

PASS THE PITCHFORK: WE'RE MOVING OUT TO THE COUNTRY



**BEGINNERS GUIDE TO
A RURAL LIFESTYLE**

By Trevor Wicks

Contents at a Glance

Part 1: An introduction to the country life

- 1 What is an acreage**
- 2 Defining a rural lifestyle**
- 3 What type of rural lifestyle suits your interests**
- 4 Experiencing the country without a big investment**
- 5 Matching a rural property with your needs**

Part 2: Property information

- 1 The components that make up a rural homestead;
Site plan, home site plan, utilities and services**
- 2 Real estate terms**
- 3 Governance and land use regulations**
- 4 Ask many questions**
- 5 Property information chart**
- 6 Checking buildings: structure, water supply,
waste water, electrical, heating, other**
- 7 Preliminary building checklist**

Part 3: Special situations

- 1 Hobby farm requirements.**
- 2 Home based business.**
- 3 Looking to build you home on raw land.**
- 4 Making changes too suit your needs**
- 5 Environmental considerations**

Part 4: Moving in and fitting in to your neighborhood

- 1 Making a deal**
- 2 Before moving in**
- 3 Moving in.**
- 4 Meeting the neighbors.**
- 5 Learn about the community.**
- 6 The responsible country resident.**
- 7 Reduce your impact.**

Part 5: Skills and tools for the do-it-yourselfer

- 1 Architect to Veterinarian.**
- 2 You will need the proper tools.**
- 3 Tool list.**

Part 6: Emergencies, safety, and security.

- 1 Be prepared**
- 2 Emergency kits**
- 3 Personal safety**
- 4 Preventing weather related problems**

Part 7: Understanding your services and utilities

- 1 Water supply**
- 2 Wastewater and solid waste disposal**
- 3 Electric power, telephone and gas**

Part 8: Maintenance and upgrading

- 1 Maintenance list**
- 2 Calendar of maintenance checks**
- 3 Directory of your services and supplies**
Specific upkeep: Buildings
- 4 Driveway and walkways**
- 5 Lawns and grass**
- 6 Ornamental gardens**
- 7 Fruit and vegetables gardens**
- 8 Trees**
- 9 Gardening calendar**

Part 10: Major construction projects

- 1 The master plan**
- 2 Hiring the right contractors and equipment**
- 3 Managing the project**
- 4 Reducing the impact**
- 5 Equipment descriptions**
- 6 Land shaping**
- 7 Managing water flow**

Part 11: Keeping livestock and pets

- 1 Key questions**
- 2 The essential elements**
- 3 Specific species**

Glossary of terms

Bibliography

A COUNTRY NEWCOMERS SURVIVAL GUIDE

INTRODUCTION

Living in the country is the desire for many, and the reality for about one quarter of the population of North America -Canada.

People, who move to the country for the first time, find that the rural way of life brings a sense of satisfaction, tempered with a degree of frustration and uncertainty.

The transition from an urban, to a rural property, introduces the new country dweller to a wide range of practical experiences. There is also the constant need to make decisions and evaluations, many of which will be faced for the first time. The instruction book or operators manual is not included with the purchase price of a rural property.

This SURVIVAL GUIDE is an overview of the reality and some of the options and expectations, that come with the choice of a country lifestyle.

THE RURAL LIFESTYLE APPEALS
TO THOSE
THAT HAVE AN ASPIRATION,
WHO CARE,
WITH A SPIRIT,
THEY SHARE.

1. Acreage view person feeding horse

Practical information, ideas and suggestions have been gathered from a wide range of sources, and many years of experience, living and working in the country.

2. Plan subdivision

DEFINING AN ACREAGE

Rural properties come in a wide range of shapes, sizes, and types. A hectare of land on the outskirts of a small town or a twenty hectare hobby farm many kilometers from the nearest neighbor. The terms small holding, rural residence, homestead and hobby farms are all associated with a country lifestyle and acreage living.

A country or acreage lifestyle is determined, not only by the fact the property is rural and some distance from town. It is a way of living, which is closely related to the land, nature, plants, animals, and the seasons. Although you can live an urban type lifestyle in the country, the majority of rural residents live a more diverse way of life.

Rural subdivision; when a larger area of land is divided into several smaller parcels. E.g. twenty hectares of land could become eight, two hectare parcels with four hectares for access roads and utility rights of way.

3.

4.

Farm-site acreage is often subdivided from farmland, to provide accommodation for a family member or employee.

A natural boundary, a rural property border can be formed by a river or lake frontage, or a right of way, e.g. road, railway, hydro-lines.

If you live in town, should you consider moving into the country?

The decision to live in the country is probably based on one or more of the following reasons.

- | | |
|--|---|
| <input type="checkbox"/> To find space, freedom and independence | <input type="checkbox"/> Economic |
| <input type="checkbox"/> To escape from a hectic city or urban lifestyle | <input type="checkbox"/> Health reasons |
| <input type="checkbox"/> Family tradition or background | <input type="checkbox"/> As a business venture |
| <input type="checkbox"/> Self-sufficiency | <input type="checkbox"/> To raise livestock or pets |
| <input type="checkbox"/> To find close social and community ties | <input type="checkbox"/> Close to nature and wildlife |
| <input type="checkbox"/> Close to recreation | <input type="checkbox"/> Most of the above |
| <input type="checkbox"/> Children can attend a smaller country school | |

Make sure that you are aware of all of the possible implications of your decision to become a rural resident. Are all of the family members committed to the lifestyle change? Is the local economy viable enough to sustain your endeavors? You are comfortable with the distance of traveling to and from town. You can handle the amount of work involved in rural property development and maintenance, and the costs associated with the transition to country life.

WILL COUNTRY LIFE SUIT YOUR EXPECTATIONS?

<i>YOU COULD BE LOOKING FOR</i>	<i>POSSIBLE ADVANTAGES</i>	<i>POSSIBLE DISADVANTAGES</i>
MORE SPACE.	Large area of lawns and gardens.	Large lawns and gardens need lots of maintenance.
A MORE RELAXED AND LEISURELY PACE OF LIFE.	No pressure to keep up with the neighbors, standards.	There are always jobs that need to be done around the yard.
SELF SUFFICIENCY	You can grow enough fruit and vegetables to last the whole year.	We can go to the lake after we have picked and shelled these six rows of peas.
FAMILY FARM TRADITION	The family working together around the yard.	Could you please turn off the T V and help me.
FREEDOM FROM CITY TYPE RULES & REGULATIONS	A wide range of land uses and building styles may be possible.	Your rustic design barn collapses during a heavy snowfall.
ECONOMIC SAVINGS	Property taxes are half the amount you paid in town.	You spend three times as much for the fuel to drive to town.
HEALTH REASONS	You enjoy the organic vegetables fruit and fresh sweet air.	Peew, there is a large pig farm next door.
CLOSE TO NATURE	Wild birds flock to our feeder every day.	A raccoon killed all of our baby chicks.
A CHANCE TO OPERATE A SMALL BUSINESS	A roadside stall to sell vegetables and flowers.	Someone just stole a big box of apples.
AN OPPORTUNITY TO RAISE ANIMALS OR LIVESTOCK	Your six ewes have produced ten lambs.	The neighbor phones to tell you that the damn sheep are in his garden again.
CLOSE COMMUNITY TIES	There is a potluck supper at the community hall.	You are asked to unplug the men's toilet again.

SPEND SOME TIME IN THE COUNTRY BEFORE YOU TAKE THE PLUNGE.



How could we experience a country way of life before making a commitment.

If you are uncertain about the prospects of taking the plunge into country life, you may decide to rent a country residence for a while. House swapping or house sitting while an owner is away is an option. Summer vacations, or spending weekends helping-out on a hobby farm, will also provide a first hand insight into country living. When visiting people, who live in the country, ask as lots of questions about their rural experiences.

Writing a journal or keeping notes of your daily activities and conclusions will help in making the decision to live on the rural route.

5. Hoeing vegetables

Anecdote; First country experience

6. . Splitting firewood.

IF YOU WOULD LIKE TO BE MORE SELF SUFFICIENT;

- You're in good physical health.
- You are prepared for hard work.
- You have some basic knowledge of gardening and animal husbandry.
- You have enough free time to allocate many hours per week.
- You have enough money to purchase tools equipment and materials.

Ask yourself!

- Are you self motivated?
- Are you practical?
- Can you make a long-term commitment?
- Do you enjoy working outdoors?

Have you determined that a move to the country:

- Is affordable.
- Will suit your lifestyle
- Will not involve too much work.
- Will provide an ideal opportunity to be independent.
- Will reduce stress.
- Will enable you to learn new skills and meet new friends.
- Will be approved by your family, three cats, two dogs, and pet hamster.

ASPECTS OF A RURAL PROPERTY THAT YOU PREFER

When you are ready to consider moving to a place in the country, determine the type of property that you will be interested in. Before spending time with realtors or real estate guides, make a list of the aspects of a property that will suit your needs and match your lifestyle.

The parameters you set may not exactly match the properties that you look at.

CATEGORY	PREFERENCE	COMMENTS
PRICE RANGE		When assessing the costs involved in purchasing and establishing a home in the country, always allow at least 5 –10% for unexpected expenses.
LAND AREA		When deciding upon the amount of land that you need, take into account the amount of land that you are willing or able to maintain.
DISTANCE FROM TOWN AND AMENITIES		A long drive to town can become an issue if you have school-aged children, or significant health problems. In addition, you may depend upon the town for your business or customers.
HOUSE		The age, location, and standard of house construction will effect the seasonal comfort, heating costs, and required maintenance.
OUTBUILDINGS		Structurally sound buildings are an asset on a rural property, dilapidated or structurally unsafe buildings are a liability.
LAND & SETTING		The type of setting, the condition of the land, and potential views etc., is fundamental your lifestyle and satisfaction. These factors should be reflected in the property price.
NEIGHBORHOOD		Land uses and lifestyle impact factors change over time, and can effect your quality of life in the country. These can include development, seasonal land use activities, and traffic noise, etc.
WATER AVAILABILITY		A reliable supply of good quality water is essential for a sustainable rural lifestyle.
LANDSCAPE & GARDEN		Providing that the property has reasonable soil and water, landscaping and gardens can be developed as time or finances permit.
SOIL CONDITION		Many rural lifestyle choices depend upon reasonably fertile soil. Are gardening, crop production, or pasture-land important to you?
SPECIAL INTEREST		Keeping pets, recreation opportunities, enjoying nature, an active community etc.
NATURAL HAZARD		Flood prone areas, and unstable land should be avoided.
OTHER CONSIDERATIONS		Land or water contamination, erosion, excessive noise, smell, dust, traffic, etc.

WHAT KIND OF COUNTRY PROPERTY ARE YOU INTERESTED IN?

Choice of setting; Country properties offer a wide range of settings, and land types. The site could be completely covered with trees, the corner of a hay field, beside a lake or river, perched on a hill in the prairie, overlooking the ocean, or on the side of a mountain range.

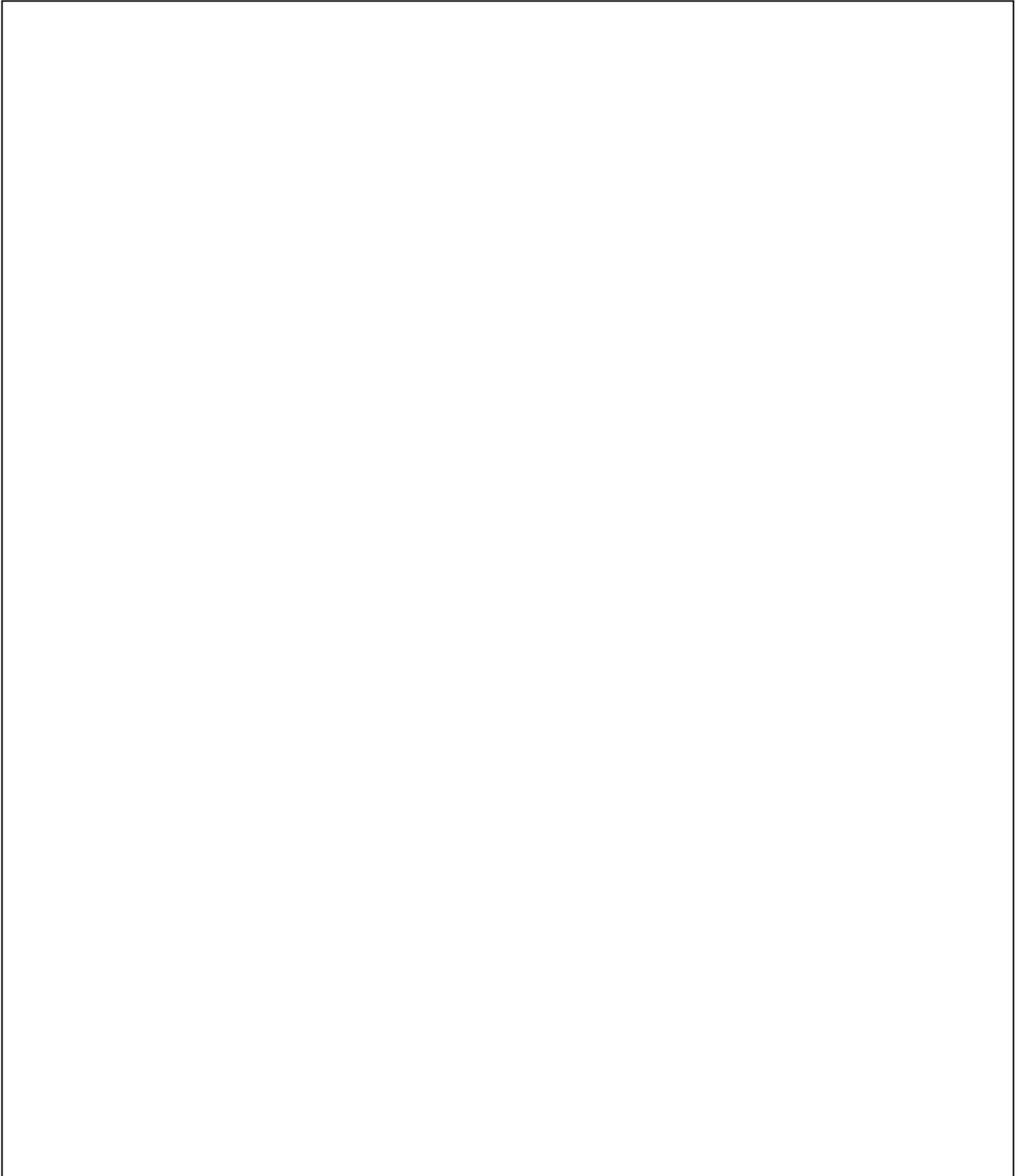
8. Forest setting

9. Open prairie

10. Beside lake

11. Farm site.

Draw a rough sketch of the features that you would like on your country estate:



WEIGH UP ALL OF THE IMPLICATIONS

When making an evaluation as to the type and condition of a rural property that you are interested in looking at, consider the following. Assess the amount of work, the amount of time, and the amount of money that will be necessary, to make changes or improvements and to maintain the land and buildings. First time acreage owners are often surprised at the amount of work involved in upgrading and maintaining land, services and buildings.

