

Offgrid in Bayham

2009- 2010

So life goes on in Bayham, a rural backwater with little vision and a complete lack of leadership in council.

A primer for those considering self sufficiency and sustainable living.



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Foreword:

There is a lot of talk about sustainable living but I find very few who raise the issue and lecture on it are not actually attempting or living sustainably. This needs to change because living it brings about a satisfaction and feeling of joy that otherwise is not possible and oddly brings up a lot more questions than answers.

All of us have limitations, many times self imposed or inflicted by bureaucracies. Some rural municipalities supported by their voters, have adopted their duty as the preservers of unsustainable lifestyles and how ironic that in rural areas such as my own which have the best options for sustainable living. That the notion of sustainability is denied the light of day and that cities are more the hot bed of fresh ideas and actual action such as in London and Toronto here in Ontario is confusing.

Living off grid, self sufficient living or living sustainably sounds like a very good idea but in the present society of 2009 it is rather impractical knowing how little we like to maintain things and then made really impossible with the municipal bylaws, our uneducated elected municipal councils, the bureaucrats who know only the written laws and us, the uninformed so called democratic society. The voting public oppose anything that is different or new despite the facts and quite sadly only a few are knowledgeable about climate change and living alternatively. Sadly we are only very knowledgeable about items promoted in the media along with the persistent advertising which feed our unsustainable lifestyles.

There were many options for my attempt at living a more sustainable life but the idea of living locally and using existing low technology was the best option for me. This means deriving all of my energy from the sun, growing my own food, and recycling old machinery and using fossil fuels to prepare for sustainable practices. This sounds a bit contradictory but yes I make use of fossil fuels for building a sustainable life by obtaining machines, solar cells, windmill parts that were made with fossil fuels. I try to purchase only used machinery but these things will only last for the next 20 years or more but in the meantime lessen my need for fossil fuels dramatically for things like heating and transportation. This system is valid for maybe the next 20 years and what humanity will do after the next twenty years is beyond my comprehension at this point but I will at least be prepared for the first 20 years.

To live off grid and attempt a sustainable lifestyle is really not practical for many since not only does one need cash to afford a homestead, lots of time and money to fight the local authorities, be able to live full time on the property while tending a garden every day and then you need to purchase all the so called solar necessities, live without insurance because of the home made devices and at the same time also have a regular income to support the land taxes and maintain the buildings, tools and machinery you need. Some may have to consider slaves to make it possible which I guess includes girlfriends, boyfriends, wives and kids.

And as for food, I eat what I grow, and have learned to trade the items I make. This will certainly cut down on the my usage of advertised unhealthy food as found in most supermarkets. For some growing your own and making your meals means a rather bland diet by today's supermarket

standards especially when certain crops fail such as my most recent crop of tomatoes. Happily this does not bother me since I am quite satisfied with the other vegetables I have grown and those that I have stored in my cold cellar. Having my new winterized greenhouse gives me a lot of hope too for more variety over the winter.

There is also the great possibility that I have it all wrong and that what I have done has just proved that my concept of living sustainably so far has proved either very difficult or on the other hand impossible for most people.

I do not believe we will never reach our goal of lessening the carbon emissions of our world to an acceptable level, there is just too much profit to be made from fossil fuels and people do not want to change. Cars and monster truck shows and the perceived economy will always trump the environment. It is the way our system works. If want to loose your vote in our democratic governments just propose lessening our dependence on fossil fuels by proposing to eliminate car driving, fertilizers, pesticides, and then demand that the only energy used is produced by the sun. If you follow the money for the organizations that oppose environmental concerns it leads to fossil fuel companies and those associated with them such as car companies and then of course the basis of all of this is you and I who drive this unsustainable lifestyle.

The only hope I see is that man finally comes to a grinding halt when the energy returned on energy invested lowers to a 1:1 ratio.

No one wants a windmill near their property but everyone insists on cheap electricity at the touch of a button from the usual coal fired and nuclear plants as long as it is in someone else's back yard!

My feeling is that a good environmental leader would do wonders for the western world but getting that good politician that opposes fossil fuels will be impossible. The making of correct government decisions just will not happen due to the infestation of lobby groups that proclaim job losses should we reduce our dependence on fossil fuels. We seem to lack real leaders in our government and a public that is interested in human preservation. Unfortunately again bad economics based on costs and jobs chasing dwindling supplies of fossil fuels will always trump the environment. Such is the sad state of governments and its inability to prepare for an inevitable decline in fossil fuels.

Many argue that until we influence the federal government there will be no real changes. I agree but the time table for such changes is far too long for the world will soon be beyond saving as recently stated by most concerned scientists. I am starting in my own back yard to try influence our local government with the Municipality of Bayham. Unfortunately this municipality with their bylaw enforcement officer seems intent on forcing the citizenry into a compliant society with laws that only encourages support for unsustainable living which under the present limits to growth and climate change problems do not make sense anymore. Control of the masses seems to more of the issue with our Bayham administration rather than good reasoning and leadership.

Another question would be why did I not choose some very rural location rather than a village? Considering the vast use of pesticides, fungicides, fossil based fertilizers chicken predators and sewage sludge on the farmers fields. Living close to any factory farm is just plain unhealthy. Now that pesticides are banned in residential properties, Port Burwell on the lake is at least partially safe especially considering the prevailing winds from the south west over the lake only carrying whats left

of the pollution from Ohio fifty miles to our southwest. A lot better than winds from Nanticoke coal fired electrical plants to our east which blow to Toronto!

There just is no possible way I can see our society moving to a sustainable society and it will not happen in time to have any effect on the ensuing disastrous climate change and our eventual extinction.

In the meantime I will continue to explore an alternative lifestyle by developing low tech solutions, raise issues within our municipality and just simply continue to enjoy this wonderful earth. To rephrase this I could say “ it is better to use known already in use systems that do not rely on fossil fuels and prepare for a future with them than to rely on finite fossil fuel and untested complex machines that rely on a single source of energy or something not yet developed”.

Reasons for considering a sustainable living lifestyle

How are we influenced in our life's decisions:

It is only now that I am over 60 years old, I realize advertising, governments and corporate influence has misguided most of my life. When I thought government or industry was making sound and informed decisions it was really some lobby group that had pirated the process. Their influence has also spread to colleges and schools doing what some think as good in the community by providing machines, drugs and finances to those that advise us in everyday life without us knowing of better alternatives. We also have a great scheme to hook students by giving them loans making sure they have to go out in the world and practice what they have learned from the lobby groups and businesses that supported and influenced them during their education. They then have to partake of the status quo jobs and in turn partake in unsustainable lifestyles so they can repay their loans. This is from of slavery.

The television while heralded as a great entertainment has done more harm to our society than fossil fuels. Walk any street in Ontario at night and you will find this odd blue light emanating from households and these will have as many blue lights as there are occupants. People are soaking up the couch potato lifestyle and doing nothing about building a community, working at crafts or entering into discussions. There would be no television without advertising and there is only advertising because it works influencing our choices making us purchase those products!

I have always argued that we need to look at facts when doing a discussion of things like the usefulness say of chickens in the backyard. While I can argue quite successfully that Chickens are a great benefit, most people will not agree with me, not because it does not make sense, but because this does not fit with their perceived lifestyle. And this image is a fantasy we all strive to uphold, brought to us by the multinational corporations that have found ways to appeal not to our logic but to our feelings of self importance. The multinational corporations have done a superb job of this.

Resource depletion:

The catalyst for me was the film “The End of Suburbia”. Previously I had been reading about peak oil and this concept did make a lot of sense. That the fossil fuels were made over millions of years and we are depleting it in a hundred years does sound bad but that we have polluted our environment, crushed many countries peoples and destroyed land in the process of extracting and using fossil fuel just for the select richest people in north America and Europe makes this not only a major crime against

humanity and the environment but also devastating for future generations the world over.

I grew up in Northern Ontario towns such as Virginia town, born in Kirkland Lake and spent my teens in Sudbury and was well aware of the devastation caused by mining but more important it showed me the extent that we are prepared to go to get the resources. There were days when the air was so polluted that it was nearly impossible to breathe. I doubt that anyone had the idea to just stop the production for that day and I certainly did not understand that this rape of the earth was harmful in any way! Each year the mines would go deeper and the cost of obtaining this resource grows exponentially. That is the same case for every natural resource we have. This should make all of us wake up and think about it. There will be a time when it will just not be affordable, environmentally, monetarily and that the required energy input will be greater than the output. And we being a rather uninformed public no-one will realize the moment has arrived and our situation will only get worse until it is too late to make any changes.

The real kicker for me is that it's our retirement money behind all of this. This means that some guy retired from a job in sustainable living has his retirement fund supporting the very industry that is spewing forth toxic material on our daily life.

Quality of life:

I really wanted a real life with real feelings and not something I learned from the acting done on television. How can one really live when they are forced to work in a situation that all outward signs need to point to a happy content working environment when inside one feels quite the opposite? I like the feeling of getting up each day and having to figure out just how my day will be spent. Do I have a lot of sun derived energy for the activities of doing some biodiesel? Do I have enough energy left over to do a clothes wash? Will I have some left over energy to heat water for a hot shower??

I get up with my cat rubbing my nose with his nose at the first sign of light. If I feel cold I know the wind is from the north which means there will be sunshine and depending on the time of year I will know how much energy I can use for what purposes. I feed the cats and chickens and make an adjustment to the solar panels to capture the morning sun.

I do a lot of work and maintenance punctuated by thoughts of how to improve or develop an idea to make life easier or harder depending on your point of view. Realizing those ambitions also keeps me active and gives me a feeling of having the best quality of life for me. I cannot live a lifestyle that is a charade.

I have many things to do to survive and each year I am better prepared. This is very real for me and makes me feel very sane (if not already declared insane by my detractors.)

Food quality:

Luckily my mother was able to feed us good food while we were young. Dad always had a garden and he instructed us and at times forced us to participate in the gardening and composting. How lucky I was to have had this early training. Our food was carefully supervised and I have a healthy body to show for it now. I never really thought about healthy food for a number of years while attending University, I just ate what was in the cafeteria which seemed to suit me fine. Advertising abounded for soft drinks, fast food and junk food. Somehow I got through this, being one to not spend money frivolously on junk food and even had a garden or two along the way. While creating a business for the last 30 years I just

ate what the supermarkets provided with an eye to reasonable health. The many recommendations from nutritionists over those years makes one realize how wrong they can be. The obvious solution is whole foods grown with good soils and this means to grow your own so that you know what goes in to it. One can also trade or purchase locally provided you know what is going in to that food.

I look out over farmers fields and see just soy and corn. A little reading soon points out that these are the basis of most junk foods and that if you only add a few nutrients such as potassium, phosphorous and nitrogen your food is going to miss a many of the thousands of nutrients available in properly compost fertilized soil.

Insect and animal habitat:

If the farmers are spaying their fields with pesticides, fertilizers, herbicides etc where are the animals and insects safe? Certainly not in our short cut weed free grass in residential areas. The province has recently banned all pesticides for residential use but any thinking human soon realizes that the bulk of pesticides is on farms and this adversely affects the insects and animals a lot more than any residential use. When you ponder about the bee population I wonder just how they do survive this onslaught with the many pesticides. Again humans just do not see very far in the future. Without the insects and animals there will be no humans! Which I guess is where we are headed. I love all of nature and understanding it is the cornerstone of sustainable living. I have no greater joy that to see the many butterflies, dragon flies, insects, birds and animals enjoying my yard! And to do this you need a great deal of natural habitat. Keeping the bylaw officer at bay can be a difficult undertaking though as I have discovered with Paul Groeneveld here in the Bayham Municipality in 2009. Fortunately he has moved on.

Community building:

We live in community settlements but thats about where it ends. We do little to bring our neighbours together in such things as dances, card games, cider pressing parties, baseball games, or a pot luck meal. Even getting together to help renovate a house just does not happen but I am changing that. Most of this is because of the death grip that television has on us.

So what can be done? In 2009 I thought of the idea of a trade fair that I would hold in my barn. The odd thing that happened in my mind was that I was there to trade for something that represented the quality that I had put into the sunflower oil, garden vegetables or biodegradable degreaser. There was no thought of what monetary value it had. After the trade fair I taught dancing and at another I showed films on sustainable life in Cuba. I made new friends and my neighbours felt enlightened as to what I was trying to do.

It is not easy to get people to work together on projects but looking forward to a good potluck hot meal at the end of the day really does help.

I have a new idea: Since most municipalities do not allow multiple dwellings on a property why not invade a small town like port Burwell. I will purchase another house, renovate it with sustainability in mind then offer it for rent to a family who wants to life in a sustainable community for a year. Hopefully that family will choose to become participants in the community by purchasing a home in Port Burwell. I would help with the finances and provide work during the whole process.

Happiness:

This is one area that everyone will define differently and it will be different at all ages. I have always enjoyed the ability to fix things and now I also enjoy working in the garden as well as designing things that help my attempt at a self sufficient lifestyle. Dancing makes me happy as does cycling.

Another thing I have found is a tremendous enjoyment of sharing work with others. A friend of mine Will Arlow decided to take time off work, cash in his rps and fix up his house. He had to struggle for a few days by himself until I could get a few days free to help. Working together meant that the roof went faster by more than twice. Will measured and screwed in the structure for the roof while I manned the saw. If Will had done it himself he would have had to scramble around the roof taking a lot more time. It was also wonderful to sit at supper at the end of the day and trade stories while entertaining the kids.

Unfortunately my happiness is greatly disturbed by bylaws that are enforced and that directly support an unsustainable lifestyle since I must spend so much time fighting those bylaws that prevent me from pursuing a sustainable lifestyle. Having Paul Groeneveld , our past bylaw officer for 2009, impose them at his discretion without finding solutions is just plain harassment.

Now these wonderful things that I am doing also bring about the inability to go away from home for any length of time. Each day is filled with chores from emptying the compost to monitoring the windmill and solar cells which provide a routine and at times a challenge to remember to do everything. This morning for example I forgot to open the greenhouse wall until 10 am but I had remembered to write down my disturbing thought about the next council meeting that is determined to get rid of my chickens.

