as an educational tool. There are many science and health programs shown. A variety of subjects include shows on school, family, and sex education. Ninety-nine percent of the population has a TV.

Education in Cuba includes a vocational aspect but one which is different than the concept in the U.S., which is only for manual trade skills. A national organization called the Pioneers, offers a combination summer school and camp during the July-August school holidays.

This camp is free. Saturday and Sunday are devoted to recreation, excursions to the mountains or beach, and birthday parties. Many of the children are not local and reside at the camp. Studies are varied, including agronomy, sea studies (fishing and boating), transportation (including auto repair), embroidery (local historical craft), construction, gastronomy, and plant nurseries. Boys and girls both learn sewing skills and auto repair. The classrooms include the uniforms and tools of the various trades to heighten the exper-

...two of the four teachers were crying. When we asked why, they said that this was what they had dreamed of when they became teachers, but that it was not possible in their schools.

ience. Teaching of local handicrafts is a national priority as sales to tourists

At the “Pioneers” vocational school and summer camp in the small community of Trinidad, a 12-year-old girl tells us about the carpentry tools. In each classroom, we found the children poised and articulate.



This kind of embroidery is specific to Trinidad. It is taught in their vocational school to keep this local craft alive. Each town's crafts are unique.

(tourism is their largest industry) can make a big difference to a family. The Pioneer camp we visited had been in existence since 1985. The Pioneer program originally began in 1975.

Each of these disciplines has its unique classroom. In agronomy, students learn about beans, seeds, soils, and coffee. Sugarcane has its own learning space as it is a major industry in Cuba. In another room, students study the sea – activities in this area include fishing, boating and diving. The main objective of the Pioneer camp is to help children choose a career by experiencing a wide range of options and discovering what they like.

The children we met seemed to enjoy these non-academic activities. A high point of the trip was a solo ballet dance by a ten-year-old girl in a pink tutu.

There were four public school teachers from the U.S. on our trip. As we returned to the bus, two of the four teachers were crying. When we asked why, they said that this was what they had dreamed of when they became teachers, but it was not possible in their schools.



After the loss of Soviet oil in 1990, commuting by car was no longer possible in Havana. Out of necessity they developed this simple mass transit bus they call the “Camel.” It holds 300 people and costs 1 peso (about a nickel) to ride.

Transportation – A System of Ride-Sharing

By 1993, after the rapid loss of oil supplies from the Soviet Union, transportation was totally paralyzed. There were no cars running, public transportation collapsed, and the streets were empty. Cuba imported two million heavy Chinese bikes. One man told us that with the combination of pedaling in the tropical heat along with food shortages, everyone lost weight in Havana. Fortunately things have improved.

Cuban transportation today can only be described as fascinating – and difficult! Less than one-tenth of Cubans have cars and it is unlikely that the percentage will grow. All of Havana’s buses were packed and most seemed to be old. One special Havana transport consists of a very large metal semi-trailer, pulled by a standard semi-truck tractor. This oddly configured vehicle holds three hundred people and is called a “Camel.” It is said to always be hot

and crowded, but it is also very cheap – one Cuban peso.

Cubans often quote the phrase, “Necessity is the mother of invention.” With little money or fuel, Cuba moves masses of people during rush hour in Havana.

This inventive approach makes use of every form of transportation, from hand-made wheelbarrows to busses. Cuba took all vehicles, from large to small, from motorized to animal powered, and built a mass transit system. Although there are some recent imports of small cars, these are limited.

This old station wagon is one of many 1950s cars used for transport all over Cuba. Unable to buy parts for them, Cubans create what they need. Mostly, they seemed in excellent running order.



Cubans often quote the phrase, “Necessity is the mother of invention.” With little money or fuel, they move masses of people during rush hour in Havana.

What is surprising is to see the dozens of old American cars from the 1950s, which would be valued collector items today in the U.S. They are used as taxis all over Havana and elsewhere. It is against the law to take these older (antique) vehicles out of the country.

Bicycle and yellow motorized two-passenger rickshaws are also prevalent in Havana, while horse and cart are used in the smaller towns.