- | | |
|---------------------|---------------------|
| 12. Window view | 13. Shower head |
| 14 Driveway at road | 15. Planting garden |
| 16. Pick apples | 17.Ducks on pond |

Matching your choice of lifestyle to the type of property is a challenge.

There are a number of components, which will be necessary for you to evaluate:

An ideal combination of topographical and service elements include.

- ☞ A well drained building site with a view.
- ☞ A reliable supply of good quality water.
- ☞ A reasonable access to the road, services and utilities.
- ☞ An area of good topsoil.
- ☞ A grove of trees.
- ☞ A field or pasture.
- ☞ A pond, creek or wetland area.
- ☞ A south facing slope.

Anecdote; What you moved to the country for?

Note: A first time move, and settling in to the country to your homestead will probably take longer, cost more money, and result in more work than a typical relocation in town.

EXAMPLE OF A PROPERTY COMPARISON

A typical search for a developed property will seldom result in a perfect match to your preferences. Listing your favored options and comparing them to similar properties is a first step. The decision to purchase may be the result of making compromises.

CATEGORY	PROPERTY PREFERRED	PROPERTY AVAILABLE
PRICE RANGE	\$120,000 - \$150,000	\$155, 900
LAND AREA	1 HECTARE – 4 HECTARES	2 HECTARES
DISTANCE FROM TOWN	2 – 8 KILOMETERS	9 KILOMETERS
HOUSE	1 – 10 YEARS OLD 3 BEDROOMS 2 BATHROOMS	8 YEARS OLD 3 BEDROOMS (1 SMALL) 1 BATHROOM + EN-SUITE
OUTBUILDINGS	GARAGE & WORKSHOP BARN & CHICKEN HOUSE	CARPORT & TOOL-SHED BARN AND CORRAL LARGE GREENHOUSE
LAND & SETTING	PASTURE AND TREES PLEASANT VIEW FERTILE SOIL	SCRUB BRUSH & TREES PLEASANT VIEW MARGINAL SOIL
NEIGHBORHOOD	QUIET RURAL	BACKING ON TO A GRAVEL PIT
WATER AVAILABILITY	RELIABLE WATER FOR HOME USE, & SUFFICIENT FOR GARDEN & STOCK.	1 SHALLOW WELL LOW SUPPLY IN SUMMER 1 DEEP WELL, HEAVY MINERAL CONTENT, SMALL DUG-OUT
LANDSCAPE & GARDEN	VEGETABLE & FLOWER GARDENS AND LAWN	TWO SMALL VEG. BEDS NO FLOWERS SOME LAWN
SOIL CONDITION	FERTILE LOAM SOIL	LOW FERTILITY WITH SOME SANDSTONE AND GRAVEL AREAS
OTHER FACTORS		
LIVESTOCK & PETS	ENOUGH PASTURE FOR A HORSE	LIMITED PASTURE POTENTIAL
LAND DRAINAGE	WELL DRAINED BUILDING, BARN, & RIDING RING SITE,	LAND WELL DRAINED
FENCING	FENCED PADDOCK OR PASTURE FOR A HORSE	SOME FENCES NEED REPAIR
NATURAL HAZARDS		THE GULLY CROSSING THE DRIVEWAY COULD FLOOD

UNDERSTANDING A RURAL PROPERTY

Components that make up a typical rural homestead.

A country home-site is usually more complex than a typical residential property in the suburbs, it will consist of many of the following.

- House
- Garage
- Barn
- Driveway
- Parking
- Patio
- Lawn areas
- Ornamental gardens
- Pathways
- Vegetable garden
- Orchard
- Native trees
- Well
- Pumphouse
- Ornamental pond
- Natural vegetation
- Shelter belt
- Child's play area
- Pet enclosure
- Storage area
- Woodshed
- Workshop
- Outhouse
- Greenhouse

234. Layout sketch



***TAKE A CLOSER LOOK AT A COUNTRY HOME SITE
HOME AND BUILDINGS***

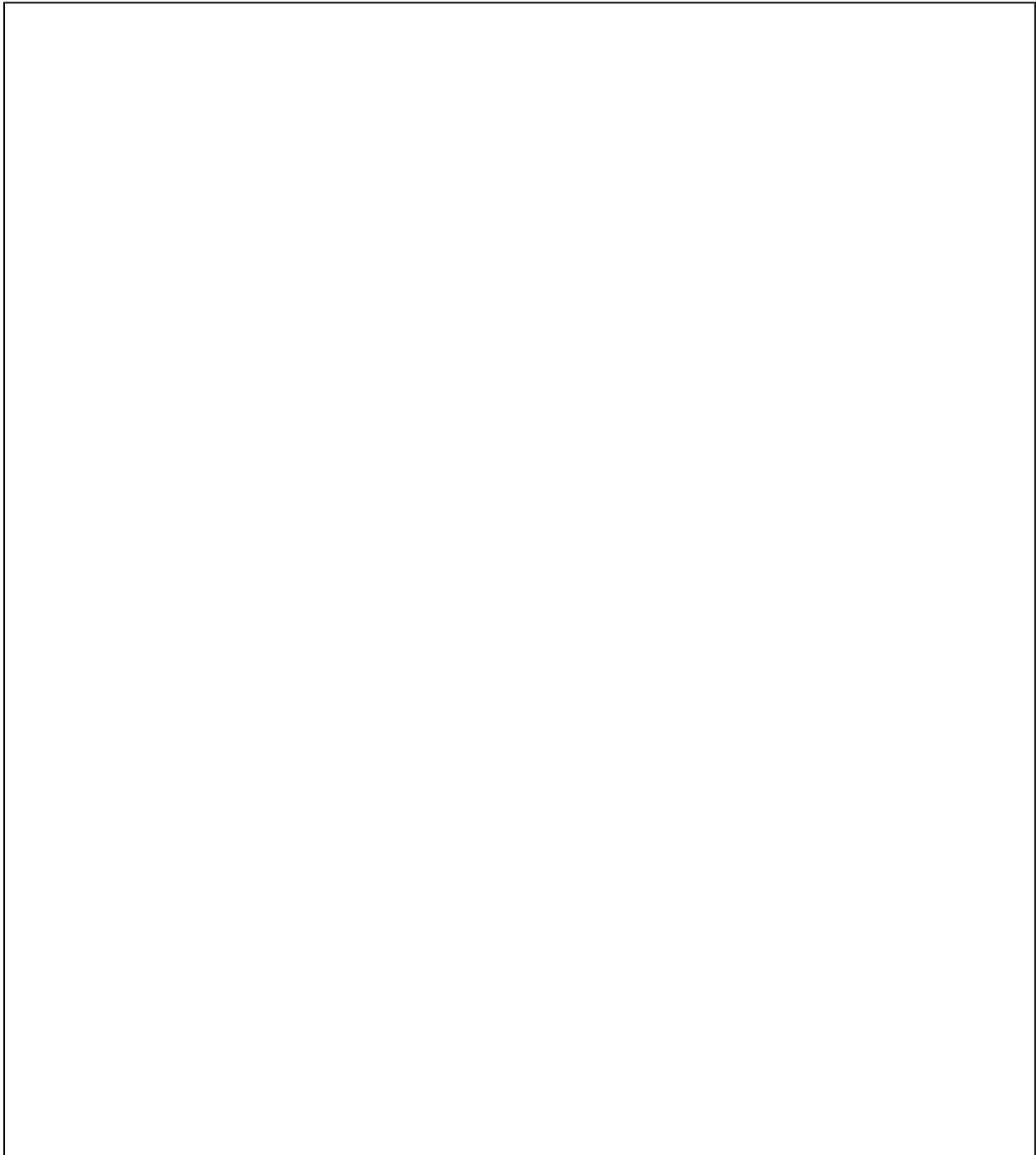
A country homestead usually includes buildings in addition to the home. The site could provide space and services for:

- Home
- Garden shed
- Pump house
- Root cellar
- Garage
- Barn
- Power shed
- Outhouse
- Woodshed
- Workshop
- Chicken house
- Pet facilities
- Greenhouse
- Machinery storage
- Feed storage

231. Buildings plan

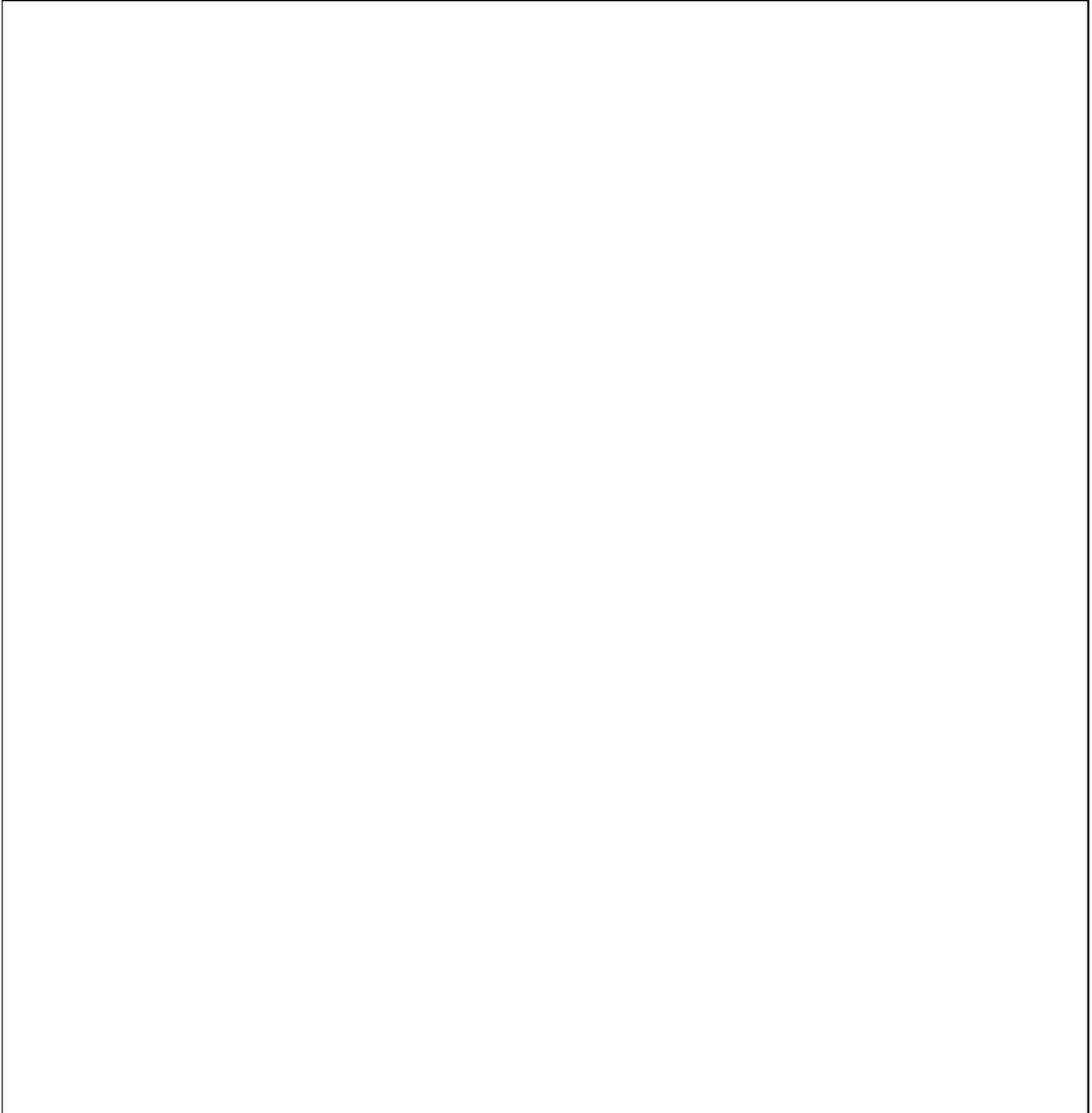
UTILITIES AND SERVICES ON A TYPICAL SITE.

- Electric power
- Sewer
- Telephone
- Back up power
- Water
- Storm drainage
- Intercom
- Security censor
- Cable TV
- Natural gas
- Satellite disk
- Livestock water heater
- Solar power
- Propane
- Yard lighting
- Electric fence



VEHICULAR ACCESS, PARKING, PATHWAYS, LANDSCAPING ETC.