My happiness has a lot to do with community working together. Unfortunately most people feel that to have an opposing idea means you are enemies but on the contrary it just means we need to have dialog and talk the issues out without getting angry. Trying to understand another's point of view is most important.

My happiness also includes leaving the earth to those that follow knowing that I did all I could to ensure a sustainable lifestyle and that I stood up against those who try to perpetuate a lifestyle that makes life for others much less happy. Burning fossil fuels to me only exacerbates climate change and seems to only make the poor suffer more as we rape the very country that has fossil fuels. Countries that have fossil fuel incomes seem to benefit only the very rich that do not seem to concern themselves with the lives of the less fortunate.

A normal day in my life

I like to get up with the sun which varies greatly with the summer and winter seasons. Just now in late November 2009 the sun is up about 7 am (I think that is eastern standard time). In the summer I love the long days which allow me a lot more energy from the sun and my favoured pastime of cycling in the evenings.

While it is a good idea to get up early it was really my cat that got me started. As soon as it is beginning to get light out he comes up to me and rubs his nose on mine and will continue until I get out of bed. Now he is not thinking of anything else but getting a good breakfast but I take the cue and get on with my day.

I have two cats one that prefers to stay out at night, that's Dusky and then Muggs who likes to stay inside once it gets cooler outdoors. It is Muggs who loves to wake me in the morning.

I begin the day by putting Muggs outdoors, I note the weather. A lot can be found out about the weather by looking out the window and once I have an idea of what to expect and what I will be doing, I dress accordingly.

Once mobile I check heat in living area and if below 14 Celsius in the winter and I am not expecting sunny weather then I light the biodiesel heater. I then check voltage of the battery, let cats in, feed them and check the water heater temperature. Note the outside temperature.

I then get outside and feed the chickens- make sure they have fresh water, open nesting box to check for early eggs then check orientation of solar cells on the roof of the barn and adjust them for the morning sun. I can also remove the snow if any has accumulated over night.

If there is morning sun or I am expecting the sun I open the solar air heater on the south side of the house.

The swinging insulated/mirrored wall of the below grade greenhouse needs opening to let the sunshine in. At this time I also take a quick look at the plants, munch a few lettuce leaves and a dried piece of apple or pear if there is any left.

I then check the biodiesel, if I have done some or prepare for biodiesel by looking at temperature of the oil and the incoming temperature of the evacuated tube water heating system.

An important part of my early morning is to make sure that 84 year old Gwynn's Car is clear of snow and her driveway is cleared. She is no longer capable of clearing the snow and her car is her only means of transportation. Caring for the older folk is most important in a community.

I return the house and check biodiesel stove, adjust the air intake so that it burns with a blue flame.

Breakfast is either ground rye which I hand grind, a plate of veggies with an added egg or pancakes made from a fresh egg and fresh ground rye or wheat. I usually prefer a large breakfast and lunch rather than the traditional supper. This schedule does get upset when I get meals at others homes which serve large meals at the end of the day.

In Early March 2010 we have had a week of sunshine and the excess electricity that has been produced has allowed me to use the natural gas furnace to get the day going. Once the temperature is above 18 the solar Air heaters take over. I have also just let the house warm up on its own and in the early afternoon it is about 22 degrees Celsius which is quite comfortable.

I go for a walk every morning for 30 minutes to check on ducks down at the river, get heart rate up and warm myself and get some exercise. When I get back I check battery voltage again, think about what energy I have for the day and then start the computer, plan my day.

After breakfast I usually put the compost out and check temperature perhaps turning the pile or adding

water, sunflower meal or straw.

In the summer time I will spend a lot of time in the garden weeding, planting, gathering harvest and even just looking over the various plants.

On the computer I check the news, weather and especially enjoy the internet site <energybulletin.com> but lately have been trying to find Internet sites that deal with what people are doing to live sustainably and base their lives on sunshine but unfortunately most are just concerned with the reasons for being sustainable and not actually making the change by doing it.

I do serious writing for an hour or two usually defending myself from the local bylaw officer, Paul Groeneveld but sometimes I work on a presentation or write my book. I also write up jobs for my various helpers.

In late morning Darlene comes in with mail and does accounting, greenhouse and odd jobs and I start odd chores outside which in the afternoon I try develop ideas or maintain all those labour saving devices.

I love working in the workshop. I have a great resource out there which others may call a junk collection and a passion for designing and building things. I spend some time in design and then go to the shop for some prototype development. If I am satisfied with my work I may ask Will to finish the project so I can get on to developing another idea. In the summer afternoon I like to have a bike ride but as winter approaches I just continue working on my projects. Some evenings I play piano for friends and on one day a week I teach piano to a friends kids in exchange for a good hot meal.

And after all of that I like to read a book or watch a little television while riding my stationary bike but my television watching is very difficult since I will not watch an advertisement, nor do I appreciate television acting ...so I jump for channel to channel looking for something real to see all the while pedaling away.

And yes I would like a break for the routine but how can I leave with all the maintenance that needs to be done? The biodiesel heater will not light itself, nor the solar cells adjust to the sun automatically and my water system could easily freeze if neglected.

This is a life of maintenance and every moment is needed to keep afloat.

Old age

Yes I am getting older and I'm already at 62 and unfortunately things are slowing down and I am now a has been. No longer can I claim to be a pilot doing test flying, nor developing aircraft, nor being the owner of multiple properties, nor owning a magazine and mail order business. Life has changed drastically from being a some body in the eyes of the world to an older person. The pretty girls just pass me by except on the dance floor where I still have some distinct skills that the gals want to share in. I now take pride in my bicycle riding, garden and developments in the self sustaining home I occupy.

Yes there may be a day when I can no longer be self sufficient and will have to be helped along. As my

aging neighbour across the road reminded me, “it costs about \$3000 a month for senior care”. Which makes me do some rough calculations as to how long I can benefit from those services before I am thrown out!

In old age I am not chasing the beautiful gals anymore, I know better if simply I try to think about what I would do if I caught one! And which gal would want to deal with composting toilets, intermittent hot water and a multitude of chores? Yes I encourage those willing to look at what I have to offer and hope that one day some will join me in my endeavors.

If there is one really wonderful thing about getting older it is that I have a lot of experience and it is all becoming most useful now. I know my limitations and do not get too emotionally upset if things do not go my way, I have more patience and especially a better understanding of others and their points of view. I have yet to really work in a group in a democratic way, formed to discuss a problem and find a resolution. My understanding is to find someone who has solved the issues and let them be our leader. On Feb 2010 this is being tested as the Municipality in their wisdom after hearing their lawyer say that they must recognize natural gardens, which is what I have been saying all along, has asked for participants in a committee to recommend to council how this is to be done. AS of April 2010 the Bayham councilors passed the resolution to amend the bylaw to recognize natural gardens but quite obviously done because it is backed up by court rulings.

I am still very much alone which I think is the case for most older people, but I also prefer a great deal of my time by myself to plod through the tasks I have devised for my day. Going dancing on the weekend is my social moment. I loose myself in fun and enjoy the ladies!

And What is democracy Anyways?

Recently in March of 2010, a number of citizens want to introduce backyard chickens. There are many good arguments to have them and very few reasons not to have them. From that perspective I guess we should have chickens and the law should be changed. A committee was formed and this question was discussed at length with the recommendation to council that we adopt a bylaw that allows chickens. But our councilors have yet to accept this. Why would they object to this change? I'm sure that the majority of councilors will worry more about re-election than any good reasons for a change in the bylaw. I doubt that any councilor would be able to give any reasons for their stand other than it may not be a popular idea and the old folklore about chickens bringing rats would persist in the ignorant publics mind. So is this democracy? More of a “tyanny of the masses” than good reasons. So does this mean that if enough of us got together and voted for all males under 25 years of age have to go barefoot in public in Bayham then this could become law? If that is what the majority want, is this democracy? No it is discriminatory legislation and this is what most of our laws are. But to try changes these laws is next to impossible: I know I have tried. The only way I have found that works is to break the law get charged then challenge the law and hopefully the municipal lawyers will see the argument and recommend making changes to the bylaw.

Its now april 29, 2010 and the councilors unanimously rejected any idea of backyard chickens. Wayne Casier said that he remembered as a youth that the chickens smelled so he voted against it. A very good example of how out of touch he was with backyard chickens having never visted mine of any others in Bayham and demonstrated that he was judging everyone else by his inability to keep a healthy chicken coop. Cliff Evanisky suggested that since Port Burwell was trying to become a tourist town that the

tourists would not like to see chickens. Mark Taylor joined him as well and suggested that it would be good to see what other tourist communities did. How they derived that conclusion when the proposed Byaham bylaw was copied from Niagara Falls, an already busy tourist hot spot is beyond me!

So life goes on in Bayham, a rural backwater with little vision and a complete lack of leadership in council.

Roadblocks to Sustainable living

My lifestyle choices

Our choices in life are limited by our debt and the standard of living we try to maintain. Without debt and a relaxed standard of living we are able to have the freedom of making more choices in life but for many it seems too late as the mortgage drives one to work endless hours and the kids would be considered disadvantaged without a large house and your friends would reconsider their relationship with you if you changed your lifestyle to match a more sustainable lifestyle.

I have no easy answer to this because anything one does will cause great disruptions including divorce, loss of friends, loss of job and maybe spurned by your neighbours and the local municipal councilors.

My only answer to this is to get on with it since everyone will have to do the same before very long. Sell the debt ridden house, find modest accommodations, look for a job or create your own that provides for you needs not your wants and join up with others who think similarly. And yes it will be traumatic at first but find your community and get on with it.

All talk and no do

There are so many people out there who give lectures, talks and advice about living sustainably yet so few actually live it. Then there are those who have great plans and somehow have a myriad of excuses why they cannot go ahead with them. If there is one piece of advice I can give it is to start small and if you lack the skills then help others who know how. Build up your skills you will need them. In starting small, create your living space, where you will spend most of your time usually around a kitchen area. make it small and very comfortable. Let it grow naturally. If you want a more sustainable heat source then find a way to use the sun for heating not only the air but your hot water too. There is nothing more refreshing to have a hot shower and live in a warm environment. Avoid the religious attitude by denying yourself heat and hot water as this will more than anything discourage yourself and with that anyone else from wanting to visit you and certainly is not a good advertisement for sustainable living.

Money is our real Religion

What do we do for money?.. just about anything even at the cost of our future generations. We are persuaded to buy things with credit, have a large mortgage so everyone ends up living pay cheque to pay cheque and very few people actually save up for anything. Having money is advantageous but it does not guarantee happiness! And unfortunately making money usually means abusing the environment and hurting others along the way.

Recently as an alternative, I have been holding community events in the summer of 2009. The trade

fairs are particularly interesting for it offers an alternative because I am not looking for something cheap as I would in a yard sale or discount store, instead I am looking to trading for something of quality because what I have to trade is something I am proud of and it is the best quality I can make.

Lack of Skills

There are so many things I have forgotten or never learned. My mother made jam, did preserves, baked and made excellent meals from real food. My father was an excellent organic gardener and I have tried to revive some of these abilities with the help the older people in the community and referencing cook books. Most people know nothing about food gardening and rely on the supermarkets for everything. Mother also knitted with incredible skill, sewed things, made beds, washed clothes in a wringer washer and ironed things! Dad repaired everything and taught us boys how to do it.

But where are the parents and courses for our younger generations to learn those things? A computer will never replace the ability to craft anything but I also admit it is a great device for accessing information that others have found, learned or developed and yet at the same time it is frustrating and time consuming as I delve into far too much information.

Preserving food for the winter is a very easy skill to learn and most appreciated in the winter months. This year I have done an impressive amount, there is chili sauce, tomatoes, pickles, peaches, pears and apricot jam.

Learning to fix a machine is also valuable but with the computer complexity today I worry about my ability to fix anything controlled by computer. I recently took my computer in for a hard drive upgrade. The technicians there said the system was over 5 years old (really outdated) and the systems have changed drastically since then. A new computer was recommended. So what am I going to do down the road if a machine is controlled by a computer and I cannot get parts for it, or I cannot afford them? Add in a probable lack of future electricity and there is a problem.

I really like simple technology. Things that can be fixed and made at home with common tools.

Bureaucracy

As I was growing up I really thought that some form of democracy was good for everyone and it sounded so good but in my later years I have come to realize that there are some serious flaws, namely bureaucrats who enjoy power as well as lobby and special interest groups who have hijacked the system. Add in those that have no real leadership, add in a very ill informed public (usually because of the coercion from lobby and special interest groups) and you have a most disappointing system that really does no good and will eventually fall apart.

One of my main beefs is the actual person administering the laws. They do not read the law and yet they presume to know, interpret and administer it. There are times the law is so confusing that it needs to be interpreted by lawyers who have differing opinions about what it says but they all charge hundreds of dollars per hour to do so. And while bureaucrats know certain laws are inappropriate or misguided they insist on keeping to the law rather than suggesting to their superiors that things should be changed. This is not leadership and not working for the general good of the public it is supposed to represent.

Occasionally I ask for information that is hidden away in the Bayham office. Lately I have been getting invoiced for that freedom of information. The process freedom of information is available for those who can afford to pay for it, how ironic!

For example in Bayham we have bylaws that are only invoked through complaints. This being so a neighbour that has a particular argument with a neighbour can lodge a complaint against his neighbour for having his grass too long which is against the bylaw of 6 inches in height. The bylaw enforcer then comes to the property in question and writes out a violation for the tall grass and while he is there notices that there is a vehicle in the yard that does not have a current license as well as a miraid of items he finds.. It is his discretion to issue the violation on the vehicle. Despite the fact that there has been no complaint on the vehicle and that it is in fine condition and drivable and that it is sitting outside a garage with room for it to be stored he has given a notice of violation. Why?