Cuba has shown that in a national emergency it is possible to transport people with little fuel, albeit with lots of inconvenience. Without adequate oil, individual mobility is sacrificed and replaced by communal transportation. There are government officials in yellow garb who have the right to pull over nearly empty government vehicles and trucks and fill them with people who need a ride. It is not unusual to see an old Chevy with four people in front and four in the back.

On the roads to and from Havana there were always hitchhikers waving money in an attempt to solicit rides. We observed a donkey cart with a taxi license nailed to the frame. Many trucks had been converted to passenger transport vehicles simply by welding steps to the back so people could climb up and down easily. In some cases, two men, stationed at the back of a high truck, had the job of lifting passengers into and out of the truck. Many of these trucks had been equipped with canopies for shade. Old 1950s station wagon taxis sometimes carried up to ten passengers.

High level government officials often don’t have cars, but there are small buses to bring them to and from work, or they share rides with someone who does have a car.



Top: Old trucks are used all over Cuba for transportation of people. Many have been modified with steps in the back and canopies to keep off the rain.

Above: In the coastal town of Baracoa, we watched people going home after work using this time-honored mode of transportation. Cart after cart went by, filled with people.

On one rural trip, we rode in a horse-drawn wagon to the beach. On the way, we picked up hitchhikers and dropped them off during the journey. At one point, we came upon a family and took the two small children while the parents continued to walk. At another point, the driver flirted with a teen-age girl we picked up. This casual, slow, free, ad hoc bus was quite charming.

There are no billboards or other forms of advertising on the streets or highways. This was a relief for an observer used to American display advertising. Also there are no trendy shops in or near the hotels. Without ads cultivating endless needs, the limited material resources are not as psychologically debilitating as they would be in the U.S. Yet where there are tourists there are shops – in Havana, selling cigars and rum, and in the villages, local handicrafts and art.

A high point of the trip was viewing a film called “Suite Havana,” a noteworthy feature being that it was completely silent except for music, street sounds and the occasional call of a woman for her child. It illustrated the severe difficulties with transportation as well as food and housing. But it showed the ingenuity and the sharing of things – the Cuban response to the decades-long U.S. embargo.

Housing – Less Is More

Havana is the largest city in Cuba with a population of 2.5 million people. The city appears somewhat seedy and dilapidated. Buildings are obviously deteriorating, and some have collapsed or been abandoned.

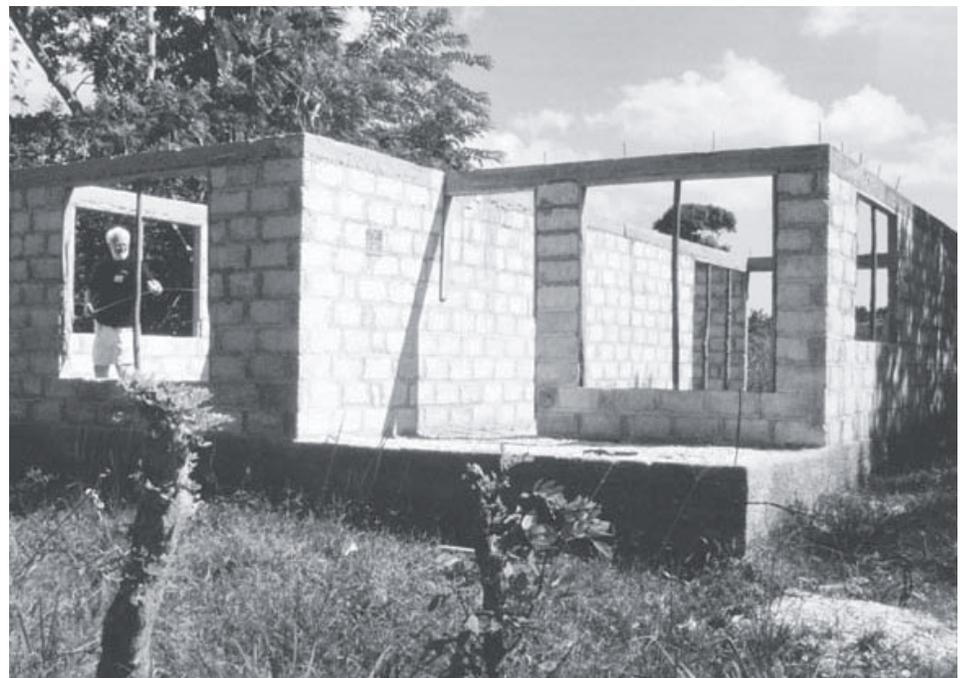
The housing in Havana is very crowded. In many apartments there are only three square meters per person, and several generations live together. This crowding together of multigenerational families contributes to a high divorce rate.