Sufficient space should be provided for larger vehicles, e.g. moving van, or fire truck, to access and turn around on the property, with a driveway width of 5 meters (16ft) wide plus 2 m cleared on each side. Parking stalls should be at least 2.75 m (9ft.) wide, by 5.1/2 m (18 ft.) deep, plus sufficient space for turning. Landscaped areas visually enhance the home site, and provide screens and windbreaks in open locations.



LOCAL GOVERNANCE AND LAND USE REGULATIONS.

If you are looking at a rural property with the intention of placing an offer to purchase, check the local and provincial government regulations for the area. The property could be subject to regulations or restrictions, of which you should be aware.

Land use, or construction could be affected by;

- Building codes and sighting permits. Although some rural areas do not have enforced building codes, it is advisable to build structures, to comply with the National Building Code, Fire code or the regional equivalent.
- Electrical installations and rewiring, usually require permits, and are subject to inspection.
- Land use or zoning bylaws, which could regulate the parcel size, building density and size, and permitted land uses.
- Building schemes, strata development, or prospectus, which could define the type of dwelling, setbacks and permitted uses of the land.
- Agricultural Land Reserves, Forest Land Reserves, Aboriginal Land and restrictive covenants are in effect in many areas. These designations will define the type and intensity of permitted land uses.
- Flood plain areas or land subject to seasonal flooding may be subject to a development permit approval.
- Rivers, creeks, lakes, and wetlands most often bordered by sensitive riparian areas, which could be protected by a restrictive covenant.
- Soil removal by-laws can restrict the removal of topsoil from certain areas.
- Mineral or water rights, may not belong to a property, they could be owned by another interest.
- An Official Community Plan will provide a broad statement of Community goals and objectives.
- Provincial Health regulations, require that all new installations and upgrading to sewage disposal systems, require a permit and are subject to inspection.
- Undeveloped road allowances, railway right-of- way, or utility easements.
- Farm status, for property tax requirements, will depend on the actual land usage and revenue generated from the land.
- Fire protection status, will effect the availability, and cost of house insurance.
- The traveling distance to schools, and to the nearest hospital needs to be considered in remote areas.

TERMS THAT ARE USED TO DESCRIBE LAND, AND REAL ESTATE.

Advertisements or general information about real estate often use abbreviations or terms, that need some explanation. LAKVW is the acronym for Lake View, It doesn't explain that the view of the lake is seen by standing on the roof of the barn, with a good pair of binoculars, on a clear day.

Whether you are looking for your place in the country with an agent, or with the help of newspaper ads, catalogues, or the Internet, it is very important to ask many questions. Do not take for granted that what you see is what you get. Question anything about property information that you are not completely sure of, especially terms like fixer-upper, or good business potential.

The following terms used in real estate advertising may need some clarification as they apply to the particular property.

- | | | | |
|-----------------------------------|-------------------------------|-----------------------------|-----------------------------|
| <i>Additional Accommodation,</i> | <i>Open Zoning,</i> | <i>Agricultural Zoning,</i> | <i>Building Scheme,</i> |
| <i>Business Opportunity,</i> | <i>Chattels Included,</i> | <i>Commercial Mix,</i> | <i>Easement,</i> |
| <i>Under Construction,</i> | <i>Restrictive Covenant,</i> | <i>Right of way,</i> | <i>Mineral Rights,</i> |
| <i>Visual Exposure,</i> | <i>Fully Sewered,</i> | <i>Highway Access,</i> | <i>Industrial Zone,</i> |
| <i>Land Only,</i> | <i>Not Full Height,</i> | <i>Not Sewered,</i> | <i>Multifamily,</i> |
| <i>Partial Foundation,</i> | <i>No Septic,</i> | <i>Single Family Zone,</i> | <i>Strata Lot, Consider</i> |
| <i>Trade,</i> | <i>Residential Strata,</i> | <i>Shallow Well,</i> | <i>Unfinished,</i> |
| <i>Farm status,</i> | <i>Subdivision Potential,</i> | | <i>Business Potential</i> |
| <i>Agricultural Land Reserve,</i> | | | |

19.	20.
Real estate adds.	
20.	22.
23.	24.

Always check on the status of properties, adjacent to the real estate for sale. Rural land can become a busy industrial site, or a new four lane highway, almost overnight.

- Acre = 43,560 sq. ft.
- = 4,840 sq. yds.
- = 10 sq. chains
- = 160 sq. rods
- = 0.4046 of a hectare
- Hectare = 1000 sq. meters
- = 2.471 acres
- Section = 640 acres
- Quarter section = 160 acres
- Chain = 66 ft.
- Rod = 16.5 ft
- Mile = 1760 yds.
- Kilometer = 1000 meters.

**WHEN LOOKING AT RURAL REAL ESTATE
ASK LOT'S OF QUESTIONS**

26

Legal issues:

- Verify that the sale is authorized by the legal owner of the property.
- Does the property have clear title?
- Are there any liens against the property?
- Does the existing land use fully comply with local and provincial regulations?

Property Information:

- Is the property surveyed?
- Are all of the corner points and boundaries marked?
- Are the existing perimeter fences on the property lines? (Many are not).

27.

The property services and utilities:

- Does the property have a dependable supply of water?
- Has the water been tested and does it meet the 'Canadian Drinking Water Standards'?
- Does the water quality change at certain times of the year?
- Is the house serviced by an approved sewage disposal system?
- How old is the disposal field? (Sewage disposal fields can fail after as little as ten years, by poor construction, improper use, poor maintenance).
- Is the septic disposal field more than, 30 meters (100 feet), from any drinking water source?
- Is the primary electric power supply sufficient for your needs? (A 200 amp service is usually sufficient)
- Is natural gas supplied to the property?
- Is telephone service available of one or more lines?
- Is cable TV service available?

Natural Hazards and Environmental Health:

- Is the property affected by natural hazards? E.g. seasonal flooding, erosion, storm or wind damage, snow drifts, drought, high fire risk, mosquitoes or high rodent populations?
- Is the property subject to drainage problems? (Look for deep ditches or large numbers of dead or dying trees).
- Has the land been used for auto wrecking, vehicle or machinery storage, chemical storage, i.e. pesticides, large-scale commercial or industrial operations? (If these types of activity have taken place, the soil and water could have been contaminated. Soil and water should be tested if contamination is suspected.)
- Are there old buildings on the site? (There could be abandoned wells or septic tanks, on the property.)

WHEN LOOKING AT A PROPERTY, YOU WILL NEED TO DETERMINE:

Home and buildings:

- Are the house and other buildings, constructed to a building code? (Many rural areas have no building codes or inspections. Even where construction standards are in place, buildings are sometimes erected without construction, electrical or health inspections.)
- Have the home and buildings been inspected by an independent building inspector.
- Are buildings affected by termites, carpenter ants, rodents or dry rot?
- Will all of the structures or buildings on the parcel (i.e. greenhouse or garden shed) be included in the property sale?
- Does the electrical wiring need upgrading?
- Are the water pump and plumbing systems in good condition?
- Is natural radon gas a concern in the area?
- Are the water systems constructed to withstand severe freezing conditions?

28.

29

The land and hobby farming:

- How fertile is the soil?
- Does the land require irrigation to stay productive?
- Is the land suitable for livestock?
- Will animals cause problems for water quality or the environment?
- How secure are the fences?

Home based business ventures:

- Does the business conform to the local and provincial regulations?
- Is the business accepted in the neighborhood?
- Has the business been successful in the past?

PROPERTY INFORMATION CHART

Keep a record of your property search.

STREET ADDRESS OF PROPERTY	HOUSE NO.	ROAD.	
	COMMUNITY.		
LEGAL LOT DESCRIPTION	LOT NO.	PLAN	
	DIST. LOT.	DISTRICT.	
	OTHER.		
ASKING PRICE	\$		
POSTAL ADDRESS	HOUSE, BOX, RURAL ROUTE NO.		
	ROAD.	POST CODE.	
OWNERS OR AGENTS IDENTIFICATION	NAME.	PH. NO.	
	COMPANY.	FAX.	
LOT AREA	HECTARES		ACRES
DIMENSIONS	FRONTAGE BACK	SIDE	SIDE
HOME GENERAL DESCRIPTION			
AGE OF HOME			
FLOOR AREA.			
OUTBUILDINGS	GARAGE	WORKSHOP	
	BARN	OTHER	
WATER SUPPLY	WELL NO. 1 DRILLED	DUG	DEPTH
	WELL NO. 2 DRILLED	DUG	DEPTH
	OTHER SUPPLY		
WATER QUALITY AND VOLUME	QUALITY TESTED	FLOW PER MINUTE	
	SUPPLY TESTED	FLOW PER MINUTE	
SEWAGE DISPOSAL SYSTEM	DATE CONSTRUCTED		
	TANK CONSTRUCTION CONCRETE	OTHER	
	SIZE GALS.	LAST TIME PUMPED	
	TYPE OF DISPOSAL FIELD.		
	LENGTH OF FIELD.		
ELECTRIC POWER	PHASE ; SINGLE	DOUBLE	AMP SERVICE
GAS SUPPLY	SUPPLIER		
PHONE	SUPPLIER	NO. OF LINES	
TV & INTERNET	CABLE <input type="checkbox"/>	DISH <input type="checkbox"/>	ANTENNA <input type="checkbox"/>

TAKE A CLOSE LOOK AT THE HOME AND BUILDINGS

Before purchasing a rural property, the home and other buildings should be given a detailed inspection. Finding serious problems after making a deal will be frustrating and costly.

Before committing to the expense of a professional building inspector, you could perform a preliminary check. This will help to determine if the buildings are in a condition to consider further investigation.

Building construction, modifications or renovations are frequently done by the homeowner-handyman, with advice from a friend or neighbor. Substitute building materials are sometimes used especially when the property is a distance from a building supply store. Construction of this type does not always comply with building codes, health, safety and electrical requirements.

The footings and foundations may not be visible. If concrete is exposed it should be solid, look for signs of crumbling or cracking.

Wooden structural components can be subject to decay or insect damage. Untreated wood should not be less than 15 cms from soil or moist materials. Vapor barriers are not always used, which can result in condensation causing decay in wood.

Roofs, windows, doors, and the chimney should be checked for structural soundness.

The amount and type of insulation used in the building will determine if your heating costs will go through the roof. If possible, determine the annual costs for heating and electrical power.

37. Broken footing	38. Rotten beam
39.No insulation	40. Rotten window

41. Pressure tank	42. Corroded pipe.
43. Well cap	44. Stained sink

WATER SUPPLY. The well, pump and pressure tank, pipes from the well, plumbing, hot water tank and fixtures should be checked for signs of leakage or corrosion. Old plumbing may need to be replaced

Rural water supplies sometimes contain minerals, sediments, or corrosive materials, which over time can block or corrode piping and fixtures. One indication of trouble is low water pressure from faucets.

If the well and water system have not been used for a while, flush out the water lines and pressure tank before drinking any water. The water supply should be tested, before committing to purchase.

Check the distance from the well to any source of contamination i.e. septic disposal fields, livestock pens, or manure storage etc. At least 30 meters is required, more distance is advised in highly permeable soils, or in impermeable soils, where surface water could affect the well site.

TAKE A CLOSER LOOK AT THE PROPERTIES SERVICES.

- 45. Uncovered septic tank
- 46. Failed field

- **SEWAGE DISPOSAL.** Determine the age, type and general layout of the sewage disposal system. Several possible alternatives exist ranging from, a package treatment plant with pressure distribution, to a plywood pit privy. Waste water disposal systems and drain-fields can fail after as little as ten years. Check the disposal field area for soggy soil or obvious saturation, which will usually show up with a large patch of lush, dark green grass and a sour smell if you dig into the soil. Inquire as to how often the septic tank has been serviced (checked and pumped out). Servicing should take place every two to three years depending upon the amount of use.

- **STORM WATER.** Storm water drainage pipes should be checked wherever possible. Downspouts from eaves troughs are often directed into the footing drain, or separate storm drainpipes. Over time these pipes can plug, causing flooding or dampness inside the house.
Outside, land drainage systems such as driveway culverts, storm drain catch basins, field drains, ditches, swales or a soak-away pit can become plugged or ineffective. Question the condition of these systems, particularly if the property is on a hillside or has high water table.

- 47. Down spout
- 48. Catch basin
- 49. Culvert
- 50. Swale

- 51. Transformer
- 52. Meter base
- 53. rotten pole
- 54. Tree branches

ELECTRICAL POWER SUPPLY.
The service lines from the road to the main service breaker are generally the responsibility of the homeowner. Power poles will deteriorate over time, if the poles look old and weathered, check the base of the pole to a depth of 50 CMS below grade for signs of rotting. Trees or branches, may need to be cleared away from power lines, professionals should do this. (Always contact an electrician or lineman, if you have concerns about the main electrical power supply.)

TAKE A CLOSE LOOK AT WIRING, HEATING OUTBUILDINGS AND FENCES

ELECTRICAL WIRING. A qualified electrician with an electrical inspection 'Survey Permit' may be needed to test the safety of the wiring inside the home and other buildings. Some electrical wiring installations are done as home handy-man projects, particularly during renovations, or when building additions. At some point the main service may need upgrading to handle increased demand. Some older installations were done without installing a main breaker switch, also there is often a need for more electrical outlets in a modern kitchen.

55. Breaker panel	56. Dangling wires
57. Taped connection	58. Multi plugs

59. Furnace	60. Wood stove
61. Chimney pipe	62. Oil tank

HEATING SYSTEM. The home could be heated with a furnace, wood-stove, baseboard heating, hot water radiators, or other method. Often the heat source is a combination of systems; a wood-stove could be used to back up a natural gas furnace for example. Most heat sources pose some risk of fire, or carbon monoxide gas poisoning if they are improperly installed or maintained. All heating appliances such as furnaces and wood stoves, oil heaters, etc. should be checked for structural soundness, and compliance with fire and safety codes. All of the components such as the chimney, fuel tank, pipes and ducts, should be inspected.