Well this is exactly what happened to me and I am still fighting it as of Oct 2009. As of Dec 2009 our Bylaw enforcement officer has dropped the charges and given me a nice letter saying I am in compliance. This letter was only sent because of my legal challenge which has obviously been endorsed by the municipalities lawyer.

Just recently I received a letter from the Bayham planner that asks for \$2000 for a zone change for my windmill. There is no guarantee that this will be granted and it is a very long and unpredictable process. The kicker for me is that the author of this knew about an impending provincial law that may not allow municipalities (the legalize is hard to understand) to ask for a zone change for those wanting to put in renewable energy. Certainly if she had also included a line in the letter saying that there was an imminent change coming this would have made me feel that the municipal government was in some way interested in promoting renewable energy and that Bayham was becoming enlightened in sustainable living and renewable energy. The intent of the Green Energy act is to promote renewable energy which is what I am doing but the municipality of Bayham does not consider the effect of having a \$2000 zone change a detriment to renewable energy especially in light of the zoning costs and an unpredictable outcome.

In late September the provincial law was finally made law and it took a long time for the council to realize that a municipal zoning bylaw was no longer able to be imposed for renewable energy projects but they still had reservations and are waiting for directions from the province as how to deal with this. So they are not even able to look at my suggestions and promote them as a good guidelines for windmill installation in an urban setting despite my experience.

Having certain requirements with a building permit for a windmill to be met is a much better solution rather than demanding a zoning change that does not guarantee a positive outcome. My suggestions are listed in the windmill section of this article.

I have no way of being a part of any discussion concerning councils decisions. At the public meeting I am only allowed to address council with a prepared speech but not allowed to have my comments heard in the actual debate concerning any issues. The Bayham council agenda is published on the Monday afternoon before the meeting and if I wish to make a presentation to council I have to book it the week before. Even the councilors may not have had a chance to read the agenda and I'm sure that much of the information in the agenda has not been read before the council meeting by them. Are we

being well served? If those councilors represent me they have none of them every asked for my opinion?

The Electrical Safety Authority:

Among the many issues of putting up my windmill was the belligerent attitude of the electrical Safety Authority. Suddenly one day a junior inspector for the electrical safety appeared. He informed me that I just could not convert to an offgrid home. It had to be inspected and furthermore the windmill was not CSA approved and therefore illegal! I told him to leave my property as I need to do some research. This resulted in a hand delivered notice as I had incurred the wrath of the authorities and was assessed a maximum penalty of \$55,000 plus \$5000 a day for non compliance along with a possibility of a year and a half in Jail.

This did upset me but rather than just pay the fine and subject myself to more abuse I phoned the CSA and asked what was required to get the windmill certified. The more senior inspector assured me that this indeed was not the case and for such a small windmill with the voltage of about 24 volts posed no problems for any humans and suggested that inspector was new on the job and should have made this observation himself.

But they hung on like a bulldog looking for the kill. I would not give in and decided to take it to court. Suddenly they changed their mind offered to inspect the installation. I was quite mystified by this but more than that was completely astounded when the inspection took just a few minutes without any real evaluation and declared that my installation and windmill were fine and there was no fine to be assessed! But they would not issue me a letter stating that the inspection had even taken place. What happened??

No forward thinking leaders in our community:

Our Councilors are not about to put their elected position on the line by suggesting changes that their constituents might not want or promoting anything except the status quo. In a naive way I thought that the councilors in our municipality would be leading the way to researching and promoting a sustainable way of life, instead they are guardians of the most unsustainable way of living and are looking for ways to control and curtail my development and are not looking for ways to become sustainable. It might be unpopular with the uninformed populace but these things need to be brought to the public's attention!

Limits of growth (that include the use of fossil fuels), climate change brought about by fossil fuels, and alternatives for fossil fuel based agricultural fertilizers are serious matters. How are our councilors preparing for these eventualities? I wonder if any of them have read about it?

Take for example the Fairy proposal. It is a very risky adventure for a municipality that does not have tremendous financial resources. I doubt that any one of the councilors did any of their own research on the subject for if they had they would have found that the company they have hired at \$230,000 to do the feasibility study has already done the work in their publication of April 2009:

Ontario Marine Transportation Study

Phase II Final Report Market Issues, Competitiveness, Opportunities, and Recommendations

Prepared For

Ontario Ministry of Transportation

and

Ontario Marine Transportation Forum

Prepared By

MariNova Consulting Ltd.

Research and Traffic Group

Gardner Pinfold

CPCS

In their conclusions they state the following:

While on a tonne-km basis the marine mode is more fuel efficient and produces less GHG than other modes, the potential for modal shift, from truck to marine, to significantly reduce road congestion and air pollution is somewhat limited by market realities and regulatory obstacles. Whereas the greatest potential for modal shift is with inter-city traffic, the greatest road congestion occurs with local intra-city traffic where distances are too short and handling costs too high for marine transportation to be viable, except perhaps in the case of high speed passenger-only ferries in the GTA region. With regard to air pollutants, new truck engine legislation will significantly reduce truck emissions so that by year 2010 the tonne-km cost of air pollutants from trucks may be lower than that of rail or marine, assuming the status quo remains with respect to the aging fleet of pre-1985-built vessels

Weaknesses

- Government investment in and commitment to maintain essential infrastructure
- Load transfer and inventory costs
- Vessel fleet – age and vessel type
- Longer transit times and less frequent service than other modes
- Lack of direct access to other than shore-based clients
- Seasonality of service
- Government imposed fees and constraints
- Dimensional constraints of the Seaway system
- Low water levels

E.3 Duty Issue

The most important policy issue is the imposition of a 25percent duty on foreign built vessels. This policy may support the shipbuilding industry, but it is an impediment to fleet renewal and impacts on the end users such as critical manufacturing capacity in the Province.

E.8 Opportunities

At the present time, there are too many barriers in the way of allowing cross-lakes or via Seaway short sea shipping to take place. These include:

- 25 percent duty;
- Coast Guard Hull Construction regulations should move to a high international

standard;

- US HMF needs to be removed;*
- inability to obtain pilotage exemption for a “ferry”;*
- the requirement to pay all customs infrastructure and personnel costs;*
- for Seaway-based short sea shipping, a viable and cost effective winter alternative is required; and*
- proponents of short sea shipping should work with large industrial shippers or trucking firms to develop supply chain solutions.*

We also examined 10 potential cross-lakes routes and compare them to the cost of driving around the lakes on a point-point basis. We conclude that many obstacles need to be removed before these services are viable, but stripped of these obstacles, looking strictly at pure shipping operations (excluding duty), several services could be competitive providing they are well supported or built around the needs of a major shipper or trucker.

It is expected that water treatment requirements for overboard discharges will become ever more stringent over the next few years. These may include treatment facilities to render discharge water inert or a requirement to retain water that is currently discharged on board for treatment ashore or for discharge outside of the Great Lakes system. For Great Lakes vessel operators this will represent a further requirement for capital investment to retrofit older vessels to comply with new regulations. Some of these are expected to be so technically difficult as to make them impractical or uneconomic and once again emphasizes the need to invest in purpose built tonnage that can meet all of the regulatory requirements for continued trade in the Seaway and Great Lakes system.

An immediate impact will be felt at the opening of navigation as a consequence of the negative effect of the economic recession on the demand for goods and materials in the Great Lakes basin.

The recession-induced decline in world trade will have other negative effects for the marine industry at least in the short term. New services that have been proposed for the cross-border movement of trucks or semi-trailers as well as marine container movement from the east coast have at least in part been predicated on existing routings becoming congested and less attractive. In the case of cross-border ferry services, delays at land crossings have been cited as one of several reasons for pursuing a marine option. With Canada/US trade in decline border congestion becomes less of an issue.

3.2.7.6. Border services

New marine services can also be affected by the availability and cost for government Border Services in Canada. Current Canadian government policy is that the cost of such services (Customs, Immigration) must be borne by the transportation service operator or a third party for any entry point that lacks existing Border Services. At established crossings Border Services are provided at public expense although the requirement to provide accommodation without cost to the government may be the responsibility of the crossing operator. Those services established more recently such as the Windsor – Detroit Truck Ferry (and any other new service) are required to pay for Border Services personnel in addition to providing accommodation. This adds costs to any potential new service using ports (or parts of ports)

that lack existing Border Services.

4.2.2 Cleveland – Port Stanley

A 2003 study examined the potential for a service between Cleveland and three ports on the north shore of Lake Erie in Ontario. In the Great Lakes region, land connections do exist, unlike many areas served by ferries. The land distance between Cleveland and London is 284 miles, or five hours. There is significant commercial vehicle traffic between the two regions, but O/D data suggest “only” 103 truckers per day between London and Cleveland. The cargo market would depend on a modal shift taking place. A survey conducted highlighted the importance of reliability, on board customs, major cost savings, frequency and time savings. The study considered three port locations on the Canadian side and concluded Port Stanley had the most potential. A limiting factor in terms of acquiring suitable vessels is the Seaway beam of 23.8m. According to the authors, the Canadian Coasting Trade Act would apply to the service, even though it would operate between two foreign ports. The service would also have to absorb the cost of providing customs service. Any vessel imported would need to pay duty and GST. A \$15M vessel acquisition cost with “down payment” of \$5.6M is provided, as well as terminal construction costs and vessel operating costs are estimated. Another major obstacle, however, is the inability of Port Stanley to accommodate large vessels, and the requirement for the harbour to be dredged. As of early 2009, Cleveland is still interested in the concept, as well as developing short sea feeder links to Halifax and Melford.

In terms of the potential for a modal switch, the Trans Systems Cleveland-Port Stanley study suggested that drivers would need to save at least \$100 to be persuaded to use a ferry. On this basis, very few of the routing options we have examined are viable.

80 “US-Canada trucks decline”, *Journal of Commerce*, January 12, 2009.

Ontario Marine Transportation Study – Phase II Final Report 109 June 2009

Research by Brooks and Trifts, however, suggested that a number of factors influence whether shippers will switch modes, including price, reliability, distance, and frequency of service.⁸¹ Stakeholder consultation for both the 2005 MariNova “Short Sea Market Study,” and the recent “Hub-and-Spoke” study suggests that a saving of 15-20 percent would be needed. Real life experience in Atlantic Canada demonstrates that truck drivers will use ferry services to save time, save driving time and overall cost. Large trucking firms, however, tend to avoid sending their drivers on a ferry if they can avoid it, preferring to keep them “driving”. Ideally, a cross-lakes service could cater to trailers-only, but this assumes a company has operations on both sides of the border. It also assumes the “drop” part of the service is well co-ordinated, such that a trailer is brought into the ferry terminal and the driver hooks up another load which has been discharged from the arriving vessel. This type of operation is not unusual; indeed, it is a feature of the marine Atlantic service between mainland Canada and the Island of Newfoundland

At the present time, there are too many barriers in the way of allowing cross-lakes or via Seaway short sea shipping to take place. These include:

- 25 percent duty;
- Coast Guard Hull Construction regulations should move to a high international standard;
- US HMF needs to be removed;
- inability to obtain pilotage exemption for a “ferry”;
- the requirement to pay all customs infrastructure and personnel costs;

□ for Seaway-based short sea shipping, a viable and cost effective winter alternative is required; and

□ proponents of short sea shipping should work with large industrial shippers or trucking firms to develop supply chain solutions.

- Has anyone considered the restrictions of recreational boating out of port Burwell if we have an international port of entry?
- The cost of the infrastructure will be millions of dollars and if the ferry gives up the municipality will be holding the bag.
- In todays age one should not base a future business on an industry that relies on fossil fuels.
- Localization is the new paradigm. Globalization is not sustainable and does irreparable harm to many countries that are exploited for resources and cheap labour.
- Border crossings are becoming hot beds for hostile acts. The United States will have a large presence here and will be very committed to having a lot to say about what goes on in Port Burwell
- Taxes for most people will go up to pay for municipal upgrades and there is no industry to support this in the municipality of Bayham.

In early 2010 the study was complete at about \$80,000 and said just what had been published in the April 2009 report. Just economic suicide. So \$80,000 down the drain!!! So how was it our councilors didn't read these reports and vote against the study and avoid spending the taxpayers money? Welcome to Bayham!

Laws that do not make sense for our future:

In Bayham everyone is expected to have well maintained lawns. It is a matter of pride and strongly supported by our bylaws to have a perfect lawn and the cost for the retired folks here to maintain this image is beyond understanding for if climate change and fossil fuel depletion means anything this ridiculous social custom cannot continue and only represents our love of unsustainable living at the expense of the future of our civilization and many third world countries that support our addictions.

Would it not be prudent to think of a future where we need to grow our own veggies, have our own chickens on our own property use the sun for our energy and not be depleting our already diminishing fossil fuel supplies?

Even on the matter of chickens: We in our very rural town of Port Burwell are fighting to have the ability to have chickens to feed ourselves and yet our well paid bylaw officer cannot understand this need: Consider my presentation to council on November 19, 2009.

Mats presentation to council nov 19 2009

The proposal for a new animal control bylaw, which is really about chickens, came about because of two chickens in my yard. But rather than deal with an actual complaint an obviously discriminatory animal control bylaw was drafted to prevent anyone having chickens.

The chickens are well behaved, live in a movable pen, provide nutritious eggs, and provide a lot of enjoyment and education for the neighbourhood and do no more harm than the birds in the trees. During the October 2, 2008 council meeting during my presentation Mayor Lynn Acre asked Paul just what was the complaint and all he could say was that “*it was against the law to have chickens*”. So why don't we deal with the issue and resolve any perceived problems?

On October 2, 2008 in Paul's presentation to council under the section entitled Legal Opinion, a nameless legal adviser “*suggested the current regulations could be enforced on the basis that keeping chickens in an urban area is not normal.*” Arguing that chickens should be banned because they are abnormal today fails to provide any practical reasoning since just less than 50 years ago it was normal for many people to have chickens in Port Burwell. In my research, there is no reason not to have chickens that I can find other than discrimination.