Havana has 21 social transformation centers, which work with people in planning neighborhood housing. Where there is new construction, neighbors select who among them should get the

new house. Some new construction is of a simpler technology using sand, stone, and lightweight concrete. Courses are offered to teach people how to build houses with this new technology.

Cuban housing is a very serious problem, but there are no slums as in Brazil and other Third World countries. Raw land is provided for building homes. The standard house is a simple rectangle about 25 feet x 35 feet with three very small bedrooms, a living room and kitchen and a small porch. It is made of concrete block. Building supplies are provided by the government. America’s average new house is now over 2400 square feet, or about three times the size of a Cuban new house.

Cubans call the era since the collapse of the Soviet Union the “Special Period.” This “Special Period” led to a reversal of the movement of people from rural areas to Havana. Prior to that period, sons and daughters of farmers who went away to school didn’t want to farm or return to their original province. There was no incentive to work the land. But today Cuba is more and more an agrarian country and the pay scales reflect it. Originally there



In rural areas land is provided for people to build homes. We saw this type of house (porch, living room, kitchen and three bedrooms) all over Cuba. In rural areas and small towns people are also encouraged to keep chickens and pigs in their yards and courtyards.



The housing in Havana is very crowded and many of the buildings are in terrible condition. With too few resources, these old brick and stucco buildings have been ravaged by time and water. To fill the need for housing, new development is designed to eliminate the need to commute long distances. Work, schools, markets and recreation areas are all within walking and biking distance from dwellings.

was too little focus on rural areas and food production, and much of their food was imported from Eastern Europe. Now, in rural Cuba, those who have the skills to grow food are extremely important.

In the coastal town of Trinidad, we were invited to a block party. The party was late in the evening, on a narrow street with narrow sidewalks abutting the entrances to the homes. The distance from the front of each house to the one

The standard house is a simple rectangle about 25 feet x 35 feet with three very small bedrooms, a living room and kitchen and a small porch.

across the street was similar to that of the length of one of our large living rooms. We were welcomed and then we listened to a speech by the CVR (Committee for the Defense of the Revolution) president. She then introduced her three-person management team, each of whom gave a short speech.

After snacks, songs and dancing, the people invited us into their homes. The houses were comfortable, since Trinidad has spacious accommodations compared

to Havana. There were one, two and three children per bedroom. The entry living area was simple. The furniture looked old and secondhand but in good repair, and there were few decorations. Art on the walls was simple and attractive.

Most houses in rural towns and small cities seemed to have a small walled-in garden/patio in the back, where some people kept a pig or a few chickens.

There is sufficient skilled labor to build more homes, but there is an acute shortage of housing materials, particularly concrete, which takes a great deal of energy to manufacture. Natural disasters also affect housing. In recent years a single hurricane destroyed 4,000 homes.

A Sustainable World in Which Every Person Matters

As noted at the beginning of this article, we are not experiencing the discouragement that affects many people who learn about Peak Oil. We did not print Wendell Berry's entire poem. But in it, as well as in other parts of *The Land Report*, a vision is presented of a world that lives as though all people matter – a world with a sense of community, morality and values. This is a sustainable world, one without agricultural poisons and machine toxins, and a world where people are living in harmony with each other and the earth, rather than in constant competition based on the principles of capitalistic industrialism.