SMALLER OUTBUILDINGS, FENCING, AND OTHER STRUCTURES. Consider the structural soundness of smaller outbuildings such as a greenhouse, woodshed, or garden shed. In addition, wooden decks and fencing can deteriorate to the point of replacement in as little as ten years. Therefore, check for rotting wood before making a commitment, replacing these structures can be expensive.

63. Greenhouse	64. Old fence
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PRELIMINARY BUILDING INSPECTION CHECKLIST

Component	Serviceable	Needs Attention	Comment
HOME EXTERIOR			
Driveway & Parking			
Sidewalks			
Retaining walls			
Grading			
Patio – Deck			
Porch			
Exterior stairs			
Fences & gates			
HOME STRUCTURE			
Basement			
Slab – Crawlspace			
Floors & flooring			
Exterior walls			
Interior walls			
Trims & finishes			
Insulation			
Windows & Doors			
Chimney			
ROOF			
Attic			
Structure – Trusses			
Surface			
Flashing			
Gutters, downspouts			
WATER SUPPLY			
Well or other source			
Pump & main supply			
Pressure tank			
Distribution lines			
Fixtures, water heater			
Irrigation, ext. lines			
WASTE WATER DISPOSAL			
Plumbing pipes			
Septic tank			
Disposal field			
HEATING			
Type of heating			
Distribution			
Controls -venting			

PRELIMINARY BUILDING INSPECTION CHECKLIST

Component	Appears Serviceable	Needs Attention	Comment
HOME ELECTRICAL			
Main service			
Main panel			
Sub panels			
Wiring, receptacles			
Lighting			
Other			
SECURITY – SAFETY			
Doors windows locks			
Smoke, CO2 sensors			
Fire extinguishers			
INTERIOR FINISHES			
Ceilings			
Walls			
Floors			
Trims etc.			
KITCHEN			
Cabinets & counters			
Sink & Plumbing			
Appliances			
BATHROOM(S)			
Bath & toilet			
Plumbing			
LAUNDRY			
Washer – dryer			
Plumbing			
GARAGE			
Basic structure			
Roof			
Doors & windows			
Firewall			
OTHER BUILDINGS			
Barn			
Workshop			
Greenhouse			

PART 3. INVESTIGATE SPECIFIC ASPECTS OF RURAL PROPERTY OWNERSHIP

BECOMING MORE SELF-SUFFICIENT

GROWING YOUR OWN FOOD

When selecting a property, where you intend to grow your own food, you will need to consider the following aspects. Producing vegetables and fruit will require a site with an area of fertile topsoil, an adequate supply of water particularly in the summer months and exposure to a least six hours of sunshine each day. Localized climatic conditions caused by land elevation, the degree of slope to the south or north, or exposure to strong winds will have an effect on crop production.

Modifications can be made to a property to improve vegetable and fruit growing potential, these include soil conditioning, developing irrigation systems, building a greenhouse, planting a shelter-belt, and constructing intensive gardening beds. Producing the vegetables and fruit is only a part of self-sufficiency in food. Facilities for freezing, canning, drying, and a cool storage facility for root vegetables will also be needed.

RAISING ANIMALS OR LIVESTOCK.

Take into account the fact that animals must have adequate space, a cow and calf needs about two hectares of pasture to be sustained year round. They will also need a reliable supply of water. Buildings should protect animals from extreme heat, intense cold, snow, high winds, and rain. Adequate fencing is essential, not only keep animals in, but also to keep predators out. Animal waste should be managed in a way that does not present a hazard to human health, the water supply or the environment.

69. garden scene.
of different crops

List

OTHER ASPECT OF SELF-RELIANCE

A large pond or dugout may provide an opportunity to produce fish.

A woodlot will produce logs for timber, or firewood to heat your home.

Energy from the sun, wind, or a flowing stream can be utilized to generate electricity or pump water.

Aggregates on the land such as sand or gravel could be used in building and maintenance.

A wide range of home based recreational opportunities can be available in the country. Gardening, raising pets, hiking trails, skating, cross-country skiing, attracting birds and wildlife, and angling, can often be enjoyed without leaving your property.

PURCHASING A PROPERTY TO START A HOME BASED BUSINESS VENTURE.

Rural property can open a wide range of home based business opportunities, providing the business activity complies with local zoning and land use regulations. Many successful entrepreneurs operate business ventures from their country residences. However, in many cases the income from newly established country enterprises, needs to be supplemented. Many country ventures start as a hobby, then develop into a side-line before becoming a primary business. If your plan is to start or acquire a small business, several factors need to be taken into account.

COUNTRY STYLE BUSINESSES.

Bee keeping, bookkeeping, log home building, market gardening, artist, mechanic, are examples of the hundreds of possible country, home based ventures. Before proceeding with a property purchase, with a business in mind, determine that the property is appropriate for the proposed venture. Determine that the particular business or land use complies with zoning bylaws, restrictive covenant or building scheme, provincial, or federal regulations.

Food processing for example, will need a health permit, workshop, sales or storage facilities, should be constructed to meet building standards, safety and fire codes. Inquire with the local authorities and network with other individuals who have similar interests or ventures. Determine that your enterprise will be legal, conforming, and is compatible with the neighborhood before you sign on the dotted line.

68. Home office

67. Country business

BUSINESS PLAN. Starting a rural business venture will require foresight and planning, to be successful. Most new endeavors will incur expenses that may not be obvious at first glance. A well thought out business plan, will address these issues. Some of the costs of a rural business operation can be less than a similar venture in town, for example, property taxes, water and sewer rates. Some of the expenses will probably be higher than in town, e.g. traveling and freight costs, garbage disposal, snow clearing, heating and insurance costs. (Note that insuring some types of business can be difficult, particularly if the operation is located a long distance from a fire hall).

LOOKING AT RAW LAND TO DEVELOP.

When looking at a parcel of raw land, to develop into a homestead you should consider the cost and implications of building your homestead from scratch. Sometimes the costs and work involved in planning, clearing, building, and developing a homestead on undeveloped land, far exceed the costs of moving onto an established home-site. The following chart will help to determine a ballpark estimate of costs, to help evaluate the if a homestead development is economically viable.

How much will this cost ?????

THE SIZE OF THE PROPERTY. The area of land that you can manage, is an important consideration. Maintaining a large acreage will usually require a greater commitment in terms of time, equipment and money.

THE DISTANCE FROM TOWN will determine your ongoing cost of travel. The cost of construction is usually greater when developing land in a remote area. Equipment set-up costs, delivery charges for building materials, and concrete will be higher. Also the installation costs for some services; e.g. hydro and natural gas lines often increase in relation to the distance from the main lines.

TYPE OF EXPENSE	MINIMUM COST (estimated)	MAXIMUM COST (estimated)	ACTUAL COST
LAND PURCHASE	\$	\$	\$
LEGAL AND SURVEY	\$	\$	\$
BASIC LAND CLEARING	\$	\$	\$
SIGHT PREPARATION	\$	\$	\$
WATER WELL DRILLING	\$	\$	\$
WATER DISTRIBUTION SYSTEM.	\$	\$	\$
WASTE WATER DISPOSAL SYSTEM	\$	\$	\$
HOUSE PLANNING	\$	\$	\$
HOUSE CONSTRUCTION	\$	\$	\$
OUT-BUILDING CONSTRUCTION	\$	\$	\$
UTILITIES; ELECTRIC	\$	\$	\$
GAS	\$	\$	\$
PHONE, CABLE TV.	\$	\$	\$
DRIVEWAY, YARD AND PARKING	\$	\$	\$
BASIC LANDSCAPING	\$	\$	\$
FENCING, PATHWAYS, DECKS	\$	\$	\$
MOVING EXPENSES	\$	\$	\$
MISCELLANEOUS EXPENSES	\$	\$	\$
TOTALS TO COMPARE WITH FUNDS AVAILABLE	\$	\$	\$

74. Surveying	75. Hydro truck	76. Framing
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STRATEGIES FOR DEVELOPING AN ACREAGE HOMESTEAD

The project could be modifying, or expanding an existing homestead, or building a new home on undeveloped land. Asking the right questions and good planning will prevent costly and time-consuming oversights.

Compliance

Do your long term plans meet land use and zoning requirements?

- Prospectus, covenants, easements, set backs, development permit areas, forestry, agriculture, fisheries, environment, health and other regulations may be in place. Always check with local and provincial authorities to ensure that your proposed land use is appropriate for the property.

Economic

- Does the project make economic sense?

Timing

- How long will this project take to complete?
- When is the best time of the year to start?

Skills

- Do you have the necessary skills and knowledge to manage the project?

227. Slope of land

Property

Is the parcel of land large enough?

- Is the area of the building site, large enough to accommodate all of the proposed buildings?
- (Note) Your property boundaries should be located and clearly marked, before clearing land, building an access road or drilling a well.

Topography

Is the land suitable for the project?

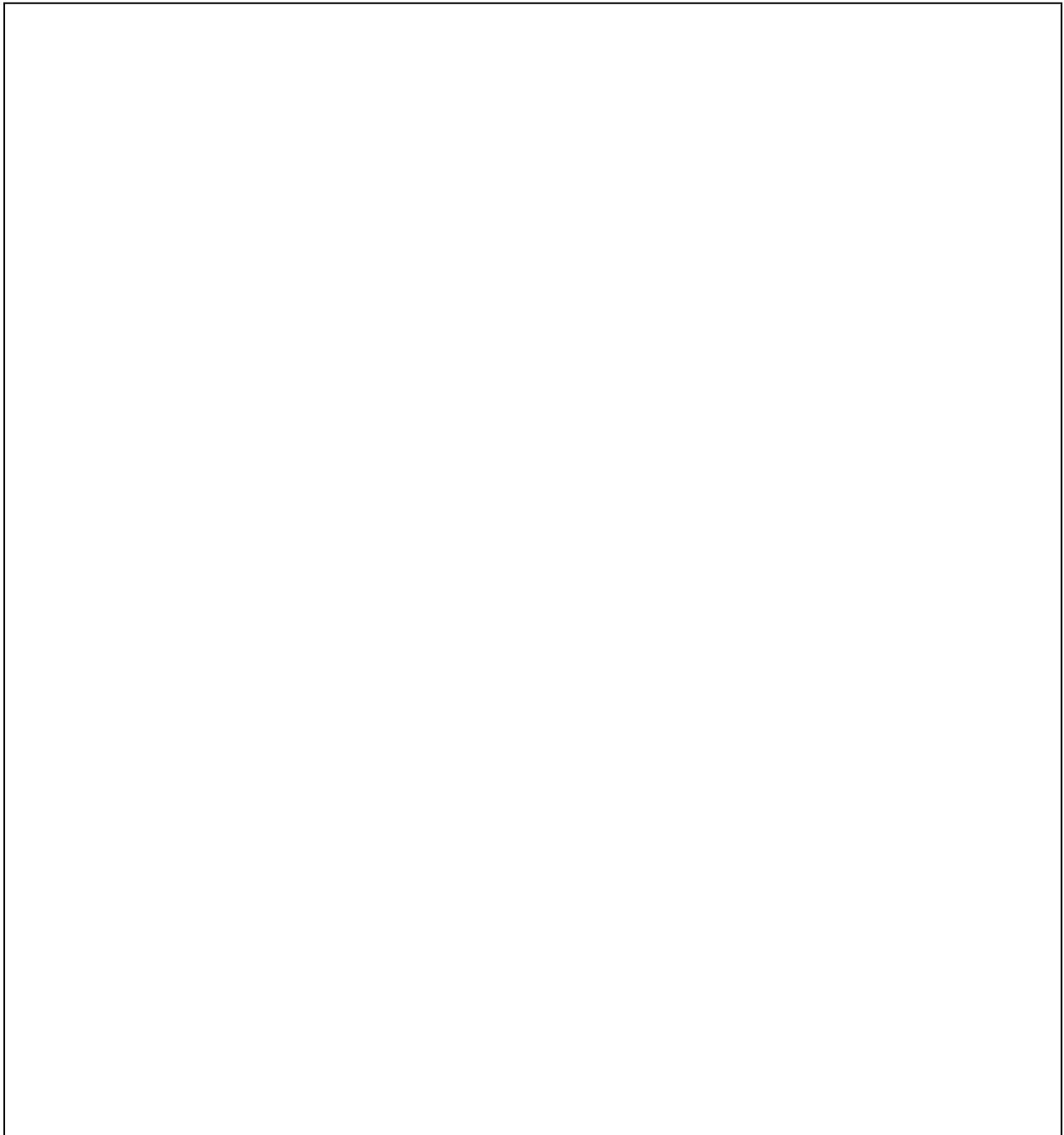
- The soil conditions should be stable and suitable for construction.
- Is the site safe from flooding?
- Will large volumes of fill material be needed to build the driveway and for back filling etc?

228. Sketch plan

DETERMINE THAT THE PARCEL OF LAND IS SUITABLE FOR DEVELOPING INTO A RURAL HOMESTEAD

A site sketch plan showing the following aspects of the existing property and the proposed construction can help to determine if the project is feasible.

- Property dimensions
- Elevations, soils, trees etc.
- Natural water flow & drainage
- Utilities: power, water, sewer etc.
- Buildings house, other structures
- Driveway, parking, pathways, etc.
- Landscape lawns, gardens, fields, paddock, etc.



ESSENTIAL SERVICES

Well located ?

A reliable source of water is a pre-requirement for land subdivision in many jurisdictions. If a property that does not have a dependable water supply, it is not a good choice as an acreage homestead. If the well is already drilled on a parcel of land, it is important to:

- Make sure that the well is productive and the water is safe to drink.
- The well should not be affected by surface water, or storm water run-off.
- The well must be located where it will not become contaminated from sewage effluent, animal waste, or other pollutants, from your property or surrounding land.