Also consider that in Paul's comments on Oct. 2, 2008 :

“*Staff suggests the rationale for implementing or not implementing regulations for controlling such animals would be whether the community as a whole wants animals raised and housed in urban areas versus the safety and other impacts.*” So why has he proposed a new bylaw that does not take into consideration the communities input?

So what we are really doing with the new animal control bylaw is deciding if our municipality should have chickens but what we are getting is a bureaucratic costly nightmare.

Paul gave a report on Nov. 5, 2009 on animal control. In it, his main concern was what other municipalities are doing. Overall, he elected to stop us from having any chickens as mandated by council on Oct 2, 2008 and it seems he arrived at his conclusion before he did the report and the proposed bylaw. He did not consider the people of Bayham and our more pressing need of providing food for the many people that are out of work. Even the study he presented “*Residential Urban Chicken Keeping*” was most enthusiastic about keeping backyard chickens and is filled with valuable information about sound reasons for keeping chickens. Did any of our counselors read it? He did not consider the many reasons for my having the chickens and it was not my idea at all but a 13 year old girl who figured out that this was an excellent way to resolve the problem of local quality healthy food. I merely designed the chicken coop tractor, she did the research. How fitting that a 13 year old pointed us in the proper direction!

Let me quote from the study provided:

“*This question of whether or not cities allow backyard chickens keeping has increased substantially over the past 5 years as citizens become more interested in participating in their own food production.*”

Also “*the recent increase in urban backyard chicken keeping has come about for three main reasons. First the local food movement itself has become very popular which has sparked a new interest for many in backyard food production. Since chickens are one of the smaller protein producers they fit well into a backyard food production model. Second, rising energy and transportation costs have caused concern over increase in food costs and backyard eggs offer a cheaper solution as they do not have to travel far to reach the plate. Lastly many citizens are becoming increasingly concerned about food safety and with meat recalls and other animal industry issues in the news backyard chickens offer many*

a safer solution”

Note especially the conclusion of this paper, *“Many cities and towns are now looking at how they can be more sustainable and allowing urban chickens is one step towards that goal of increased sustainability. Not only can backyard chickens provide residents with a fresh and important food source but they also bring about an increased awareness of our relationship to the food cycle.”*

And it goes on to state:

“by forming a just and well thought out pro chicken ordinance cities can allow citizens to keep chickens while also addressing the concerns of other stake holder groups.”

And it goes on *“With that said, city council should approach the issue of urban chicken keeping with a “how” rather than a yes or no as a growing list of pro chicken cities across the nation shows that it can be done successfully.”*

So how did Paul Groeneveld conclude that a ban is justified other than this was a forgone conclusion?

Note too that his report did not interview anyone in Bayham who has backyard chickens.

The bylaw is also dependent on complaints so that any person or group with a gripe with a neighbour can abuse the system.

If we are to register each animal how will Paul recognize the same chicken and if an egg hatches is that considered a continuation of the life of the bird. Clearly the new bylaw is far too complicated and riddled with errors and should not be adopted by this council.

Note the most recent recommendation in Vancouver which is notably missing from Pauls report:

City of Vancouver

DRAFT GUIDELINES

KEEPING OF BACKYARD HENS

On March 5, 2009, Council directed staff to develop guidelines for the keeping of backyard hens. The guidelines were to both protect public health and welfare, and ensure humane treatment of hens. This document outlines the draft guidelines that staff recommends, as well as the rationale behind each recommendation. The proposed guidelines would be implemented through changes to the Zoning and Development and Animal Control by-laws.

Our municipal bylaws are based on aesthetics not scientific principles, sustainable practices nor issues of fire, safety or health. For example our current bylaw officer is hounding me on matters of aesthetics as a result of my desire to have a natural garden and construct a sustainable example in the village of Port Burwell. There is certainly an argument to be said that I should try to blend my natural garden into the surrounding neighborhood and this can be done with trying to resolve the specific issues but Paul Groeneveld and our administrator Kyle Kruger refuse to reveal any complaints to me. I have had to to the information and privacy commission for resolution of these issues. I eventually got those complaints at a cost of about \$172.

A Ruling has been handed down in Toronto Bell v. Toronto (City) *The conviction was set aside and an acquittal was entered. Section 7(c) of the by-law was found invalid, both because it was void for vagueness and uncertainty and because it unjustifiably violated the freedom of expression guaranteed by section 2(b) of the Charter. While some of the goals of the by-law were sufficiently important to justify overriding a constitutional right, the objective of creating neat, conventionally pleasant yards did not warrant a complete denial of the right to express the values and beliefs reflected by naturalistic gardens.*

Section 7(c) of By-law No. 73-68 is found invalid, both because it is void for vagueness and uncertainty, and because it unjustifiably violates the freedom of expression guaranteed by s. 2(b) of the Charter. The appeal is accordingly allowed, the conviction set aside, and an acquittal entered. The fine which has been paid will be remitted to the appellant. In my view, the appellant is also entitled to her costs of the appeal, pursuant to s. 129 of the Provincial Offences Act.

Considering that we will have to cut down our fossil fuel use and eliminate emissions the lawn is a good place to start planing for a natural garden that does not require a lawn mower. I would think that this would be a good leadership role for our councilors but I doubt that municipalities will take the lead. The province will probably make this mandatory in the near future.

Another difficulty I have is the discouragement of small businesses by not allowing someone to conduct a business other than in the house. This promotes office type work (white collar crime) and discriminates against the mechanical home businesses. Up the street from me there is a fellow who fixes tractors. It does not bother anyone and provides a community service. I could easily call the municipality and he would be shut down. This is criminal on the part of the municipality.

Not so long ago in our village there was many small businesses and almost anything could be purchased here and even made here. These little businesses should be encouraged.

Consider too that most organic farms only need ten to twenty acres but that is not possible in Bayham since the smallest amount you can have is 50 acres. This law was proposed to aid agriculture but now it is used against farming organically and only promotes large agri businesses.

Costs of a sustainable lifestyle:

Here is the real kicker that will make any venture towards sustainability almost impossible for most people!

To be in any way sustainable one needs a debt free living. You need a community, life skills, a homestead, machinery and a steady income or at least some funds that will last many years. And how do you get this? That is the question I really cannot answer with any certainty. I got there by being very modest in my purchases, never having a full time job, luck, good planning and owning small businesses and never spending more than I earned but I also had critical support from my parents who got me started on the right path with an excellent childhood.

Preserving my fruit and vegetables is a lot of work and in turn probably costly in time alone but I do have the knowledge and I have gained a lot in learning how to provide for myself and I know the soil it has been grown in.

Once you are on the path one makes small improvements at every opportunity and suddenly one will find that a lifestyle based on sunshine is a very rewarding and stable way to live.

Small business undermined:

Unfortunately anything anyone can make at home on a small scale can easily be produced at a fraction of the cost by some large commercial usually foreign venture. So what seems to follow is that countries like the USA and Canada which have divested themselves of a number of industries have to purchase products from china at what one thinks is a bargain. What I do not understand is how this process will have any long range benefit. Eventually it seems that as Canada and the USA will owe tons of money to China, have themselves in debt and then follows a recessions and depressions and just maybe that is happening!

There are some nutritional advantages to small scale organic produce but very few will purchase it when they compare a similar looking supermarket item selling for less money. The fact that we may be compromising our health does not seem to concern most people.

In Bayham anyone in Business is subject to higher taxes as in most municipalities whether you are a multinational or just a person working out of their home. In fact most businesses here work under the radar here as the business is somewhat sporadic and getting an industrial or commercial zoning is quite impossible noting the neighbours have a lot of sway in the decision and the cost of \$2000 for a zone change. Bayham also relies on complaint to initiate action which is a very poor system to operate under. Once a complaint is used the bylaw officer can come in a list anything he feels is an offense rather than dealing with the compliant itself as demonstrated by Paul Groeneveld and my natural gardens from July to Oct of 2009.

Tax rates as of 2009 for residential are 1.423220 whereas industrial is 5.330975 which is not very encouraging to businesses here considering that there is no land or buildings set aside on Port Burwell for anything of this type. And any business starting up will certainly look to those areas that already have industrial buildings for rent in other municipalities. Somehow this does not mean very much to our councilors who tend to not be leaders at all but merely followers.

Our lifestyle is a Ponzi scheme

Lets face the facts: The lifestyle we are living really is unrealistic if you think that it should last for ever: it will not because we have reached the limits of growth and resources. We will simply will run out of everything eventually and leave nothing for future generations. We have been using fossil fuels relentlessly to uphold this unsustainable lifestyle, destroying the natural vegetation, our water, our air and the soil. It will end but with this Ponzi scheme there will be no winners.

Maintenance:

While maintenance is the key to survival it is also perhaps one of the greatest roadblocks.

I have started a life of maintenance as opposed to a life sustained by unsustainable fossil fuels. While in many ways this seems like a very romantic idea, but the reality is that one gets bored and it is actually amazing how much work there is to feeding and providing comfortable shelter. Yes there are times I can get very run down trying to do too much. This is part of the learning curve and preparing for the

future. What are you capable of for long sustained periods? I feel quite sure that most of us are just not capable of a life of maintenance so it is a good idea to start small; unlike what I have done!

In past years I used fossil fuels for transporting myself around, used fossil fueled and nuclear electricity to power my workshop and purchased groceries Dependant on fossil fuels. I suddenly woke up to the fact that we have based our entire existence on finite fossil fuels and anyone can easily figure out that if we base our livelihood on something that will eventually run out we will be in serious difficulties and the industrial processes currently used will be useless. We need to make serious changes to our lifestyle!

There is no magic fix to all of this and with a little thought one can only see our way through this if we have sustainable systems. So what is sustainable? Well the sun has been around since the beginning of time so why not use it? And yes a lot of our economy is based on processes that will not be able to be supported by the sun. So that means we need to make drastic changes.

Lets look at food production. We have relied on fossil fuels to increase our farm yields not only to drive the machinery but for use in fertilizers. Going to the grocery store is easy as long as you have money and the time it takes to shop is rather small compared to growing ones own in a garden. Growing a garden is part of the life of maintenance. But look at the energy savings.... no fertilizers if you make your own compost, no driving to the store, no tractor as you are the energy. And yes it will take time so that means you cut down on your working for others.

Then there is putting out the compost, insulating the house, devising more efficient ways to do things, working with friends when more labour is needed, collecting the eggs from the chickens, weeding the garden, preparing meals instead of ordering in a pizza, making bread, preparing food for the winter and on it goes!

This life of maintenance leaves little time for golf, television watching or going to the movies but it does seem to have many other rewards such as being part of a community and knowing just where your food comes from. You learn to share your abilities with others and together you encourage a growth in sustainable living but remember to start small otherwise it is very overwhelming!

Waiting until fossil fuels are no longer financially affordable is too late. We need to do it now, learn the difficulties, find solutions and share our knowledge.

Solutions:

I have no easy solutions for those people who have acquired large debts. If there is one simple thing we need to do it is to get out of debt but of course that is much easy said than done. It is very hard to survive in this world without a debt free home and a means of making a living. It is also very hard to loose ones status in society by stepping down from any job to something seemingly less secure. (divorce for sure)

The problem is much like the smoking issue; the best way to quit is to have never started.

In my life I was just lucky. I did not want to go from university to teach music and saw no benefit from being married so I built musical instruments when I left university. I did purchase a building, in fact three of them in downtown Toronto. I moved from the buildings and rented them out trying to find a lifestyle I enjoyed. I eventually moved to a small community on lake Erie, sold the buildings at a great

profit and then pursued my sustainable living. Rather simple but very lucky as the lifestyle Ponzi scheme had not gone bust as it has in the last year.

So what would I do if I had a wife and children and a mortgage? This is perhaps the hardest circumstance. Save every penny you can, insulate the house to the fullest, have a garden, shop at farmers markets and work towards joining a sustainable community.

If I was a just graduated Student from University with a student Loan? If a sustainable lifestyle has meaning for you. Get the best job you can, rent a small apartment, live simply and pay off the loan. Volunteer at various eco-villages and organic farms. Develop your skills to be of use in a sustainable living lifestyle.

Get life skills!

Elements of a sustainable lifestyle

Hybrid systems

As with other things these days such as making a living one needs a number of sources for water, food and energy for things like hot water and heat. Life does not exist when there is no hot water in a cold winter, I've tried it! So for my hybrid hot water system I built my solar water heater over an outside south facing cistern that uses ordinary water in a thermo-siphon arrangement. It never freezes and it is optimized for the low angles of the sun in February. Then there is the biodiesel water heater, a small boiler attachment to the biodiesel heater that heats as the biodiesel heater is used. It is very effective. I also have an electrical element in the hot water tank that takes my excess electricity from the solar cells and windmill. And just to really make sure I get my hot shower I have installed 38 evacuated tubes to heat more water not only for my showers but to heat the air of my main living area. See what I mean about reinventing unsustainable living??

Converting the sun to mechanical or electrical energy is not a good use of sunshine and is very inefficient, but if one insists you need a windmill, solar cells and a diesel (sunflower oil or biodiesel) generator. It pains me to include the generator but there are some days where there is no wind and no sun around December and January. In many ways I want to just accept that for that day there is no electricity but then I have employees coming into the office and I need computers and lights. I am making changes so that if there is no electricity I will not use the generator except for extreme emergencies. In actual fact I doubt that the generator goes for more than an hour per month in the winter and none in the summer.

Electricity

I thought a separate chapter on electricity would be important because I often question the usefulness of this commodity. Is it important to spend most of our waking time monitoring and maintaining our labour saving devices? There is something strange about electrical addiction that makes us spend our labour, money and spare time either getting or using electricity. I consider it an inefficient use of sunshine but you will notice that I do have an off grid home and have spend a vast quantity of money in its acquisition. Being able to live life without electricity is a much better lifestyle.

So what does one do without Ontario Hydro electricity delivered to our municipality of Bayham? I posed this question to a grade three class and they really figured it out quite quickly. I should try our councilors on this one but I doubt that they would figure it out. Our grade three students came up with the answer and they found that literally nothing in our unsustainable life works without electricity: no computer, no heat, no water, no sewage, no gas to pump, no refrigerator and the list goes on!