It has given us hope to learn how Cuba quickly moved from dependence on oil in this industrial age to a modern decentralized agrarian society. It is not easy for Cubans and many additional difficulties come from the U.S. embargo against the country.

Mostly the people are not dour or bleak. They are discovering (or maybe they always knew) the importance of community and community values. They told us that things were very difficult but they also told us what they were proud of – quality education, free health care with a focus on prevention, long life expectancy,

They told us that things were very difficult but they also told us what they were proud of – quality education, free health care with a focus on prevention, long life expectancy, excellence in sports, and their survival in spite of the U.S. embargo.

excellence in sports, and their survival in spite of the U.S. embargo. Some even said they thought the embargo had made Cuba stronger.

Machines in Cuba are not gone, but there are far fewer of them than there were before 1990 and the ones left are not used near as much.

We would invite you to visit Cuba, but we also know that our government wouldn't allow it. And we can understand this policy: Cuba is a threat to the American way of life... for which we at Community Service are grateful. The Cubans' agrarian, low-energy, cooperative life style is more in line with our values than is the modern consumer society of growth, competition and consumption, based on using an ever-shrinking supply of fossil fuels.

We wish Wendell Berry and Wes Jackson could visit Cuba as we did and see an agrarian way of life being reborn. Wendell's poem notes, "I don't like machines... Some day they will be gone, and that will be a glad and a holy day." Cuba is well on the way to that glad and holy time. ■



This and additional publications and resources are available online at www.communitysolution.org.

New Solutions

is published by Community Service, Inc. under its program, The Community Solution. Community Service, Inc., a non-profit organization, has been studying and promoting small local community for more than 60 years.

To receive New Solutions on a regular basis, please send your tax-deductible contribution of \$25 (or more) to P.O. Box 243, Yellow Springs, OH 45387. Your contributions will help us continue this work.

To receive regular email communications, send us an email at join@communitysolution.org.

© 2004 Community Service, Inc. All rights reserved.

Resources

Books on Peak Oil

The Coming Oil Crisis, Colin Campbell, 1997

The Essence of Oil and Gas Depletion, Colin Campbell, 2003

Hubbert's Peak, Kenneth Deffeyes, 2001

The Party's Over, Richard Heinberg, 2003

PowerDown, Richard Heinberg, summer 2004

Saudi Arabia Oil Review, Matthew Simmons, summer 2004

Out of Gas – The End of the Age of Oil, David Goodstein, 2004

On the Web

Speeches by Matthew Simmons: www.simmonsco-intl.com/research.aspx?Type=msspeeches

Museletter, Richard Heinberg: www.museletter.com

The End of Suburbia, a DVD: www.endofsuburbia.com

Sustainability through Local Self Sufficiency, Folke Gunther: www.feasta.org/documents/wells/contents.html?sitemap.html

Association for the Study of Peak Oil (ASPO): www.peakoil.net

Books on Cuba

Democracy in Cuba and the 1997-98 Elections, by Arnold August, 1999

No Free Lunch: Food and Revolution in Cuba Today, by Medea Benjamin, Joseph Collins and Michael Scott, 1989

War, Racism and Economic Injustice, by Fidel Castro, 2002

Books and Resources on Community

The Small Community, Arthur Morgan, 1942 (available from CSI)

The Long Road, Arthur Morgan, 1936 (available from CSI)

Books by Wendell Berry are recommended.

The Land Report, A publication of The Land Institute, www.LandInstitute.org

Communities Directory, Guide to Cooperative Living; compiled and published by the Fellowship for Intentional Communities, (FIC), (816)883-5545

Communities Magazine, Journal of Cooperative Living, published by FIC

You may also contact us through our websites: www.communitysolution.org and www.smallcommunity.org.



A program of Community Service, Inc.

P.O. Box 243
Yellow Springs, Ohio 45387
T: 937.767.2161
www.communitysolution.org

Return Service Requested

Nonprofit Organization
U.S. Postage
PAID
Permit No. 51
Yellow Springs, Ohio