If there is no reliable well

Sewage disposal

The sewage disposal field and sometimes an alternative disposal field area, should be approved before the planning process proceeds too far.

- The disposal field is down-slope from the well.
- The location will be more than 30 m (100 ft.) from the well.
- The set backs from property lines, water pipes, and natural watercourses are okay.
- Driving or parking on the disposal field area should be avoided.

229. Well and sewer layout

Road access, electric power, telephone, cable television and gas utilities will usually need to be considered.

230. Drainage sketch

Surface and subsurface drainage.

- Areas with high water tables are not suitable to building construction.
- Surface water must be directed away from buildings, roadways, parking areas etc.
- Contouring land for buildings is often required.
- 1% - 2% slopes drains water in pipes.
 - 2 % - 6% slopes drain water from land.
- More than 6 % slope can cause erosion.
- Open ditches are not recommended around a home-site. Swales are preferred.

PERSPECTIVE AND ORIENTATION

Sun and shade

The location and orientation, and the degree of slope of the land can determine if you have a warm sunny, or a cool shaded home.

238. Building

- Buildings with southern exposures should utilize the free solar energy for winter heating.

239.

- Land sloping to the south will warm up earlier in the spring than land sloping south

Take into account areas that will be shaded from the sun by trees or buildings. A vegetable garden will need at least six hours of direct sunshine per day.

Determine the direction of the prevailing wind. Wind, snow and dust problems can be reduced with shelter trees and shrubs, or planted screens.

236. Sun angle

- Mid summer the sun's angle is about 65 degrees as seen from southern Canada.

237. Sun angle

- The winter sun angle is as low as 16 degrees above the horizon in mid-winter.

240. Shade trees.

CONSIDERATIONS AND RESPONSIBILITIES FOR COUNTRY FOLK

As a rural property owner, you will face many more options and choices of lifestyle, and the use of your land than the average city dweller. Most of the decisions you make will have some impact on your pocket book, your family, the neighborhood, resources, or the natural environment. The satisfaction you find from country life, the legacy you leave for the future will depend upon the decisions you that you make, and the actions you take.

Decisions, decisions, decisions; Construction projects, business or horticultural endeavors, raising livestock or landscaping, will require an understanding of all of the implications.

114. a Cartoon Alligator farm.

114 b.
Construction

THE SIZE OF THE COMMITMENT

- **The land area;** An acreage of four hectares, (ten acres) of land is as large as many urban subdivisions with 30 – 40 houses. The amount of work and costs involved with building projects can be substantial.
- **Servicing;** Extending electric power to a large greenhouse, laying water pipes to a livestock yard or building a new driveway: the decision to proceed with a relatively small project will often develop into major undertaking. Carefully planning is key to a successful assignment.
- **Maintenance;** Don't under estimate the amount of time and money required to keep your homestead in shape and looking good. For some people, maintaining an acreage is a full time job.
- **Impact;** Will you project adversely affect your neighbors, could the ditch you dug flood a property next door for example? Perhaps the accumulative effect of digging several ditches could destroy a productive salmon stream.

RESOURCES;

- **Topsoil;** Conserving topsoil, and preventing erosion or contamination of this vital resource is an important part of responsible land stewardship.
- **Water;** Essential for human, plant and animal survival, protecting water quality, maintaining surface and subsurface flows is the responsibility of rural property owners.
- **Trees;** Effective woodlot management and the efficient use of wood products, could sustain a supply of timber, firewood or even Christmas trees on your land.
- **Pasture or cropland;** Pasture and crop rotation, nutrient testing, restricted grazing and weed control, need to be practiced in order to sustain this resource.

114 c Logging

MINIMIZING THE NEIGHBORHOOD IMPACT

NEIGHBORHOOD AND COMMUNITY considerations should be taken into account. Successful community relationships are enhanced if property development is compatible with the existing land uses in the area. Plans to develop land should take into account the existing land uses and the lifestyles of the area residents. **Non-conforming types of land use or development may meet with opposition.**

- **Noise;** The noise from your property, could be the whine of a sawmill or dogs barking all hours of the day and night. The impact on residents around you should be considered.
- **Visual appeal;** Not to suggest that you have to 'keep up with the Jones's. However, it is considerate to develop and maintain the appearance of your property consistent with the neighborhood.
- **Dust, smell or smoke.** Minimizing the impact of airborne contaminants is part of being a good neighbor.
- **Water contamination;** To reduce the effects of contaminants in water, the manure pile should be covered during the fall, winter and early spring. Fertilizers, pesticides, and road salt, should only be used when appropriate. Extreme care should be taken with fuels, lubricants solvents and other chemicals. Sewage disposal system should be pumped out on a regular basis.
- **Water over-use;** Excessive use of water on your property will often affect surface and subsurface water flows, a long distance beyond your homestead.
- **Traffic;** A sudden high volume of traffic, or an increase in the amount of very large vehicles, can have a considerable impact on a quiet rural neighborhood. This is particularly true if the road is gravel, and becomes dusty in the summer or turns to mush when it is wet.

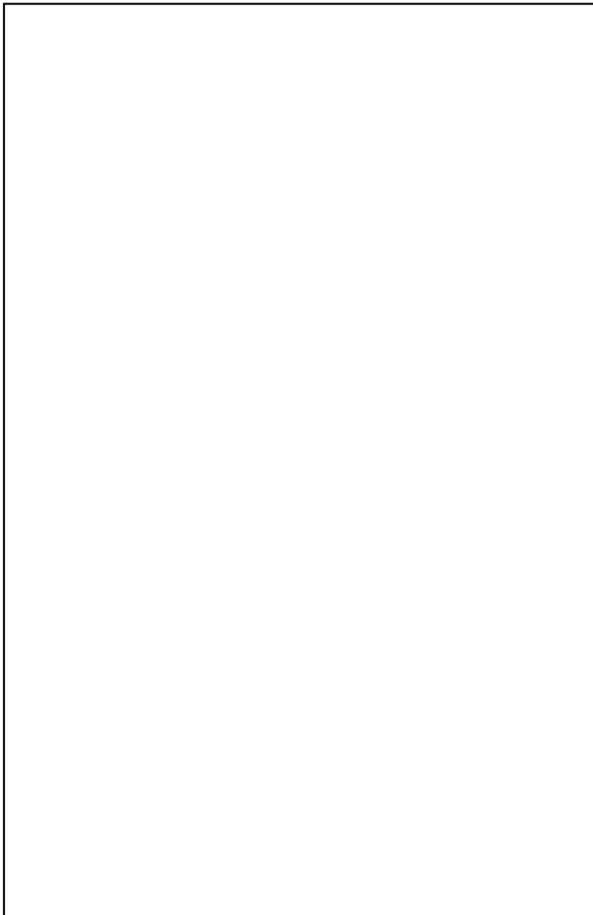
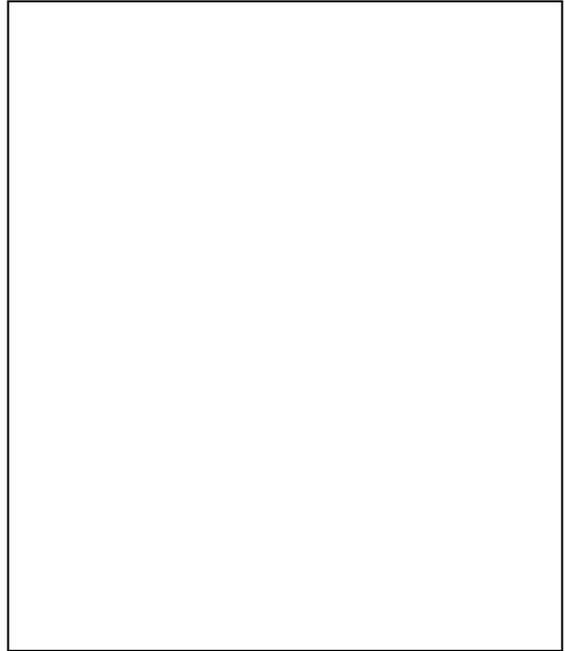
114 d Big smoke

Anecdote – wildlife story

THE ENVIRONMENTALLY RESPONSIBLE PROPERTY OWNER

The accumulative effect of land clearing, home development, and road building by An individual or a number of property owners, will have an impact on the natural environment. There are a number of ways, that landowners can minimize the negative effects.

- Protect and enhance watercourses, ponds, and wetland areas.
- Provide a minimum 15 m set back for the riparian areas beside creeks and watercourses.
- Introduce desirable native species to improve diversity.
- Leave natural corridors for the movement of wildlife.
- Retain groupings of native trees and shrubs to provide food and a nesting place for birds.



- ***Birds and animals;*** *Habitat protection and restoration will help to maintain the variety of native plants, birds, and animals in the area.*
- **Unique ecosystems;** Retain as much as possible, the natural balance of forests, grasslands, soils, watercourses, wetlands, and other ecosystems on your property.

LEGACY

As caretakers of a significant proportion of Canada, acreage owners have a responsibility to future generations. We should try to reduce the negative impact, and find ways to enhance the parcel of land on which we have made our homes.

THE IDEAL PROPERTY MAY NOT JUMP OUT TO MEET YOU.

“WHAT CAN YOU FIX ? “

A single factor could deter you from purchasing an otherwise ideal property. Modifications to a property can be undertaken over a period of time, usually at a price.

71. Before	72. After sketch
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SITUATION	POSSIBLE REMEDY
PROPERTY IS COMPLETELY CLEARED OF NATURAL VEGETATION	NATURAL GROUPINGS OF NATIVE TREES AND SHRUBS CAN BE PLANTED IN AREAS THAT WILL ENHANCE THE SITE, AND NOT ADVERSELY AFFECT BUILDINGS OR SERVICES
WATER QUALITY IS NOT GOOD.	CONSIDER DIGGING OR DRILLING A NEW WELL, INSTALL A FILTER, CONDITIONER, OR PURIFICATION SYSTEM FOR DRINKING WATER.
WATER VOLUME IS INADEQUATE	INSTALL A CISTERN OR OTHER LARGE WATER STORAGE SYSTEM, DRILL A NEW WELL, DIG A POND FOR WATER RETENTION.
AN AREA OF THE LAND IS SWAMP	UTILIZE THE LOW LAND BY EXCAVATING PONDS AND RE-CONTOURING THE EXCAVATED MATERIAL.
THE SOIL IS NOT SUITABLE FOR A GARDEN	CONSIDER INTENSIVE GARDEN BEDS, WHERE THE SOIL IS AMENDED AND IMPROVED IN SMALLER AREAS.
PARTS OF THE YARD & DRIVEWAY ARE WET & MUDDY DURING SPRING.	DESIGN AN EFFICIENT DRAINAGE PLAN, RE-GRADE AFFECTED AREAS, ADD GRAVEL AND NEW SURFACE MATERIAL.
WEEDS AND WILD GRASSES HAVE TAKEN OVER THE LAWN, VEGETABLE AND FLOWER GARDENS.	THE LAWN CAN BE REWORKED, TOP-DRESSED AND RE-SEEDED, THE VEGETABLE, FLOWER AND SHRUB GARDENS CAN BE RE-DEFINED AND WILD VEGETATION CONTROLLED WITH CULTIVATION AND MULCH.

PART 4. MOVING TO THE COUNTRY

YOU HAVE MADE THE COMMITMENT TO RELOCATE TO A HOME IN THE COUNTRY. AND HAVE VERIFIED THE FOLLOWING:

- ✓ The area and type of land is within your ability to manage and maintain.
- ✓ The location of the property is not too remote or inaccessible.
- ✓ The property boundaries are accurately marked.
- ✓ The property is not in the path of a new highway.
- ✓ The neighboring property is not to be developed as an open pit mine.
- ✓ The dwelling and other buildings are in good repair.
- ✓ The water supply and wastewater disposal systems are satisfactory.
- ✓ The other main services e.g. hydro, telephone, natural gas, etc. are as required.
- ✓ The natural features, e.g. soil type, view, topography, trees, etc. suit your needs.

88. Family and dogs walking.

87. Acreage with sold sign

Anecdote – Finding that the 'ideal ' Home has a few problems.

Planning the transition to country life is exciting particularly if you have never lived in the country before. You could be either renting a rural property, or you may have purchased your perfect dream homestead. You will be responsible for many of your own services, necessities, and comforts of life.

In a city or an urban area, the municipality usually looks after the snow removal, maintaining water and sewer services. When living in the country, you are most likely to be the person first in line for these jobs.

BEFORE YOU MOVE IN TO YOUR COUNTRY HOME

MAKE SURE THAT

- ✓ Hydro, telephone and gas companies are aware of your moving in, and the services are in operation.
- ✓ Water system is working and the water is safe for consumption. If the system has been unused for a time, the tank and pipes should be flushed, and possibly, the well and distribution system should be disinfected.
- ✓ The furnace or wood-stove and chimney, water heater, and any appliances are safe to operate and in good working condition.
- ✓ If the residence is heated with wood, propane gas or fuel oil, make sure that the fuel is available. The gas and oil tanks must be in good condition and certified to refill.
- ✓ Insurance coverage for the property has been arranged
- ✓ If the dwelling has been vacant for a while, sometimes, unwelcome creatures can move in. Check for rodents and bugs, e.g. mice, bats, wasps, spiders and fleas. It is much easier to get them out before you move in.
- ✓ Measure doorways and stairs, etc. to make sure that your furniture and appliances will fit through.
- ✓ A check of power outlets, and stove and cloths dryer receptacles will save inconveniences, if plugs will not fit or circuits are overloaded.
- ✓ If you are moving in the winter, you may need to arrange for someone to clear snow for better access.
- ✓ If the transaction is taking place in the fall or winter, make sure that exposed water pipes are drained, or that adequate heat is available to prevent pipes, pump and pressure tank etc. from freezing. It is not fun to move to a new home, and find that the water pump is frozen and the pipes in the barn have burst.
- ✓ If the property is vacant, the house should be checked on a regular basis, and the basic maintenance around the yard continued if possible.