In Port Burwell we are blessed with wind in the winter months and at times far too much wind too!! At the time the wind arrives there are many days without sunshine so the solar cells and windmill are complimentary.

When I first wanted to put up a windmill I was told I had to have a zoning change at a cost of over \$2000 with an uncertain outcome. Any reading I did was very supportive and recommended not requiring a zoning change and if anything, something concrete such as a requirement of certain setbacks that the prospective renewable energy person could safely predict the outcome. I made those arguments to council but as usual it fell on deaf ears. In the end they gave me a temporary permit to try out the concept. It was supposed to be periodically reviewed but no one ever came to inspect it or see it in operation and despite the imminent passing of the green energy act, the council pressed for a zoning application at the end of the two year probationary period. But this did get me into the time frame of the passing of the Green energy act in September of 2009. Surprisingly council did not know anything about the green energy act and my letters to council were disregarded as always, and council to this day September 2009 refuses to acknowledge that I was correct all along in insisting that this was not a zoning issue. They still insist that they are waiting for directives on how to deal with the windmill despite letters to the contrary from the province. None of our councilors see any reasons for allowing renewable energy since there is no climate change happening in the Bayham municipality. It is something that is happening elsewhere, or is a fraud. And why would you want the expense of putting in renewable energy when Ontario will deliver the stuff to your door?? These are the things I deal with here in Bayham! If only one councilor could support me in principle.. but that is not going to happen soon.

The solar cells and Windmill are complimentary: If there is brilliant sunshine there is usually no wind and vice versa but take into the consideration the maintenance required to keep your addiction. In the short term use the electricity provided and prepare for a non electrical future.

If there is one positive aspect to electricity it is that I can more quickly prepare for a non electric sustainable lifestyle.

Energy Management

To live offgrid one needs to be there 24 hours a day to manage and maintain the lifestyle. No you do not go to work all day and your batteries soak up the sunshine so you can have electricity at night. This is major issue when considering going off grid and needing electricity. Perhaps having a grid tie makes more sense for most people. You produce energy for the grid during the day when you are at work then take some back from the grid when you come home to do the various chores. Sounds like a very good idea in theory but I have no experience at it and somehow when dealing with a local provider I can't help thinking that it is rigged in favour of the local utility company. And who is going to supply all that energy at night... those on the west coast thousands of miles to the west in the sunshine??? NO! Start

the coal fired plants for the energy hogs evening rituals!

I thought I would try an experiment with delivering 10k to the grid but the first requirement is to have an account with a local utility and you have to use their electricity and then you incur the delivery charges, debt retirement and other obscure charges. I am off grid so I cannot get an account.

Managing ones energy requirements each day does take some planning... if there is lots of sun I may be able to make biodiesel. To make 130 or so liters of biodiesel takes four very good sunny days in the summer. I used to forfeit a hot shower (warm water is actually fine in the summer) to make a load of biodiesel but that is no longer the case with the addition of the 30 evacuated tubes on the house roof which provide the house with plenty of hot water... and in fact most times too much!!

Not only do you have to manage the days energy needs but one must also think of the coming weeks, months and years. Do I insulate the house to save on energy, Do I add just four more solar cells so I can have hot shower and a batch of biodiesel? Or should I get my hot water from evacuated tubes or from a flat plate solar water heater?

If I make biodiesel in the summer I need to obtain sunflower seeds in the fall after harvest so I can press sunflower oil in the spring. This is really the only form of saving energy I know of as it will keep for months.

I have that nagging feeling I may be just creating another unsustainable lifestyle as I ramp up my energy needs and selfish desires for warmth, hot showers, hot meals and transportation.

Heat

Heat in the winter is very necessary as I found out as I lived in my motor home with very little heat for a few winters. My motor home never got above 45 degrees F, heated by a small vented propane heater. A sample day was getting up about 9 am when light from the sun however overcast finally came out taking off about three layers of clothing that I needed to survive the night leaving a few layers to try get breakfast. I had no running water other than a water cooler that I filled at a neighbours and any water from washing came from a barrel I placed under my eves trough beside my warehouse. Washing was tough..... I had to heat water on the propane stove and then take a sponge bath. I discovered that being outside and active even in winter is warmer than being inside and stationary..

When I finally moved to a house that I purchased I went to work on insulating the duct work, insulating the house, and building an entrance air lock so that the doors to the outside had much less heat loss. I also sectioned off the house so that the areas that I occupied had closed doors making it much easier to heat a small area. The idea of a biodiesel heater occurred to me and a lot of development went into its execution. It does burn biodiesel that I make myself, and is adjustable for my heating needs. There is only one drawback; It needs cleaning and I clean it every day to monitor my progress on the improvements I am constantly making.

Having done double wall construction in the second floor to about R 40 the bedroom rooms are very warm at night. When I am finished my day I move upstairs where I open vents in the second floor to capture the heat that I was using on the first floor in my kitchen/work area.

The latest idea I have for heating my work/kitchen area is to have the excess heat from the evacuated tube system moved through a ceiling mounted radiator in my work area. This does work well as my heat in the hot water tanks gets well over 60 degrees Celsius, the down side is that it does lower the temperature in the tanks quickly. This heating with hot water only works when I can look forward to the next days sunshine to renew the heat in the hot water tanks.

Gardens,

There is nothing more fulfilling than growing your own food. The learning is exciting and for once you are learning something real. Unlike computer knowledge which changes every day the principles of gardening are valid for ever and there is no end to learning and gaining experience.

The basis of my gardening is food production but surprisingly as I have let some wild weed species flourish I am enticed by the wealth of insect life that springs up. There is nothing more fascinating than watching the pollinators busy in flowers! This of course flies in the face of most municipal bylaws were they only encourage short cut weed free lawns.

While keeping a garden seems to be a great way to beat the food costs, it isn't when you consider the value of your time. It may be far cheaper to purchase all your groceries at the supermarket but there you will have no control over what goes into making your food.

Common gardening has changed and been challenged quite successfully by those advocating a forest garden. This concept is still quite new to me but makes more sense than the way most of us conceive how it should be done. Considering that forests survive quite well without cultivation, fertilizers and pesticides I would say that forest gardening is future model for sustaining life.

Learn to eat what you grow. Avoid anything with a bar code.

Insulation:

There is nothing more important than insulating the house. It must be first on the list before anything else. Simple projects such as putting up double walls and double ceilings make the need for heat very low indeed as well as reducing the space that needs heating. Once you have reduced your heating needs then one can effectively size the appropriate size heater.

In putting in Double walls and Double ceilings I used the readily available 2 x 4's along with roxul insulation and a heavy vapour barrier. This is very simply done by constructing a wall with 16 inch centers about 8 inches in from the existing outside walls. Once the wall is framed then 6" insulation is added to the spaces between the studs then covered with a vapour barrier. This then can be covered with drywall.

A more environmentally friendly way of insulating could be the use of straw bales and clay. I have not done this yet at my home but I have helped others in this type of construction.

Food:

What is safe to eat today? I grow my own and this provides most of my food. I also do a lot of

preserving, have a cold cellar which is full and now with the new green house in late 2009 and I hope to provide all of my fresh greens in the winter time.

Farms that use fossil fuel based fertilizers and pesticides give me a great concern. It has often been said that the yields would be a lot lower without the fertilizers and pesticides but that is disputed and I have certainly seen excellent yields with certified organic grains in farms close by.

If in the commercial fertilizers there is only three elements namely phosphorus, nitrogen and potassium how do plants get the thousands of other nutrients that humans need?

Have we forgotten the wild plants as food?

Preserving Food:

The growing season in our area is rather short from June to October so to provide food for the winter we need to preserve food. This is a new venture for me and the method I have chosen this year so to do a lot of canning and storing food in my cold cellar. If there is one thing I like it is relish or as some call it Chili sauce as introduced by my 84 year old neighbour Gwynn Williams. My diet is somewhat bland by supermarket standards so the "chili" really adds to the food. Other things I have attempted to can this year are peaches, apple sauce, beans and pickles. I have also frozen some things like apple cider, corn and Rhubarb. I have also made some Apple cider vinegar.

The cold cellar is far more successful than I had imagined. I preserve all my veggies such as carrots, potatoes, onions, beets in buckets of sawdust. The veggies in the sawdust last about 8 months and the left over potatoes I plant for next years crop. Squash, cabbage, and sweet potatoes are left on tables in the cold cellar and I only expect them to last a couple of months.

The greenhouse has already shown great promise in drying things as well as growing plants. I harden the sweet potatoes and dry the stinging nettle roots and leaves.

Composting and mulch, the cornerstone of food production:

While I was growing up my dad insisted on having a compost box and every day we added to that pile. In fact there was a job that in our family that was called "compost man". This was such a routine to me that I did not even question it nor did fully understand why we did it. I must have helped the vegetables with spreading the compost on the them but matters of compost did not stick because I was going on to bigger and better things in the advertised world of western pleasures. Well I never got to the land of Oz probably because of my upbringing and my hatred of working at menial tasks to line to pockets of others.

Getting back to composting there is just no substitute to enrich the soil. This is probably the main tenant of the organic growers and to me it just makes sense. Why spread our fields with the three ingredients of phosphorus, nitrogen and potassium when nature's composts provide millions of nutrients? If we are to have healthy food should we not feed it a vast variety of healthy nutrients?

One of the excellent compost accelerators is the sunflower meal from the sunflower seed oil that I produce. I discovered this one winter when I was expelling oil.. I had just too much sunflower meal and

dumped it outside in a pile. The temperature was very cold and it was snowing. Within a few hours the pile was steaming and was very hot to the touch. Eureka I had found the secret ingredient to heat my compost. I have used it ever since with great success getting 130 to 140 degrees Fahrenheit quite easily for extended periods.

A question that has always bothered me is that many people talk about using farm waste to generate energy but shouldn't that be composted and go back in the fields?

What confuses me even more is the use of sewage sludge on our agricultural fields. It amazes me just what governments recommend which makes me feel that our governments have been hijacked by big businesses and lobby groups. Should we not be composting our daily human excrement in our own properties? If you know what goes into it there is no worry about contamination but if you are heavy into pharmaceuticals you may be in for an unpleasant surprise! Wastes that contain things like cadmium, lead and arsenic should be stopped at the source.

The role of Lawns?:

What is the role of our lawns? Even as a kid I was employed cutting lawns and I was proud of it. I never questioned why I cut lawns and spewed exhaust fumes in the atmosphere with glee. I did not realize that cutting the lawn left no place for insects or birds that are so vital to our survival. We rid ourselves of weeds and again do not consider them vital to survival. How in the world did this get started?

Today you are considered a derelict member of the community if you do not cut your lawn and get rid of the weeds! But hold on here, the province has dictated that we can no longer use pesticides for residential use? Is this telling us something in a back handed way that politicians have of acknowledging there is something wrong with lawns and we are not quite there in public understanding yet? And yet farmers are the greatest users of pesticides why are they not banned? I guess it has something to do with economics trumping the environment or lobbying my large businesses, despite the fact that we are snuffing ourselves out of existence!

Why is it that most Ontario municipalities are unaware that the precedent has already been set in Toronto that aesthetics do not play a part in municipal bylaws? I do however acknowledge there must be some measure of understanding towards maintaining a property.

In July of 2009, Paul Groeneveld our local bylaw enforcer came to my property and said amongst many things that my rye was too high! Yes he had a number of complaints. I obtained those complaints from the municipal freedom of information act. Many of the claims did not have specifics and those that did had listed things that were completely false such as eight chickens running about.

Upon receiving the complaints Paul Groeneveld our bylaw enforcement officer visited my property and proceeded to list anything he felt was not aesthetically correct and sent me a notice of violation. He did not deal with any specific complaint which I would have gladly listened to and made changes.

I fought this and after many letters letting Paul know that I do know the laws and the many rulings that have transpired over the last few years in Ontario. In the end he wrote me a very polite letter letting me know that my property indeed complied with the bylaws. Absolute rubbish!!!! I wrote him the letter

below in response.

Mat Redsell
P.O. Box 18
Port burwell Ontario
N0J 1T0
Dec 3 , 2009

Mr. Paul Groeneveld

I am disappointed in your last letter to me of Nov 23, 2009 stating that you found my property in compliance with bylaw 2002-009 “the Officer was satisfied the property was in compliance with the Notice of Violation and Repair noted above”

Let me write the letter many of us in Bayham would have preferred. Rather than “the Officer was satisfied the property was in compliance with the Notice of Violation and Repair noted above”

Nov 23, 2009

Dear Mat,

Thanks for all of the correspondence and research you have sent me concerning chickens and natural gardens. It has been an eye opener for me as I was unaware of the legalities and the good points you brought up about preserving the earth and doing what we can to mitigate climate change and live a more sustainable life. I also note that you are very willing to make changes to your property to satisfy complaints and will work with you on getting these resolved.

As I am supported by your tax dollar I do respond to valid situations and I will certainly bring your points to the attention of the council and present changes to the bylaws that reflect the issues of chickens, natural gardens and the issue of a compliant driven system that does not deal with actual complaints nor the resolution of them in a proper way.

I certainly had poor judgment when at my own discretion I proceeded to list every possible infraction I could find on your yard while completely disregarding the actual complaints, some of which was probably generated by a disgruntled neighbour. As you said a number of times I should have tried resolving the issues rather than issuing a notice of violation and using my position in a vindictive way towards you.

Please be assured that at the next council I will make your points well known and set about to meet with you personally along with council members so that we can move in a constructive way to bring the municipality of Bayham to the forefront of Canadian municipalities that support a sustainable future for our children.

Sincerely,

Windmills:

When confronted with the idea of generating my own electricity I immediately thought of a windmill. How exciting I thought but little did I realize some of the practical considerations. Windmills need maintenance and in the beginning lots of it to get everything just right for my area and wind conditions. I did a lot of reading about commercially available ones but none seemed to withstand the rigors of constant use and abuse. Luckily as I searched the internet Hugh Piggots name was well recommended. And justifiably so as my windmill has been problem free for over two years as of January 2010.