89. Fill propane
90. Sweep chimney
91. Phoning
92 Measuring
93. Plug ins

The day after we moved in the well pump quit; Three day later 2 rings on the stove burned out. Next day the water heater failed. We could not use our front loader cloths dryer because the space did not allow us to open the door.
Russ Vindon.
Errington B. C.

MOVING DAY

There are probably enough 'moving house' stories to fill a book on the subject. Moving to the country for the first time can involve extra considerations.

- If the moving is being done with the use of a large moving van, make sure that the driveway is wide enough and trees trimmed for access.
- The driver should be made aware of low slung power-lines, the location of the wastewater disposal tank and field, and any other non-accessible areas.

After the furniture is in place and the appliances are installed and working, check out some of the essential features of your new abode.

Familiarize yourself with the electric breaker panel, and the main breaker switch, they should be easily accessible. There may be more than one set of breakers, especially if there has been a sizable addition added or if there is a workshop and garage. The service panel breakers should already be labeled to indicate which circuits they protect. Make sure that the well pump circuit is clearly identified.

Locate the main power service, meter, it is usually located on the outside of the house, on a power shed or on a power pole in the yard.

96. Breaker panel

97. Main meter

98. smoke detector

99. Replace battery

100. Fire extinguisher

101. First aid kit

Smoke and CO2 detectors should be checked and batteries replaced if needed.

Fire extinguishers should be located near entrance doors to the kitchen, the furnace room, the garage and or workshop. Upend and shake powder type extinguishers annually, to ensure that the retardant chemical has not consolidated in the cylinder.

A **first aid kit** should be located in a convenient place. Also as a list of telephone numbers for your doctor, fire, police and ambulance etc.

AFTER MOVING IN

make sure that your address number is clearly visible at the end of the driveway near the road. You may consider having your family name on a sign. This is very helpful to delivery people, visitors and neighbors, or emergency services.

102. Number sign

Always have a good flashlight handy, you may want to check out that weird noise in the middle of the night. In addition, a basic set of tools in a toolbox should be in a convenient location.

103 Cartoon

Anecdote – Animal or pet story when moving to a new home.

Pets should be closely monitored during the first weeks after moving to a new place. Dogs may need to be restrained or fenced for a while, and cats have a habit of heading off in the general direction of your old home if they are not totally impressed with the new digs.

Will our pets get lost in the country



104. Cat in cage.

Health protection tip.

Attic spaces, the basement, barn, or other buildings will probably need some cleaning before you can move in. Wear a dust mask or respirator and provide adequate ventilation if the area is dusty, has signs of rodents, mould or fungus, asbestos, fiberglass, or unknown chemicals. Spraying a dusty area with a fine mist of water and diluted disinfectant can help to prevent exposure to harmful substances.

Take the time to becoming familiar with the natural features on your property. Check out the soil types, existing drainage patterns and wetland areas. Use a naturalists field guide to identifying the types of native vegetation, as well as birds and other wildlife in the area.

Locate the corner survey stakes and the perimeter boundary of the property. Existing fence-lines are not always located on the property boundaries, check with your neighbors if you are not sure. Many property disputes are caused by landowners clearing trees, building, or fencing on the next door property.

106. Child & birds nest

MEET THE NEIGHBORS

Getting to know the neighbors, is an important part of the rural lifestyle. You may feel comfortable visiting them to introduce yourself, or you may prefer to host a, getting to know you house-warming. This provides an opportunity to ask questions, and learn about the community and the area in general. A fundamental part of a rural community is sharing good times and perhaps a bowl of strawberries and a dozen eggs as well as the willingness to help each other in times of need.

107. Clearing snow

Community support, in case of an emergency, severe weather event, lost animals, predator problems, crime, security or health concerns, environmental issues, or emergency road maintenance. The local residents often deal with these types of situation themselves. It is much better if you have several friends or acquaintances nearby, especially if you are the person needing help.

Anecdote –Neighbors good deed

If your neighbors are taking a couple of weeks vacation, or have to spend some time in hospital, they will grateful for someone who is willing to keep an eye on their place. The favor could be to pick up the mail, or feed the animals. Their opportunity to repay you, could be when you need help hauling in the hay crop.

**LEARNING MORE ABOUT YOUR LOCALITY, COMMUNITY,
AND COUNTRY LIFE IN GENERAL**

Information, knowledge, and experience need to be in good supply, in order to make the most of your country way of life. Many facts are available in books and other publications, Videos, T V programs, the Internet, or from attending courses, workshops, community groups etc. The ministry of Agriculture, farm organizations, and associations, can often help to rural residents.

108. People taking course

109. Maps

Maps, showing the nearby property boundaries can be useful. Also, topographical maps locating and trails, land characteristics, or maps depicting soils, watersheds, environmental and local climatic conditions, and land use zones are useful references.

110. Services directory

Goods and services available in the area, some of them are usually listed in the telephone directory. In small communities or remote areas, a Chamber of Commerce, or similar organization will usually produce a local business directory.

Governance and jurisdictional issues. If you need to call an emergency service, a government agency, or vote in a local election, would you know which respective jurisdiction you live in. Information of this type, including land boundaries, zoning bylaws, building codes, property or other taxes, is available at the municipal, county, regional district or government offices, or agents.

GETTING INVOLVED IN THE COMMUNITY AND THE LOCAL AREA.

Service groups, clubs, and other organizations, perhaps you will have an inclination to join a horticultural organization, maybe the volunteer fire department or the local community club. Becoming involved in local activities will provide an opportunity to be a part of the community lifestyle.

111. Local fire dept.

112. People & waterfalls

Natural and environmental information, which could include, wildlife migration paths, spectacular waterfall, bird nesting sites, or maybe some rare species of orchid that is growing on your property. Many rural communities have a naturalist club, or environmental group whose members could provide you with information.

History of the area may not be high priority. However, it can be useful to understand the background of how the region evolved, and who originally occupied or developed the land in your area. Many communities have this kind of information in the nearest library, museum or archives. Many rural areas have a locally produced book explaining the history of the region. On your travels, you may stumble across some old remnant or artifact, which has significant local historical value.

Keep your property plans and ownership documents in a safe and convenient place. This information should include the property dimensions, the location of easements, rights of way, and the primary services on your land. You could wake up one morning to find that your neighbor is clearing trees, building a structure or installing a sewage disposal field next to the adjoining property line. It is possible that he doesn't know for sure, where the property line is.

113. Looking at artifact.

Anecdote – property line dispute

SKILLS, TOOLS, TIME, AND COMMITMENT

SKILLS THAT ARE NEEDED TO DEVELOP AND MANAGE AN ACREAGE

Many people who move to the country aspire to be independent and self-sufficient. Working toward these goals requires a wide range of information, a variety of skills, and lots of practical experience. Don't overestimate your abilities, especially where safety is a concern.

Examples of some of the skills and knowledge that may be required include;

ARCHITECT HOUSE AND OUTBUILDING DESIGNS, YARD LAYOUT, ROADWAY, PARKING, PATHWAY, PATIO, AND LANDSCAPE DESIGN.

CARPENTER ALL PHASES OF CONSTRUCTION FROM FORMING, FRAMING, ROOFING, TO BUILDING LIVESTOCK PENS, SHELVING AND FINISHING CARPENTRY.

114 e. Drafting at table

115. Carpentry

116. Wiring plug -in

117. Shooting levels

ELECTRICIAN UNDERSTANDING ELECTRICAL CODES AND SAFETY, HOUSE AND BUILDING WIRING, REPAIRS AND REPLACEMENT, CIRCUIT TESTING ETC.

ENGINEER DESIGN AND DETERMINE THE LOCATIONS AND ROUTING OF SERVICES, ELEVATIONS AND GROUND PREPARATION FOR STRUCTURES, DESIGN STRUCTURAL COMPONENTS FOR BUILDINGS, AND DRAINAGE PLANS.

SKILLS FOR COUNTRY FOLK.

EQUIPMENT OPERATOR PRACTICE SAFE AND EFFICIENT SET UP, OPERATION, AND MAINTENANCE OF HEAVY EQUIPMENT, E.G. TRACKED MACHINE, BACK-HOE, TRACTOR, OR SMALLER PIECES, RIDE ON MOWER, ROTO-TILLER, SNOW-BLOWER, POSTHOLE AUGER, TO CHAIN SAW, BRUSH CUTTER, AND WINCH.

FARMER KNOWLEDGE AND PROFICIENCY IN ANIMAL HUSBANDRY, LAND AND SOIL MANAGEMENT, AND CROP PRODUCTION AND STORAGE.

FOREST TECHNICIAN UNDERSTAND TREE GROWTH AND WOOD-LOT MANAGEMENT, FALLING, SPACING, REFORESTATION AND BIO-DIVERSITY.

119. Landscape maintenance

118. View from tractor seat

GARDENER DEVELOP SKILLS IN SOIL ANALYSIS, VEGETABLE, FRUIT AND FLOWER PRODUCTION, VEGETATION MANAGEMENT, LAWN CARE, PRUNING, PROPAGATION, PEST CONTROL AND CROP STORAGE.

LANDSCAPER PRODUCE LANDSCAPE DESIGN AND WORK ON THE INSTALLATION OF LAWNS, GARDENS, TREES AND SHRUBS, ORNAMENTAL FEATURES, FENCES, PONDS, PATHWAYS, AND PATIOS.

MAINTENANCE WORKER SHOULD BE FAMILIAR WITH ALL ASPECTS OF BUILDING AND PROPERTY MAINTENANCE, INCLUDING, WATER, SEWER, IRRIGATION, AND DRAINAGE SYSTEMS, SEASONAL PREPARATIONS, VEGETATION CONTROL.

COUNTRY SKILLS

MECHANIC

UTILIZE SKILLS TO REPAIR, MAINTAIN AND MODIFY, MACHINES, VEHICLES AND EQUIPMENT. WELDING, SHARPENING, EVEN CHANGING TIRES, WILL BE AN ASSET.

PLUMBER

NEEDS TO BE ABLE TO INSTALL WATER PIPING AND FIXTURES, PUMPS, IRRIGATION, WATERING AND DRAINAGE SYSTEMS.

120. Fixing rototiller	121. Plumbing
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PROJECT COORDINATOR

THE ABILITY TO COORDINATE PLANNING, ESTIMATING, BUDGETING, AND HIRING CONSULTANTS, SPECIALISTS, CONTRACTORS, TRADES PEOPLE, EQUIPMENT OPERATORS AND COMPLYING WITH REGULATIONS.

VETERINARIAN.

UNDERSTAND AND APPLY ASPECT OF ANIMAL AND LIVESTOCK HUSBANDRY, DIET, SHELTER, REPRODUCTION, HEALTH AND WELL BEING

122. Talking to machine operator	123. Treating horses hoof
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TOOLS NEEDED FOR THE COUNTRY DO-IT-YOURSELF

A supply of basic hand and shop tools is essential for the rural do-it-yourselfer. High quality tools are often expensive and can be worth the investment. However, garage or farm sales can often supply a lower priced selection. When you have the tools, they should be easy to find and in a safe condition. An axe with a broken handle or loose head, an electric drill with a damaged cord, or a chain saw with a loose chain, can present a serious hazard.

Before undertaking a work project, emergency repair, or maintenance operation, make sure that the work area is safe and that you are wearing appropriate clothing. A windstorm that blows a tree over the driveway could have taken down the power-line, creating a electrical hazard. An animal that breaks down a fence in the middle of the night could leave a tangle of broken boards with nails standing up. Not a good place to be wearing pajamas and carpet slippers.

130. Cartoon lady with saw in a nightdress

Anecdote – emergency repair.

131. Workshop view

A workshop area with a bench, vice, shop tools, shelves, and cupboards, is an essential component of the do-it-yourselfer's inventory. The building would not have to be heated in the wintertime although an area of frost-free storage is needed for frost sensitive products such as latex paints, and other water based products.

TOOLS TIPS FOR THE DO-IT- YOURSELFER

132. Carrying tool boxes

When maintenance or construction projects take place a distance from the workshop, you can find yourselves making several trips back and forth to pick up another tool. Toolboxes or caddy trays, which contain tools for particular projects, such as plumbing, electrical, or carpentry, are very handy and available at any time for a quick fix up job.

Specialized tools that are more specific to the rural way of life, include handy gadgets like a jack-all jack, mattock, logging chain, fencing tool, steel bar, and post mall. Also ropes, tarpaulins, a winch, and a long ladder. Some quite invaluable pieces can be rented or borrowed from a neighbor. Attempting a big project with inappropriate tools or equipment can result in the job taking twice as long, and with unsatisfactory results.

Anecdote -not having the proper tools

133. Lifting building with Jackall

PARTS AND SUPPLIES

With most maintenance or repair jobs, tools are only part of the fix up solution. A selection of repair parts, fixtures, hardware, and other things are needed to build, make do or mend. Country living usually means that the hardware store is not just around the corner. A supply of nails, screws, nuts and bolts, basic plumbing, electrical, painting, and mechanical supplies can save that extra trip to town. Some essential emergency repair products will include, strong flexible wire, a length of rope, fencing staples, a tarp or heavy polyethylene sheeting, duct tape, roofing sealant, all purpose glue, silicone spray, a supply of light bulbs, and a good flashlight.

BASIC TOOLS LIST FOR CONSTRUCTION AND MAINTENANCE PROJECTS

134 a Tools

SHOP EQUIPMENT

- WORK BENCH
- VICE
- GRINDER
- ELECTRIC DRILL
- POWER SAW
- SANDER
- TABLE SAW
- WELDER

CADDY TOOLS

- HAMMER
- TAPE MEASURE
- SCREWDRIVERS
- CRESCENT WRENCH
- PLIERS
- LEVEL
- UTILITY KNIFE
- WRENCH SET
- SOCKET SET
- FILES
- GREASE GUN
- OIL CAN
- HAND SAW
- HACK SAW
- L SQUARE
- STRING LINE
- TIN SNIPS
- SIDE CUTTERS

PLUMBING TOOLS

- PIPE WRENCH
- PLUMBERS PLIERS
- HACK SAW
- PROPANE TORCH
- SOLDERING SUPPLIES
- GLUES
- PIPE CUTTER

MORE TOOLS FOR THE HOME HANDY-PERSON

ELECTRICAL TOOLS

- SCREWDRIVERS
- PLIERS
- WIRE-STRIPPERS
- VOLTAGE - AMP METER
- DRILLS

GARDEN TOOLS

- SPADE
- SHOVEL
- RAKE
- FORK
- HOE
- SHEARS
- PRUNNERS
- BROOM
- CHAIN SAW
- BOW-SAW
- PICK
- BAR

PAINTING & DECORATING

- PAINT BRUSHES
- PAINT ROLLERS & TRAY
- SANDPAPER
- SCRAPER
- WIRE BRUSH

MISC. TOOLS

- STEP LADDER
- EXTENSION LADDER
- WHEEL BARROW
- JACK ALL JACK
- POST HOLE DIGGER
- CHAINS
- POLE PRUNER
- POWER WASHER
- CEMENT TOOLS
- SCYTHE
- ROPES
- FENCING TOOLS
- YARD BROOM
- CHIMNEY BRUSH
- SLEDGE HAMMER
- SPLITTING MALL

134b . Tools

MANAGING TIME AND WORK COMMITMENT

How much time is required to maintain and live with a degree of self-sufficiency on a typical country property? Many people underestimate the amount of work and time that is needed to live the truly rural lifestyle. The two major factors that will determine how much time commitment you will need are; the size and complexity of your country estate, and the level of care that you will be striving to achieve.

The following table will give a broad indication of the relative level of time and work commitment for maintenance and upkeep. Keep in mind that maintaining a high standard of care and appearance for your property will take considerably more commitment than maintaining a tidy but somewhat rustic maintenance level.

COMPONENT	RELATIVE LEVEL OF COMMITMENT		
	LOW	MEDIUM	HIGH
Land area ½ - 1 hectare	√		
„ „ 1 - 2 hectares		√	
„ „ 2 - 20 + hectares			√
House - new	√		
„ older- well maintained		√	
„ old – poorly maintained			√
Other buildings - new	√		
„ „ older- well maintained		√	
„ „ old – poorly maintained	√		√
Services - new property,	√		
older property			√
Landscaping - mainly country lawn	√		
manicured lawn		√	
basic shrubs and flowers		√	
manicured shrub and flower gardens			√
trees, fences, pathways, etc.		√	
Food production - basic fruit & vegs.			√
self sufficient as possible			Very High
Keeping pets - cat & dog		√	
horse			√
Variety of pets			Very High
Livestock - a few chickens		√	
pigs, cattle, exotics			√
Field crops – hay, corn, grains etc.			√

THE LONG TERM COMMITMENT

The country resident often become involved in projects, hobbies, or ventures, that can develop into long term commitments. Planting a small orchard, growing a large vegetable garden, raising chickens to sell eggs, or keeping horses, are typical examples.

Planting two-dozen apple trees doesn't seem like a big deal as an orchard project. However, staking the trees, fencing the area, installing a watering system, spraying, pruning, fertilizing, mulching, weed control, discouraging the crows that are eating the apples, picking and selling the fruit at a roadside stand, does becoming a more involved commitment.

Before embarking on a new project that you have no experience with, determine the length of time that you are committing. Also the possible long term implications that you could be involved in.

EMERGENCY PREPAREDNESS

Medical emergencies, such as accidents, or sudden illness can have serious consequences for rural residents, particularly if they live a long distance from medical help. A serious emergency, that takes place a long distance from a telephone, or in adverse conditions such as a heavy snowstorm, can place a victim in a vulnerable situation. Recognizing potential hazards, and preventing accidents and injuries is one way to minimize the risk.

135. Victim fallen under tree

EMERGENCY TELEPHONE NUMBERS

FIRE _____
AMBULANCE _____
POLICE _____
HOSPITAL _____
DOCTOR _____
RELATIVE or NEIGHBOR _____

136. First aid attendant.

FIRE, AMBULANCE OR POLICE.

If an emergency does occur, it is more easily handled when appropriate equipment and supplies, and someone trained in first aid, are available.

To help emergency services locate your home, it is important to have your house number, and a sign with your family name located in a prominent position at the roadside, next to your driveway.

If the standard 911 emergency phone system is not in effect in your area, a list of appropriate numbers should be located next to the phone.

BE PREPARED FOR AN EMERGENCY.

At least one family member should be proficient in **First Aid**. This is particularly important if you operate a small business or work with machines and equipment.

A Home Emergency Kit in a durable container should be available.

138. Emergency kit

137. First aid course

A BASIC HOME EMERGENCY KIT SHOULD CONTAIN

First aid kit and manual.

A battery powered radio and flashlight with extra batteries.

A list of emergency and other important telephone numbers.

4 Liters of water in unbreakable bottles.

Nonperishable sealed high-energy food items.

Blankets or sleeping bag. Some candles and waterproof matches.

Waterproof sheeting or large garbage bags.

YOUR FIRST AID KIT SHOULD CONTAIN

Emergency phone numbers including your doctor and family numbers

First aid manual.

Sterile dressings large and small.

Adhesive tape.

Roller and Triangular bandages.

Adhesive bandages in assorted sizes.

Scissors. Tweezers. Safety pins.

Ice pack.

Disposable latex gloves.

Flashlight with extra batteries.

Antiseptic wipes or solution.

Emergency blanket.

Eye patches. Eye wash solution

Thermometer.

Pencil and paper.

Pocket mask.

139. First aid kit

PERSONAL SAFETY

Protective clothing and safety gear should be worn, when a job or a recreational activity has a risk of physical injury. It is advisable to carry a safety and first aid kit in your vehicle.

If you are involved in a project with equipment, machines and power tools, or other hazards, safety footwear, gloves, hard-hat, safety glasses, and ear protection should be worn. A first aid kit and portable fire extinguisher should also be nearby.

An emergency fire escape plan should be in place, and practiced at least once each year.

140. Working with all the safety gear

141. Young child in hazard area

OTHER SAFETY PRECAUTIONS.

Work areas should be kept clean and tidy to prevent injuries from sharp objects like nails, wire, or broken glass. Tools and equipment should be handled and stored in a safe manner. This also applies to poisonous or hazardous chemicals and gases. Children should be restricted from hazard areas.

Certain climatic conditions will require added precautions. In a situation where extreme cold or a high wind chill is a problem, it is important to be prepared with an adequate supply of warm winter clothing. Additional emergency supplies could include a reflective blanket, waterproof matches, a flashlight and extra food supplies.

Prolonged exposure to extreme heat or sun can result in heat exhaustion, or similar symptoms. Suitable precautions as well as a working knowledge of first aid will be important in preventing incidents.

Fire prevention procedures should be in place during periods when there is a high fire risk: grass or bush fires can rapidly grow out of control, particularly in windy conditions. Outside burning and bonfires should be curtailed when the fire risk is high. During activities that could result in a fire, such as welding or sparks from an engine, an adequate supply of water, or fire extinguishers should be at hand. In areas prone to lightning storms, large buildings, can be somewhat protected if they are equipped with lightning-ground rods.

Cellular telephones or VHF radios are a safety asset in areas away from personal communication.

PREVENTING WEATHER RELATED EMERGENCIES

<i>CONDITION</i>	<i>TYPE OF PROBLEM</i>	<i>EMERGENCY PREVENTION</i>
HEAVY SNOW <i>IF YOU HAVE MOVED TO AN AREA SUBJECT TO LARGE ACCUMULATIONS OF SNOW, IT IS WISE TO PREPARE WELL IN ADVANCE OF THE SNOW SEASON</i>	BUILDING OR ROOF COLLAPSE.	BUILD TO SNOW LOAD CODE.
	CHIMNEY BLOCKED.	INSPECT AND CLEAR.
	TREES OR BRANCHES FALLING	REMOVE OR PRUNE HAZARD TREES
	DRIVEWAY BLOCKED	PRE-ARRANGE FOR SNOW CLEARING
	DAMAGE OR HAZARD FROM GROUND LEVEL FIXTURES OR SERVICES	MARK SNOW COVERED HAZARDS WITH A STAKE AND FLAG TAPE
	POWER SUPPLY AFFECTED	ACQUIRE EMERGENCY GENERATOR
	FUEL SUPPLY FOR HOME HEATING OR VEHICLES AFFECTED	STOCKPILE EXTRA FUEL AND ALWAYS HAVE AN ALTERNATE HEAT SOURCE
EXTREME COLD <i>PREPARING FOR WINTER IS TIME WELL SPENT, A FROZEN WATER SUPPLY, OR A VEHICLE THAT REFUSES TO START CAN BE VERY FRUSTRATING AND EXPENSIVE.</i>	WATER SUPPLY FREEZING	INSULATE AND PROTECT ALL OF VULNERABLE PARTS OF THE WATER SUPPLY SYSTEM
	VEHICLE AND EQUIPMENT PROBLEMS	PREVENTATIVE WINTER MAINTENANCE ANTIFREEZE, BATTERIES, OIL, FUEL
	EXTRA STRESS FOR ANIMALS & LIVESTOCK	PROVIDE ADEQUATE SHELTER AND PROTECTION, EXTRA FEED & WATER
	LOSS OF MATERIALS AND STORED PRODUCE TO FROST	PREPARE BY MOVING LATEX PAINTS, STORED VEGETABLES ETC. TO A FROST FREE LOCATION.
WIND STORMS <i>FACTORS TO CONSIDERED IN AREAS EXPOSED TO HIGH WINDS.</i>	TREES FALLING ON BUILDINGS OR POWER LINES	INSPECT TREES THAT COULD BE A HAZARD AND TAKE APPROPRIATE ACTION
	DIRECT DAMAGE TO BUILDINGS I. E. DOORS, WINDOWS, ROOFS.	ENSURE THAT BUILDINGS ARE STORM RESISTANT AND SECURED.
	DRIFTING SNOW CAUSING PROBLEMS	PLANT TREE OR SHRUB SHELTER-BELT
FLOODING <i>STORM WATER, MELT-WATER OR FLASH-FLOODS</i>	FLOODED OR WET AREAS IN YARD AFTER HEAVY RAINS	RE-CONTOUR AREA TO MANAGE STORM-WATER, DEFINE WATER FLOW PATTERN.
	HEAVY RUN-OFF DURING STORM CAUSING FLASH FLOODING	RE-VEGETATE CLEARED SLOPPING LAND, CREATE SUITABLE WATER RETENTION AREAS, TO CONTROL HIGH FLOWS. DO NOT CHANNEL TOO MUCH WATER INTO A SMALL CULVERT OR CHANNEL.
DROUGHT <i>POROUS SOILS, TOO MUCH LAND CLEARED</i>	LAND AND WATER SUPPLY DRYING UP DURING SUMMER.	CONTOUR LAND AND DEVELOP WATER RETENTION AREAS DO NOT DRAIN STORM WATER OFF LAND. PLANT SUITABLE TREES OR OTHER VEGETATION TO RETAIN MOISTURE.
HEAT <i>SOUTH FACING SLOPE</i>	EXCESSIVE HEAT DURING SUMMER	PLANT SHADE TREES IN SUITABLE LOCATIONS, PRUNE EXISTING TREES TO PRODUCE MORE SHADE.

KEEPING THE COUNTRY HOMESTEAD IN GOOD SHAPE

BASIC MAINTENANCE AND UPGRADING PROJECTS.

Maintenance on an acreage can be the single most time consuming activity during the year. The standard of upkeep that you set will determine if you will spend every spare moment, working around the home and yard. A random list of maintenance projects include;

- Sweep chimney.
- Painting
- Gardening
- Trimming trees
- Cleaning
- Weeding
- Planting
- Fixing things
- Replacing things
- Clean out drains
- Fixing fences
- Cutting grass.
- Repairing roofs
- Grading driveway
- Pump septic tank
- Sharpen tools
- Servicing things
- Other things

156. Maintenance project

156 b

Aspects of acreage maintenance are important for health, safety and security reasons. Some health and safety concerns have been mentioned in the previous chapter. Other examples are; by keeping a chimney clean and secure the risk of chimney fires and carbon monoxide poisoning can be reduce. Trimming long grass and weeds will reduce the hazard of a wild fire. Keeping the home and buildings, visible from the road can help to lessen incidents of theft and vandalism.

When maintaining general appearance of your country home, the scale of the job is much larger than that of a city property. Country lawns for example, are usually several times larger than town lawns. It may not be practical to focus on a weed free, highly fertilized, heavily watered, frequently mowed, carpet unless you have lots of free time on your hands.