A windmill is a necessity for an offgrid home. The solar cells and windmill are complimentary. If there is lots of sunshine there is usually light winds and when there is little sunshine there is usually lots of wind. In the winter months one of the good things is the strong wind at night so that while I sleep the windmill can be charging the battery so that early in the morning I have ample electricity to start my morning chores. The summer energy production is rather benign with the windmill as the wind really

never gets very strong but I usually have lots of sunshine. The winter is quite the opposite as there are many days that I have to shut the windmill down because the wind is too strong. Shutting down the windmill is just a matter of flicking a switch that crosses the three wires from the stator which provides enough resistance to slow the blades down to almost a stop. But shutting down the blades at full speed can as I found out, can fry the stator!

A windmill can be made of mostly common elements and readily available materials unlike the solar cells. I enjoyed building the windmill but designing the tower, is by far the most difficult thing to do.

Building and designing a windmill is hardly a difficulty but for something really frustrating and ridiculous try working with the Municipality of Bayham!

There was quite some confusion at the Municipal office as to whether I could have a windmill but eventually it was decided that I could with a temporary zoning permit that was to study the issue of windmills in an urban setting. But during the two years no-one ever came to see the windmill from the Bayham office. This zoning issue haunted me for the last two years despite mine and many other recommendations to not require a zoning permit. Finally the recent green energy act confirms my recommendations that the municipal governments cannot require a zoning change for renewable energy. In late October of 2009, I finally have on a letter from Bayham confirming that there is no zoning requirement for my windmill. If any of the councilors had done their homework they would have easily found this result too! I get the distinct feeling that our Bayham Councilors just do not do any homework or research on any issues. They rely on advice from the staff which I have found to be incomplete and not thoroughly researched.

At the onset, there was the inevitable letters of the uniformed complaining that it would kill their short wave reception, lower house values, kill all kinds of birds, and make lots of noise. I tackled each one as best I could but there is no way to placate the general public. Luckily the councilors decided to grant me the temporary permit but I was confused by the recent comments by Mark Taylor about threats that I may have to take the windmill down. I challenge the administration frequently and those like myself who question the council usually do not get a fair hearing. I do put up a very good fight though and so far my arguments and recommendations have been proven correct.

I would have put up the windmill with or without permission but thankfully the municipality allowed me to have a temporary zoning permit for the windmill but they really did not do their homework on the pending legislation and ignored my recommendations to not require a zoning change but this is Bayham and rules are everything despite good reason, so I went along with the temporary permit and at its conclusion which is this very time, August of 2009, I am writing this book they are asking for \$2000 for a zone change with no assurance I will get it. There was of course no mention that there was pending legislation that would not require me to apply for a Zone change. When I mentioned this their reply was simply that they were following the current laws. Sounds quite stupid to me. As of November 5, 2010 I did receive a letter at my request from Bayham saying that a zoning application was not necessary for my wind turbine.

But I still have no word as to my fate of the windmill other than the council finally has learned that they no longer can regulate the windmill through zoning but they continue their efforts to find ways to confront me, looking at building codes and at one of the last meetings in the fall of 2009 Ed Ketchbaw said they are waiting for directions from the provincial government on how to deal with windmills.

Again they seem very reluctant to accept my recommendations that I sent them as listed below.

A discussion of changes to the Municipal zoning for the installation of small residential windmills to generate owners electricity Which I presented to council in 2007 and again in sept 2009.

Preamble.

For most people the thought of a windmill is something one purchases at a windmill dealer and then hires a contractor. A good dealer of windmills will examine the needs of the prospective home by analyzing the electrical needs then suggest a system of solar cells and a windmill. The prospective customer will be shocked at the expense of a system so **the first thing that must occur is to conserve and reduce the energy being used.** There is also regular maintenance to consider.

And if enough research is done one discovers that alternate energy is never going to fulfill our every need and that life in our future on renewable energy will be very different from our present day.

I have lived off of solar cells for about three years and understand the nature of days without much electricity and then to make use of the energy when the sun shines. I have studied self sufficiency daily for over 3 years and building a windmill is an extension of my desire to pioneer and share in a sustainable lifestyle while maintaining the need to have those items that produce electricity, heat or energy easily built and maintained by the home mechanic.

The amount of power that one can expect from a windmill depends on the blade diameter. For example a blade of 1 meter in a 10m (22 mph) per second wind may produce 70 watts. A blade of 2 meters in a 10 m/second wind may produce 280 watts. You will notice that twice the blade diameter yields four times the energy. To give you an idea of energy use consider that a hair dryer easily uses over 1200 watts!

I have built my own windmill from the plans of Hugh Piggot, a world recognized windmill builder, and recommended as the most reliable. This is a well researched, heavy duty construction made to last and has been fabricated in many countries around the world. And the best thing about it is that all the parts are easily available locally.

Guidelines to consider in allowing windmills on any zoning:

*The main issue is to have a quiet operation for residential use . If a windmill is built correctly it should have a tip speed ratio of less than 7 to reduce noise and a blade diameter of greater than 2 meters and less than 5 meters. A number of store purchased windmills have very diameter small blades and rely on a high wind speed to operate. These are usually not suitable in a residential area nor have a very good record of longevity.

*The second issue is to recommend a guyed gin pole tower so that the windmill can be easily lowered should extreme weather conditions be imminent or so that it can be easily serviced.

* Placement of the tower should be considered to give a short distance to the house to avoid energy loss since the voltages used are usually under 24 volts. The placement of the tower *should not be placed* according to where it would fall since a well designed guyed tower will not fall down. All electrical wires should be buried.

*Guy wires should be clearly marked to avoid people running into them and have some setback from property lines. Guy wire anchors are usually ½ the tower height and in sets of four per level (three to four sets in 70 ft) .

*height of the tower should allow for clearance over trees and other objects upwind of the prevailing winds by about 20 ft. A set of guidelines for the tower plans should be submitted and compared to towers already in use. Having an engineers approval does not necessarily provide one with suitability of the tower especially if they are not familiar with windmill towers; far better to have those who know towers approve certain criteria such as certain tube diameters, suggested guy wires and anchor points for certain blade diameters. A suggested one tower length from any power lines would be prudent. The tower should have at least 10 ft from the ground to the bottom of the windmill blades.

*The gin pole and tower should be able to be taken down entirely within the property lines.

The submission for a residential windmill to the building inspector should have the following:

A diagram and dimensions of the windmill from the manufacturer or builder.

A diagram of the tower with specific sizes for all the parts including the anchors.

A diagram of the electrical layout showing an electrical or mechanical braking system (wires are all crossed to stop the blades)

A plan of the placement of the tower within the property.

The building inspector should see the completed windmill before it is put up on the tower.

The building inspector is not certifying that the windmill is safe or workable. He may suggest other possibilities but he does however have the right to not allow the windmill should he find good reasons that do not fulfill the above guidelines.

The entire project is the responsibility of the builder, owner and or contractor and they will be held responsible.

POINTS TO THINK ABOUT when considering personal windmills

It is important to have a set of guidelines that are backed by careful thought and good reasoning. Do not just adopt other municipalities guidelines.

Requiring the tower to be at least on length from nearest owners dwelling does not make much sense and only contributes to energy losses due to long distances and perhaps the placing the tower in a most unfavorable site, and if the tower should fall on a house it will at least not fall on anyone and will certainly not destroy the house and the people inside.

Do not limit resident windmills by their rated power output. This is a wildly unreliable number. It is better to limit the diameter of the blades to under 4 meters and a tip speed ratio of less than 7.

Some neighbours may object to the sight of a windmill. This should not be an issue when we are striving to explore renewable energy. The sight of tv antennas, electrical lines and poles are certainly more of an eyesore. Consider which you would rather have in your back yard, a windmill or a coal fired generator?

Do not limit the choice of windmills to those manufactured and CSA approved. Many of the residential windmills available have not proven reliable. Encourage those interested in windmills to seek others who have successfully made and completed windmills in the local area.

Windmills run at low voltages that are non hazardous to humans. Typically 12 or 24 volts are used. What is most important are wire sizes and the distances the electricity must travel so good planning is necessary and should not be hampered by long set backs.

A set of guidelines is better than a rigid set of rules. Our own building inspector should have the ability to judge the merits of each installation.

I have made the presentation above to our Bayham council at least twice but it falls on deaf ears there.

Solar cells

My very first initiative for gathering energy from the sun was electrifying my motorhome with solar cells about the year 2000. It was amazingly easy and solved the issue of how to keep my electrical needs in a mobile environment but I did note that my furnace could not run for long periods of time so I installed a vented catalytic heater that had a very low electrical draw.

I have since gone on starting in 2005 to having a complete offgrid system for my home and workshop and now utilizing 20 panels each of 123 watts to produce up to 2500 watts at the maximum .

Another great fallacy is that you save up the energy in a battery and then at night you use it for washing clothes, lights and television. Nothing could be further from the truth because batteries can only hold so much charge and even with my 1000 amp hour batteries I am quite limited in the evening if there is no wind..

Batteries:

There is a great misunderstanding about batteries. Most people think that one goes to work all day and then comes home to a fully charged battery after a day of good windmill or solar cell activity. What you do not realize is that most of the energy was wasted since batteries do not really hold a lot of energy. Then they also loose the charge over time. They only store a fraction of the energy available so when

they get fully charged the solar controller will shut down the solar cells or better if you have a diversion controller some of the energy will go towards something like heating water. You must use the energy as it is being produced for the best results. I generally run all of my energy consuming appliances and machines during the sunniest times of the day. At the end of the day I will then let the battery charge so that I have lights and computer for the evening. And I do have a heavy duty battery installation using a new fork lift battery rated at 1000 amp hours. I have two other backup batteries of the same size for emergency use.

Greenhouse:

In the summer of 2009 Will Arlow and I constructed a greenhouse that has many surprising properties. It is underground and extends up about 16 ft on the south side of my house. The south side of the greenhouse has the glassed area but behind that is a swing wall that has two uses, to provide insulation at night and in the day to reflect the sunshine down into the green house. When the greenhouse gets to warm, air is drawn from the basement of the house and exited into the house. One side effect of this has been to dry out the basement. The greenhouse has also proven to be a place to dry things out such as sliced fruit and my stinging nettle leaves which I dry for a tea I make to help reduce my prostate and has cleared up problems I have had with infections.

The many benefits such as heat for the house and drying of fruit of this greenhouse overshadow the actual growing of plants. I have taken a few plants from the garden and planted the usual lettuce, radishes, tomatoes and the like which seem to be coming on strong. The first batch of lettuce came up strongly and I am eating that as of Nov 2009.

December was a very difficult month for sunshine and the temperature in the greenhouse got top extreme lows of about 3 degrees Celsius. On the extremely cold days of minus 20 celcius I was quite worried at night so I left the greenhouse door open and maintained a temperature of about 3.5 celcius. However on the extremely cold days we usually had sunshine where the air temperature got over 30 degrees. My four 55 gallon barrels of water gradually decreased in temperature to about 7 degrees.

I did install a heated bed for the plants but it has not proven very useful yet due to the lack of sunshine which heats my water. I need to have a separate reserve of hot water for the greenhouse and that will probably be a hot water evacuated tube system which will feed the barrels of water.

In later January of 2010 the sun started shining and I have recorded high temperatures of about 35 degrees Celsius and a low of about 6 degrees which seem to suit all plants except the basil. The most surprising plant are the tomatoes that as of Feb 7 2010 are getting ready to flower. Swiss chard has also done well. We do have aphids but we also have lady bugs which seem to be keeping things under control.

Oil Expelling:

I have been pressing sunflower seeds to obtain sunflower oil for a couple of years. I use it extensively in cooking and in my diesels. I do also make Biodiesel from the sunflower oil which I use for the car and use a mix in the diesel that runs the Oil expeller. Other uses of sunflower oil are to make soap and make salad dressings. Getting sunflower seeds has not been a problem, I even get them bagged but

certain issues do bother me such as what kind of sprays have been used on the seeds. I have not been able to get any non hybrid seeds for growing and and I would like to get organic seeds? Lately an organic farmer Ed Dirse has approached to press his organic sunflower seeds.

How does one grow sunflowers without the birds eating them all, avoid diseases, weeds and get enough fertilizer? I tried a patch of sunflowers in the summer of 2009 much to the dismay of Paul Groeneveld our bylaw enforcer but I did learn a lot about growing sunflowers without the use of pesticides.

I hope I have a solution to the food grade oil production. I will sell anyone a bag of sunflower seeds and if they want oil they can come on a appointed day and join others to use my machinery to co operatively produce the sunflower oil for their use.

As of February 7, 2010 I am getting help from the food inspection agency and expect that I will be able to produce food grade oil in the near future without having to resort to selling bags of sunflower seeds and having those who purchased press the oil, but that may be an option available to some.

Biodiesel:

As of Dec 2009, I have been making biodiesel for over two years now. In many ways I am delighted that the energy needed to process the sunflower seeds is entirely from the sun. I use an evacuated tube system to heat the reaction and to heat the wash water. The pumps run with solar electricity. What is not related to solar is the methanol and potassium hydroxide.

When I first envisioned biodiesel it was with the used cooking oil in mind but with my interest in sunflower oil I soon realized that I might as well just stay with sunflower oil. The cost of using sunflower oil to make biodiesel is about three times the cost of regular diesel at this time so why do I do it?

There is also another consideration for diesel fuel. Sunflower oil works just fine in a diesel engine provided it is heated... so start the diesel with biodiesel and then switch to heated sunflower oil or if it is too cold use a mixture of sunflower oil and biodiesel. This cost is just slightly above normal diesel available locally.

But what I really use biodiesel for is the biodiesel heater I developed .According to my calculations last season 2008-2009 I used roughly 16 liters every three days. This translates into about 210 heating days for my house so that means my needs are going to be about 1000 liters and this season because of the rains I was only able to make about 400 liters. So how will I heat my house this winter? In the summer of 2009 I have installed 38 evacuated tubes to heat water and hopefully in the next few weeks I will install a fan powered radiator. I had considered heating the floor but with my work schedule it would take too long to heat up for the short moments I sit down. There is also the greenhouse which adds to my heating when brilliant sunshine heats the air which vents into the house.

As of Feb 7, 2010 I have been very fortunate in using only about half of the 400 liter supply because of the sunshine available. The hot water produced and stored in the living area does a lot of heating for me. The solar air heater can maintain a set temperature if the sun is out and with the added solar cells that I put on last fall I can actually run the main natural gas furnace. The use of the natural gas furnace does seem like I am cheating but I do hope that it will also be useful when I get methane produced so I

do run the furnace for a couple of hours if I do have enough sunshine to run it. It takes about 1000 watts which is quite a lot for my system.

Another source of heat is the ceiling radiator which takes heat from the hot water tanks when the tanks are over 60 degrees Celsius. A pump turns on and hot water is circulated in the radiator. The ceiling fan draws air down from the ceiling and circulates the hot air.

What I really need is a backup heater that burns sunflower oil. I did get one made but still going through the testing stage with it. It does work but there is a smoke issue that I do not like.

So my conclusion on biodiesel is that it is not the best Energy return on investment but it is probably the best there is for my situation. Again the plan is to cut down its usage and work more towards using sunflower oil for diesels and some heating.

Transportation:

I love to cycle and do as much as possible as my busy schedule allows. I do my shopping and frequently cover over 80 kms in a morning ride before I start my days work. There is no fossil fuels used in powering a bike, there is no insurance, it is easy to repair with common tools and one keeps in good physical shape riding a bike.

If you can't do live your life from a bike then you need to move or consider a sunflower oil powered car.

Buy and trade locally:

Everything you purchase or trade do it locally. Recycle as much as possible but obtaining used equipment and repairing it. And an important part of this is visiting with the people!

Weather:

I cannot think of anything else more important than understanding the weather. Each morning I look outside and note the temperature and cloud cover, compare it to the previous morning, then from that I can pretty much tell the wind direction and what I can expect for the rest of the day. If the average is cool then the wind is from the north and I can expect clear skies, if it is somewhat warm the wind is from the east or south and I can expect rain if the wind is from the east. Our prevailing winds are from the south west and our weather is dictated usually by a flow from the southwest so that anything happening in the southwest will probably get here shortly.

The summer usually has light winds and the windmill adds very little to my electrical output but the winter is where it is most necessary as this cold season brings very strong winds in Port Burwell. A north wind will diminish in strength and the winds from the south usually get stronger but the evening usually brings diminished winds.

Knowing just how much sunshine and wind I can expect we have will dictate my energy management for the day. The winter months Oct to April have shorter days and the amount of sunshine and its strength are quite diminished so that making biodiesel that requires about 6-7 hours of brilliant sunshine is a summer occupation. Even with the addition of 8 more solar cells that I added in November of 2009 could not make up that difference so we wait for spring to make biodiesel.

Small home business

There is nothing more valuable than to have a small home based business. I have many started but at this point in early October 2009 I do not have any that have made enough of a profit to live on but it has provided some income for others who work for me . On the other hand my previous businesses have left me some capitol and my present way of life has very few expenses so I need to share my abilities and assets.

I import Cargo Bicycles, am involved with solar rack distribution and am trying very hard to make a business of sunflower oil but all of this is not permitted in Bayham in my present zoning and there is no zoning available in Port Burwell either so I must go outside our municipality despite the fact there are many unemployed people in Port Burwell. Certainly makes no sense to me!

Again my main difficulty is the Bayham municipal government who discourage any home business other than what is located in the home. The fact that it may be located on my property but in another building does not count.

On March 11 2010 I obtained a copy of the bylaw and confirmed the very tight control over any home businesses. One cannot even work in anything else but your home so I guess computer fraud and those types of things are encouraged!

Other roadblocks are the myriad of departments one has to phone to just figure out if it is possible to do something. Take for example my desire to press sunflower oil. I have been very successful pressing oil for my own use in cooking and biodiesel making so I thought I would see what the regulations are for pressing and selling sunflower oil for human consumption. My search started on Oct 1, 2009.

Surprisingly when in contact with food safety they encouraged me to go forward but doing the best I can with what I have and documenting everything I do which sounds very reasonable. I was very encouraged by my meeting with Christine Kopko and will certainly follow her guidelines.

There are many other small businesses here hiding from the municipality because they operate from their garage and with such a small business do not want to apply for a zoning change (\$2000) or pay the higher taxes demanded by the commercial zoning so its quite obvious that the work continues underground. This could easily be Bayham's salvation but as usual getting any kind of zone changes is next to impossible without a lot of money and time spent.

In my estimation the laws are made for the professionals and big players of multinational food businesses and do not account for the many possible smaller players. This idea seems to permeate governments as it plays into votes that provide wages and the local economies.

Worthwhile projects:

Bullfrog Power

One cannot just jump off the fossil fuel addiction without at first making a lot of foolish mistakes and

assumptions. You need to start somewhere so I suggest changing electric suppliers. In Canada we have **Bullfrog Power** that gets provides electrical energy from dams and windmills. The Bullfrog company demands that Ontario Hydro purchase the exact amount of electricity as its customers use from renewable sources. This forces Ontario Hydro to purchase renewable energy to fulfill those customers who belong to bullfrog. Yes it does cost more but it will do something positive for the environment, send a message to Ontario Hydro that we want renewables and you are going to cut down your energy which will cut your expenses anyways so start there.

Insulation

Most of us want to generate energy whether in heating a home or making hot water. Instead of worrying about making energy, one should worry more about keeping it and how you are loosing it and that means **insulating** and making changes to your lifestyles. Insulate the house by putting in **double walls and double ceilings**. This will make the rooms smaller that will need less heat and conserve the precious heat that you have. Move the hot water tank into a living area so that any heat loss is beneficial to the people living there.

. The return on the investment for insulating will be excellent and it continues for ever! In my house I constructed a stud wall of 2x4's about 8 inches from the existing wall on 16 inch centers. I moved over any electrical outlets or switches, fill the wall with 6 inch roxul insulation, covered that with a vapour barrier and finished it off with drywall. This will give about an added R20 to the new wall and ceiling. It has been pointed out that the materials I used are not sustainable and yes I think this is a good criticism and I will be experimenting with a different approach by pouring a wall of straw and clay. I have visited and helped others who have used straw and hemp walls.

Plastic on the **windows** is an easy fix too. Any windows that open leak air! The first season one can use plastic and later one can put in inside storm windows and even experiment with insulated shutters.

Fossil fuels

Any fossil fuel energy used in creating a sustainable environment is not lost and I consider it a good use for our remaining fossil fuels as it will continue to provide from many years. **Fossil fuels** are wasted in transportation, heating and electrical production.

The **sun** should be our only source of energy for transportation, heating and electrical production.

Solar Cells and windmills

Wind and sun are the same energy source but usually compliment each other and deciding which to start on is difficult. I started with two **solar cells** on my Motorhome. It was quite a step forward for me as I no longer needed to plug my motorhome into electrical outlets. Next I put a set of four solar cells up on my roof of the barn, purchased an old fork lift battery and purchased the required controller and inverter. I ran a 120 volt line to the house and at first just ran my office from the power. It was quite successful. Encouraged by this I increased my solar cell array by eight more solar cells and had my electrical connection from the grid removed. As of nov 2009 I again increased my photovoltaics and now have 20 solar cells rated at 123 watts each with two controllers.

If there is something I did not do well it was that in my layout of the solar cell racks I did not allow enough room between them for the very low angles of the sun in the winter. It is very difficult to avoid getting a shadow on any of the solar cell arrays. Any small bit of shade completely destroys the

electrical output of the in series solar cell arrays but this is not a real issue since in the winter time I do not need a lot of electricity as most of my needs are in the summer time when I make sunflower oil and biodiesel.

Somewhere along the line I decided to get a **windmill**. I started by joining a group of windmill enthusiasts who had built windmills designed by Hugh Piggot. I built the stator, purchased the magnets, glued everything up and had my first windmill but then I encountered the hard part: the tower. I researched the tower to discover that I really could not find any set rules so I took an average of the tube size, cables and fitting and designed my own. So far two years later it has worked flawlessly. But if I can give any advice spend your time and money on a good gin-pole tower.

The windmill as designed by Hugh Piggot uses a three phase windmill generator which is transformed to Direct Current near the battery. This arrangement has worked spectacularly well. I did have to spend a lot of time getting the furling correct and it is a good idea to have extra blades and stator for any emergency. As of the summer of 2009 Hugh Piggot has written a new book for making windmills and I highly recommend it. I am planning on building a new windmill with a 7.1 meter blade diameter.

If there is any piece of advice I can offer it is to go very slowly if you venture down this road of electrical independence but ultimately I recommend learning to live without electricity which I know may sound contradictory to everything I do.

Garden, Cold cellar and compost

There is one thing that is more important than anything else, it is the **garden**. Here one can get fresh and healthy vegetables necessary for life. Planting a garden is the simplest thing to do and there is no lack of information on how to do it. And along with a garden one must have a **compost** box. I compost everything including humanure. There is a lot of good research that Joseph Jenkins has done and it made enough sense for me that I have followed his advice. If there is one advantage I do have it is sunflower meal, the left over from pressing sunflower seeds. One winter while pressing sunflower seeds I threw the sunflower meal out on the lawn, it was about 10 degrees below zero Celsius and snowing. I suddenly realized that the sunflower meal pile was steaming and it was very hot and thus began my hot compost piles. I have put a lot of effort into composting and feel there is lot more to go in this direction. Once the main compost box is full and well composted I transfer it to the south side of my barn where it sits in the sun. I turn it and mix it with other garden plants. If there is something I need now it is a chipper to reduce the sunflower stalks and other plants to smaller bits which decompose easier.

Having a garden is very prudent but so is having a place to store the fruits of your labours. I converted a section of my basement to a **cold cellar** and now have vegetables all year round. Infact I seldom purchase anything at the supermarket anymore.

Then thinking ahead a **greenhouse** is prudent not only to have some lettuce all year round but to start plants early in the season. When I researched greenhouses the problem became apparent that heating was a major issue and especially in light of diminishing fuel supplies on the road ahead. I elected to dig a hole on the south side of my house and build my greenhouse well below grade. I also made a swinging wall to reflect sunshine to the plants during the day and to insulate the greenhouse at night. In its first year I am very pleased with the result and just now planning on having a heated table, using the excess heat from my hot water system.

Chickens

There is no valid argument that has been raised that says **chickens** are incompatible with our lifestyles yet municipalities like Bayham continue to oppose backyard chickens. They provide nutritional eggs and fertilizer, quiet and good pets. I must admit they do harm the superior attitude that the cats once had because the chickens occasionally ambush the cats and chase them.

In the spring of 2010 our local council has decided to have a public debate on the issue. A committee was formed of 8 persons from the municipality to study the issue of chickens. The committee decided to support chickens and recommended that councilors adopt a bylaw allowing backyard chickens. I was part of the committee and we worked hard to come to this conclusion but the Bayham council defeated it unanimously, so much for the publics participation! The issues we should be discussing is health, noise, food safety, but what is most on peoples minds is property values and discriminatory ideas such as presented by Mark Taylos that Port Burwell should be a tourist town and just no one wants to see chickens!

At the moment property values are receding because there are no jobs in the area the future might be a lot brighter for home values if we had a community that supported backyard chickens, home gardens and home workshops. Such is the mentality of Canadian voters who tolerate the tar sands in Alberta so we can have jobs and cheap fossil fuels but ultimately promote human die off.

Heating

I guess heating is one of the most important things for us humans yet many animals live all year round outdoors. As long as I am moving I have no need for heating but sitting down doing my computer work needs some heat... at least 16 degrees Celsius for me.

When I moved into the new house I insulated the furnace ductwork and removed the attic duct work which I am enclosing in the double ceiling hallway in the upstairs. At the same time I also developed a **solar air heater** which heats my living area quite nicely when the sun shines. But I used the central furnace very little in the first year because I sectioned off my main living quarters from the rest of the large house and put in a modified biodiesel heater which uses outside air. When the sun does not shine I use my biodiesel heater that I developed. **The biodiesel heater** is a constantly evolving project but it serves as a source of heat for a few hours in the morning and for a few hours at night. These are simple starting steps which everyone should attempt.

I lived for a couple of years without running **hot water** before I purchased my present house. It was a starting point for sustainable living and not really very much fun. In fact there was very little heat and I spent a lot of time in bed wearing 4 sets of clothes including a hat with the cat (my real source of heat) and a good book. Water came from a barrel outside that every once and a while would yield melted water from the roof of my warehouse in the winter. I would heat the water over my propane stove and have a once a week sponge bath when the temperature was over 50 degrees Fahrenheit. This changed with I purchased a house with an excellent southern exposure.

I researched ways to make hot water and came up with my own solution for the house made from basically junk, a used hot water tank which I mounted in my living area and some readily available

parts from the local hardware. I built a cistern beside my house, covered it with a small hut and inside put in copper tubes, a mirror and a glass front at about 42 degrees from horizontal to catch the winter sun at right angles.. It worked and because of the water in the cistern it did not freeze the pipes. This arrangement did not use electricity but relied on thermal siphon. On sunny days I would get 45 degree Celsius water but there were a lot of days without hot water during December when the sun did not shine.

Later I added some **solar evacuated tubes** and now I have more hot water than I can use for showers and dish washing so I also use it to heat my living quarters with a ceiling mounted radiator.

I find that most people expect water to be free until I tell them that that man has polluted nearly every water source on earth. In our village we were ordered to destroy our wells and hook up to the sewer and water system. There was no talk of learning how to safely compost our humanure nor how to prevent fertilizers, pesticides and such from entering the ground water. As of Nov 2009 we are busy replacing our water shut off valves and upgrading the system for an astounding few million dollars. Thanks to a very large grant our individual cost is only about \$1300 per user. But the costs incurred would have been a lot less in the long run if we had learned to properly compost our humanure and care for the ground water. This system is clearly unsustainable.

In a most recent Bayham council meeting the province has decided that Bayham should take over the private water company in a small town of Richmond. Sound good until the costs are calculated. To do so would cost each customer about \$2000 a year to run the operations. How are the customers going to afford this when our unemployment rate is quite high and getting higher?

Clearly provincial policy is slanted towards mega projects which mean jobs and a growing economy and that's what we have been doing the only problem is that we are at the end of growth and we have to get very busy rethinking this stupidity.

Workshop

A **workshop** is an essential building or room where things can be fixed. They require adequate tools and of course the education that one needs to use the tools. My father was my educator and I'm afraid school did not do anything to encourage repairs. Growing up I aspired to great things like becoming a musician as that was the future of growth when we all had pushbutton dreams. Fortunately I bowed out of "normal life" early and did my own thing as I saw fit.

Preparing for your future

Elements of preparation

The idea of preparing for something that is probable seems rather sensible. Most people will prepare for simple things like a forecast rainy day. Rather simple.

What else should we prepare for in life? Unemployment would be a good start. If one is going to lose a job then obviously money becomes very important. If your house is paid for and your expenses are very low and you have some investments then there may not be a problem.

Is our electrical , sewer and water system going to be working in 5 or 10 years?

As of January 1, 2010 we have just gone through a wakeup call with the year 2009. We nearly ground to a halt economically which affected people with some loosing their jobs, which made housing foreclosures, which affected consumer sales, which then made more layoffs from the companies that could not sell products and it on it goes. Governments realized the problems and injected massive amounts of money into the system. So have we overcome the problems? My bet would be to prepare for some of our shared systems such as sewage, water and electricity not being there.

If we got ourselves into a mess under the present capitalistic/democratic society and all we did was inject printed money have we solved anything or have we just prolonged the inevitable failure of the system? Logically I would say we need to change the system but if you look at history I do not believe that change is possible until it breaks down. As humans we usually support the system until absolute failure so I suspect this is what is happening and the smart person will prepare to not be so reliant on the present democratic/capitalistic system we have seen over the last 50 years.

The other wild card is that no one can predict the future with any accuracy So a lot of careful thought is necessary and the idea I like is to have many solutions to a particular problem and to follow a path that allows you the freedom to make good choices and to be in a better place to solve problems as you have the time and money to do them.

I am preparing ahead for the possibility that generous handouts from governments may not be coming my way and being self sufficient my chances of survival are better. Should the government/ industry be able to renew itself then I am still unaffected but had I not prepared and things had gone badly then I would truly be in deep trouble with little to fall back on.

The future to me is very dicey as I see more and more of us relying sources with very few alternatives. Take for example electricity. Just how much of our world is possible without electricity? We in the western world come to a standstill very quickly without electricity. We can't fill our cars with gas, there are no lights, no televisions, no computers, no heat, no water, no sewage... absolutely nothing. Think about that!

Economics

Economics affects everyone. I have thought that I prepared rather well for my old age but the actual funding required for being kept in a nursing home never really crossed my mind. If say in 10 years the cost of a nursing home stay is \$5000 a month and I only have saved \$200,000 that only leaves me with 40 months in the nursing home, just over 3 years! What happens to me then?

If I have not saved any money for old age, nor own a home what happens to me? Is there an alternative I can prepare for?

In my situation I decided that I must find a way to survive despite the economy by being as self sufficient as possible and have no debt so that my only monetary needs are taxes and even though I do not use them, the water/sewage charges each month. This I think is the best preparation rather than hoping that the government will in some way support me and that the economy will have as little affect on my life as possible.

I must also think of having others live here to help with my old age.

Jobs

If you have a job there is no protection from unemployment but if you own your own business there is a much greater possibility that your employment will be in your own control and that there will not come a day that abruptly ends your business without any warnings or giving you time to make changes.

In preparing for an economic sound future one can start the process of changing jobs to be able to eventually adapt to owning a small business.

Food

I can't think of anything easier than preparing to be self sufficient in food. Having a garden can also be a lot of fun as you learn about different plants and have fresh produce. Quite a number of people in my area have said that they would just plant a garden if things got tough. In my experience it takes years to really get a good garden growing. Again think of self sufficiency by going organic and not only composting but having a cold cellar for the summer produce. And to augment your chances of being self sufficient in food for the winter months learn different preserving methods such as canning, drying pickling, fermenting and freezing.

Heat

There is no doubt in my mind that I need some heat for living. A warm place to sit and the wonderful hot shower makes life quite livable. So how do you prepare for this. As I have said previously first think about reducing your heating needs. Insulating your home using a double wall construction to me is the easiest and inexpensive undertaking that can be done over a period of time. I like hybrid ideas, having many sources that depend on differing situations and climates. Even heating single rooms and especially putting on doors and to limit the living area is very helpful.

I have developed my own biodiesel stove because I make biodiesel and sunflower oil. It is not cheap but it is a stop gap measure when the sun does not shine. Others may prefer to have a wood stove and assemble a quantity of wood in the summer months. In the winter of 2009/2010 I used about 300 liters of biodiesel and I am planning on using half that in the coming winter by installing more insulation.

For hot water there is nothing better than sunshine heated water if only because it is free from using a fossil fueled heating source. Heating just with the sun does make things intermittent but you do really appreciate it when there is plentiful hot water. I have supplemented this source with a small boiler on the biodiesel stove and the excess electrical energy from the battery helps to heat the hot water tanks too.

So in preparing for heating use everything possible to plan for a hybrid system, even something like human energy intensive ways such as chopping wood because there may be a day when you are not able to have a job but you will have time to chop wood.

Community

There is nothing more valuable than a community to share things with. When you need an extra hand to

complete a project, need to find ways to overcome some plumbing problem or to have some social activity, there is the community around you. I prefer not to live too closely so I avoid tensions and this helps me respect someone else's lifestyle when it does not necessarily affect mine. I am not religious but I will take part in religiously based community events and often times I find a common understanding even if we feel it is fostered by different belief or scientific principle.

So fostering friends in the community can be an excellent way to prepare. For example Gwynn across the road likes pop music from the 20's to the 50's so I play at her house every Wednesday evening. We have quite a chat and sing along while I play the piano. She reminds me of the way life used to be here back in the 30's and 40's, I get to enjoy playing the piano and always look forward to a piece of pumpkin pie or other delights after the session. I am learning about old age and how we can benefit one another..... and those fresh baked pumpkin pies certainly come in handy!

Government

Its February 5th 2010 and last night I attended a Bayham council meeting. I gave a presentation about water and wastewater. The point of what I was saying was that if you do any projection of where water and wastewater is going you arrive at a point where it is no longer affordable due to the tremendous costs of equipment, required energy and the mandates of the province. So just how will small municipalities survive In the future? You can't just keep raising taxes and ignoring limits to growth or fossil fuel depletion while living up to the mandates of the province.

But that aside I got to thinking about just what the councilors are doing. The agenda is put together on Monday evening and things are voted on Thursday evening at the council meeting. There is no real time to discuss the items with ones constituents or do any research so one is confined to the staff reports and the recommendations of our administrator who is schooled at municipal dealings. There are no real issues to decide but more an endorsement or upon occasion a deferral of the items on the agenda. This does not seem too be all that bad except when one realizes that there is no leadership from the councilors to spearhead things like local economics on a scale that works.

Recently the Mayor pushed for a cross border ferry which was a hopeless economic case but it did create an illusion of grandeur and imaginary wealth for all. It's these great white knight escapades that kill any other initiatives. Where is the leadership that recognizes reality? If only a councilor would take on the role of realizing that without any local economic development there will be no Bayham. Look around and see the many small businesses hiding out in garages and basements. They need to be encouraged and promoted but for our councilors this may be a hot potato as the more well off citizens, retired or those with stable jobs would probably vote it down. I doubt that any council would take that challenge but without this leadership in our community we can expect to soon be unable to afford living here.

Leadership is a necessary part of our government but when it comes down to popularity and challenging what the public perceives our elected officials do not take up that leadership challenge.

The Future of offgrid sustainable living

My attempt at Sustainable living?

Yes I have everything that most people think is sustainable living or at least self sufficient living. I live in a house built about 100 years ago, it's paid for, have done many renovations with modern materials to minimize heat loss. I have a solar water heater, evacuated tube heaters, solar cells, a windmill, an oil press and a biodiesel plant but all of this was built with fossil fuels to enable my present level of my attempted sustainable living. I do grow over 90 percent of my food but at what point am I truly living sustainably or helping the environment and how many people can do what I have done? Can it be duplicated by the mass populations of the world or is the more simple life of the subsistent farmer in Africa a better model?

If I had just plunked myself in the bush with just the clothes I was wearing and had learned to live in a certain harmony with nature I could more aptly say I was living sustainably if I survived at all. It would be far better to join the subsistent farmer in Africa who has a history of self sufficiency and a community to trade and work with.

We should not forget the millions of people on this earth who live a truly sustainable life and we call a subsistence living who we are systematically eliminating and devastating their homeland through our flagrant unsustainable lifestyle! We are mostly responsible for the sorry plight of the climate and devastated land that has ravaged third world countries! Western man has gone a long way away from sustainable living and I do not believe it is possible for western civilizations to recover. There is more hope for third world countries since they are more basic, use less fossil fuels and may still maintain some of the culture and community which depends on nurturing the earth.

I feel that if there is a future for electricity for western nations it will be in a grid tied system as it allows one to generate electricity while away working during the day and then be able to use electricity at night that someone west of them is producing. This is not really a very good system but perhaps our only option with our current lifestyles but it will always be better to use the electricity as it is being made which means producing your own and working at home. I am actually at the point where I understand that using the sun for electricity is not very efficient and using the sun the heat things is far more productive. Looking at this closely I do not think that electricity has any part in our future which is very frightening indeed!

There is a lot of wasted land in our village and yet people still go to the food bank. These areas could easily be turned in to an urban farming area. Surprisingly and sadly our local council member for Bayham municipality, Mark Taylor just recently stated that "Mat should not be growing crops in the village".

Starting life over:

Once you start using less fossil fuel life starts over and one discovers how to progress within your own personal needs and abilities. This is not something that anyone else can dictate. Everyone will have the same starting point with the sun as an energy source but the outcomes will be highly unique. Some like myself will push the envelope to great limits and end up reinventing an overly busy lifestyle while others will be content to do a few chores each morning and take time to be with family and nature for the rest of the day. In any event once this new lifestyle has been started it makes a lot of sense and continues to grow and give a feeling of great validity.

Dish washers, Sunday afternoon drives, leaving the lights on while out of the room, heating the entire house to shirt sleeve temperatures will be a thing of the past.

It is indeed hard sometimes to make a decision of whether to put in a new furnace or to insulate. But insulating will always win in the end and once on this path, life begins to take on a direction that only gets better. There is no use treating the symptoms, you need to get to the root of the problem. Loosing heat is the root, producing more heat is treating the symptom.

Once the house is insulated then the matter of heat needed comes into play and one discovers that the heat needed is far less than originally thought before the insulation was added. I discovered this myself when I developed my biodiesel heater for my living area and now that I have insulated it is too large!

This gradual building over long periods of time is important for developing a solid foundation that cannot be taken away especially when one uses hybrid systems that provide numerous ways to produce electricity, hot water and heat for the home as well as diverse plants from the garden for eating and as a home for nature's animal and insects.

For example in setting up the oil press it was at first very simple.. just a diesel motor and a press with sunflower seeds. At first my diesel needed diesel fuel then I started making biodiesel and then a further improvement had me using straight sunflower oil or blends in the colder weather. The electricity at first came from a generator but with the addition of more solar cells I now run on just sunshine. I also added a recycled hopper to continuously feed the oil press and a cut off at the sunflower meal output so that the operation needed less work. Now all the operator does is pour the oil in the centrifuge from the expeller and the next change will be an automatic pump that sends the oil to the new centrifuge.. and on it goes based on my new energy source of sunshine rather than fossil fuels.

When you finally take that step to only use only the sun for energy everything starts to get better daily and things like abundant hot water become normal rather than a periodic luxury.

I may also be reinventing my previous busy lifestyle but at least it is based on today's sunshine and hopefully leaving a future for others who follow.

Mat redsell

A local economy: part two

A sample sunflower economy:

Globalization the brainchild of our multinationals is finally showing us its true colour. It has given us a false sense of wealth and quietly moved our jobs, talents and money to other places. We are no longer self sufficient as most anything today is now made in china and our stupid quest for cheap has promoted this to a point whereby we are really termed addicts. And all of this is supported by cheap abundant fossil fuels. Why is it that as a human being one cannot see the possible outcome of these stupidities and prepare for a better result. Greed plays a large part in this quest and our desire to leisure time feeds this addiction. We need to relearn skills such as how to repair things, bake bread, drive a horse, raise chickens, grow a garden: there is nothing more resilient than being self sufficient. I do realize that municipal bylaws are perhaps the greatest obstacles to this but before long as budgets try to support our ever costly fossil fuels dependent infrastructure a certain amount of anarchy will exist that forces people to fend for themselves. Preparing for a local economy is a wise move and it will take at least ten years to fulfill so you might as well get started.

I live in a farming community but maybe I should respell that as pharming community where farmers grow soya beans and corn with the heavy use of chemicals and fossil fuels. How odd that no one seems to realize that this is unsustainable! Again we have to have a complete breakdown before anything can be considered and those that are at the forefront of preparation are harassed by the zoning, bylaws and councilors.

I'm not really sure why I looked at pressing sunflower seeds, maybe the challenge of the mechanics, maybe the idea of fuel for my energy addictions, for transportation, heating and the fuel to drive the machinery that makes sunflowers. At any rate it seems justified.