156 c

ANNUAL CALENDAR OF CHECKS AND MAINTENANCE TASKS AROUND THE HOUSE AND YARD

TIME OF YEAR	MAINTENANCE CHECK LIST FOR BUILDINGS & SERVICES	
WINTER	<ul style="list-style-type: none"> • SERVICE AND REPAIR TOOLS AND EQUIPMENT • INTERIOR DECORATING • SNOW CLEARING • PREVENT EXCESSIVE SNOW & ICE BUILD UP ON ROOFS • SWEEP CHIMNEY AS NEEDED 	142. Sharpen tools
SPRING	<ul style="list-style-type: none"> • FIREWOOD SHOULD BE CUT SPLIT AND STACKED FOR NEXT WINTER • TURN ON OUTSIDE WATER LINES • CHECK FENCES AND REPAIR • REMOVE STORM WINDOWS • TURN ON OUTSIDE WATER LINES 	143. Sweep chimney 144. Fix fence
SUMMER	<ul style="list-style-type: none"> • PAINTING OUTSIDE SURFACES • GRADE DRIVEWAY • MOW LAWNS AND GRASS AREAS • KEEP WEEDS UNDER CONTROL 	145. Paint
FALL	<ul style="list-style-type: none"> • WINTERIZE BUILDINGS • TURN OFF AND DRAIN EXPOSED WATER LINES • DRAIN PUMPS • MOVE ITEMS THAT ARE DAMAGED BY FROST TO A HEATED LOCATION • CHECK WEATHER STRIPPING AND STORM DOORS, etc. • CHECK HEATING SYSTEMS • SWEEP CHIMNEY • INSPECT WOODEN COMPONENTS LOCATED CLOSE TO THE GROUND FOR ROT OR INSECT DAMAGE 	146. Weeds 147. Cover veg 148. Check furnace

ANNUAL CALENDAR OF TYPICAL CHECKS AND MAINTENANCE TASKS AROUND THE HOUSE AND YARD

TIME OF YEAR	MAINTENANCE CHECK LIST FOR HOME BUILDINGS & SERVICES	
AT LEAST TWICE EACH YEAR	<ul style="list-style-type: none"> • CHECK ABOVE GROUND WATER SUPPLY COMPONENTS I.E. PUMP, PRESSURE TANK, AND PLUMBING, FOR LEAKS • MAKE SURE SHUT OFF VALVES OPEN & CLOSE • CLEAN OUT OR CHANGE WATER FILTERS • CLEAN DRYER DUCTS & EXHAUST FAN GRILLS • CLEAN REFRIGERATOR DRAIN PAN & VACUUM COILS • INSPECT BASEMENT OR CRAWL SPACE FOR CRACKS & MOISTURE • TEST SMOKE ALARMS & CARBON MONOXIDE DETECTORS • CHECK FIRE EXTINGUISHERS 	<p>149. Check tank</p> <p>150. Power lines</p> <p>151 Eaves troughs</p>
YEAR ROUND AS NEEDED PARTICULARLY AFTER SEVERE WEATHER EVENTS	<ul style="list-style-type: none"> • CHECK OVERHEAD POWER LINES • CHECK FOR DAMAGE TO HOUSE AND BUILDINGS, eg. CHIMNEY, EAVES TROUGHs, WINDOWS. REPLACE DAMAGED ROOF TILES OR SHINGLES • CHECK FENCES FOR BREAKS OR FALLEN TREES. 	<p>152. . Roof</p>
ANNUALLY	<ul style="list-style-type: none"> • DISINFECT WELL AND WATER SUPPLY SYSTEM • FLUSH PIPES AND HOT WATER TANK THROUGH BOTTOM DRAIN 	<p>153. Check well</p>
SPRING AND FALL	<ul style="list-style-type: none"> • CHECK AND CLEAN OUT EAVES TROUGHs, DOWNSPOUTS STORM DRAINS, FLOOR DRAINS & CULVERTS • CLEAN LEAVES AND DEBRIS FROM ROOFS, DECKS, STAIRS, CUT BACK VEGETATION IN CONTACT WITH BUILDINGS. • GRADE GRAVEL DRIVEWAY OR FILL ANY DEPRESSIONS OR POT-HOLES. • INSPECT CHIMNEY FOR STRUCTURAL INTEGRITY 	<p>154. Driveway</p>
AT LEAST EVERY THREE YEARS	<ul style="list-style-type: none"> • HAVE SEPTIC TANK PUMPED OUT 	<p>155. Pump tank</p>

SPECIFIC MAINTENANCE TASKS

157. Culvert

DRIVEWAY and CULVERTS

At the roadside, in line with the ditch, or somewhere along the driveway there can be a culvert to allow water to drain. They can become blocked with dirt and grass. It is important to keep culverts clear of debris. Look through to make sure the culvert is not dented or flattened enough to restrict a heavy flow of water.

The driveway surface could be asphalt, but more likely it will be gravel or crushed rock. Driveway surfaces are better crowned or cambered to drain water from the surface efficiently

158. Gravel driveway

GRAVEL DRIVEWAYS.

Gravel and crushed rock surfaced driveways, will need periodic grading to maintain the contour and control weeds. Looking at a cross section from side to side, the objective of grading should not be to make the driveway level. Fewer puddles will form if the driveway is 8 to 15 CMS higher in the center (crowned), and tapered to a swail on either side. On a sharp bend, a driveway should be cambered with the inside of the corner lower than the outside edge.

159. Sketch crowned

160. Cambered

161 Truck spread gravel

Additional new gravel or crushed rock is usually required every five years or so to keep a driveway in good shape. A twelve cubic meter load will cover 300 square meters, at 4 CMS. deep, or 75 meters of driveway, 4 meters wide.

After a gravel driveway has been properly graded and crowned it is a good idea to have the surface rolled. An alternative is to vary the track you take when driving down the driveway, using your vehicle tires to pack down the center line and the edges. If a single set of tracks are made, water puddles and potholes will appear much sooner.

DRIVEWAY AND PARKING AREA MAINTENANCE

Paved driveways usually require less maintenance than unpaved driveways. However, a buildup of weeds, grass, or dirt at the edges of the asphalt should be removed to allow water to drain off the surface. This situation may become a problem when the water turns to ice.

162. Build up puddles	163. Clean & cambered
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Maintaining paved or concrete parking and turning areas, is usually a matter of sweeping leaves and scraping away weeds with a square shovel. Moss and algae growing on a paved surface, can becoming slippery when wet. Renting a pressure washer for a few hours each year, can resolve that situation. A pressure washer is also useful for cleaning roofs, siding, pathways, steps and patio areas. A sealant can be applied to an asphalt pavement to reduce surface cracking and facilitate easy cleaning.

164. Pressure wash

165. Trees over

166. Trees trimmed

Where possible, vegetation and trees growing along the sides of the driveway should be trimmed back at least 1 meter. This will make is safer for a person walking at night, and provide a place to plow snow. Overhanging tree branches should be removed to a height of at least four meters. Snow laden branches will droop, making access difficult for a large vehicle. A clear line of vision should be maintained, by trimming back vegetation and tree branches. This is particularly important at the roadside entrance, and on the inside corner of a bend, also if there is a pathway or a side trail adjoining the driveway.

LAWN MAINTENANCE

A whole book can be written about lawn maintenance. This section will address some of the more commonly asked questions.

Mowing machinery

Acreage lawns are usually larger than urban lawns, and may require larger mowing equipment. A preference is a small garden tractor with a rotary mower attachment. Usually electric powered lawn mowers are not powerful enough, and reel type mowers do not perform well in rough areas or in tall grass.

GRASS MOWING EQUIPMENT

Size of Area	Type of Mowing Equipment	
Up to 500 sq. meters 5,000 sq. ft.	3.5 – 5 horse power rotary push type mower Small gas powered line trimmer	168. Hand trimmer
500 – 1,000 sq. m. 5,000 – 10,000 sq. ft. Up to ¼ acre	5+ h. p. wheel driven rotary mower. Small gas powered line trimmer.	169. Push mower
1,000 – 10,000 sq.m. Up to 1 hectare ¼ - 2 acres	8-10 h. p. ride on rotary mower or small garden tractor with mower. Mid size gas powered line trimmer.	
10,000 – 20,000 sq. meter 1-2 hectares 2-5 acres	10-18 h. p. garden tractor with mower. As well as a small rotary mower for trimming and or larger size gas powered trimmer.	170. Ride on
2-4 hectares 5-10 acres	15-30 h. p. tractor with 4-6 ft. rotary or flail mower. Hand rotary mower and brush cutter with blade. Or a small flock of sheep.	
Very rough or steep sloping lawns, or lawns with concealed rocks or roots	Mowers are available with, high clearance, wide wheel-base, oversize wheels, or a grass discharge deflector, to improve rider comfort and safety.	171. Tractor

REDUCE THE TIME YOU NEED TO SPEND ON LAWN MAINTENANCE

A high standard of care, for a large area of country lawn, is not always practical, if time and money are limited.

One option is to have three phase maintenance levels. The smaller feature lawn area, located close to the house. This is pampered, with lawn food, weed control, water when available, and regular mowing, for practical use and aesthetic reasons. The intermediate lawn is mowed to look neat, but does not receive the other stuff. The rougher country lawn, is mowed maybe three or four times each year, to keep the grass and unwanted vegetation under control.



172. Diagram of three phase lawn

Other points to consider when facing long term lawn maintenance. Large areas of grass can be fenced and used as seasonal pasture, requiring only periodic mowing to control other vegetation.

Grass areas should not be uncut for a season, they can become a fire hazard in the fall and early spring.

For safety reasons, the lawn or any mowed areas should be kept free of rocks, debris or hazards. Mower blades can turn junk into a lethal missile. Injuries and damage to mowers will usually occur near the outside cut line, when mower blades catch rocks, wire from the fence or the rake that was left next to the maple tree last fall.

173. Sheep on lawn

BASIC MATERIALS THAT ARE REQUIRED ON AN ACREAGE.

Materials needed for the development and maintenance of a rural property are sometimes available on the site, topsoil and firewood come to mind. Other materials that may need to be purchased.

GRAVEL and AGGREGATE PRODUCTS.

<p>Pit run Is a gravel product that is sold unscreened directly as it is dug out from the gravel pit.</p> <p><i>Used for road-base and fill material.</i></p>	<p>Drain rock Is cleaned rock which is screened to a required size 2 cm – 5 cm for example.</p> <p><i>Used for drainage and septic fields.</i></p>	<p>Screenings Is the fine gravel and sand which is screened from drain rock, 2 cm minus.</p> <p><i>Used for driveway topping landscape base and sub-grade fill.</i></p>	<p>Road mulch Is a mixture of fine clay or silt, sand and crushed rock, blended to pack down hard when applied to a road surface.</p> <p><i>Used for roadways.</i></p>	<p>Crushed rock Is quarry or oversize rock which is mechanically crushed to a required size eg 2 cm minus.</p> <p><i>Surface material for driveway, pathways, parking area.</i></p>	<p>Navijack A washed blend of sand and gravel aggregates.</p> <p><i>Intended for mixing in concrete.</i></p>
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124.	125.	126.	127.	128.	129.
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OTHER BULK MATERIALS

Topsoil.	Sand	Compost	Manure	Sawdust	Bark-mulch
<p>This material can vary considerably depending on its origin and the size of screen if used. Check for quality, consistency, stones and debris, and weed seeds.</p>	<p>The sizes of sand particles will determine its use, coarse granular sand will allow drainage and air movement. Fine silt sand will retain moisture.</p>	<p>Many organic materials can be composted and sold in bulk. Determine the type and origin of materials used.</p>	<p>Another very variable product, determine the age and composition of manure. If you plan to use it on your garden check for chemicals, and weed seeds.</p>	<p>Limited amounts can be used as a soil amendment, animal bedding, or mulch. Some sawdust produce toxic leachate if used improperly.</p>	<p>Ornamental ground bark can be used as mulch for shrub beds etc. Some bark e.g. cedar, is not desirable next to plants.</p>

MAINTAINING LAWNS AND GRASS.

175. Indi pattern

176. Parallel pattern

CUTTING CORNERS

The time spent mowing your lawn each year can be reduced by many hours, if the 'mowing pattern' is suited to shape of the lawn, and the type of equipment. The lawn is dotted with, trees, two power poles, a pump house, and a large fenced vegetable garden. The lawn can be mowed by following a continuous line from the perimeter cut, mowing in one width each rotation, like an ever shrinking Indy track. However, the jigsaw shaped pieces in the center of the yard, can take forever to mow.

Because most ride on mowers have a minimum turning radius, mowing an irregular shaped lawn is often made easier by cutting the grass in parallel lines, as much as possible. Using a hand mower to trim around trees and into confined areas can save more time.

CUTTING TIME

Removing grass clippings from a large lawn is not usually necessary. If the grass is tall, it can be mowed with the blades raised to 8 or 10 CMS, (3 to 4 inches). After the grass has dried out, the area can be mowed again with the blades lowered. Keep the blades of a mower sharp and straight, to maximize available engine performance and produce a more finished appearance to the lawn.

Top dressing a lawn with course sand or topsoil to level out rough areas is often necessary. Apply a 10 –15 cm layer of mulch around larger trees when bulging roots make it difficult to mow.

Do I need to rake up the grass clippings.



177. Mulching trees

FLOWER AND SHRUB GARDEN MAINTENANCE

Flower and shrub gardens will usually require maintenance several times during the year. If the upkeep has been neglected for even a few months, a large ornamental garden will need several hours of work to restore it to a manageable state.

Having the right tools, is the key to effective garden maintenance. Sharp, clean gardening tools, with sturdy handles, will save your energy and improve the effectiveness of your project.

Personal safety and protection should be taken into account, durable footwear, gloves, safety glasses, and protective headgear should be worn when hazards are present.

178. Picking roses

TAKING CONTROL OF WEEDS

179. Cartoon, pulling big weeds

Weed control, has the dubious distinction of being the occupation that worldwide, involves more person hours of work each year than any other job. Controlling or eliminating unwanted vegetation in flower and shrub beds can be accomplished in four ways; Hand weeding, mechanical

Common garden weeds include; Quack grass, Knot weed, Pigweed, Purselane, Chick-weed, Shepherd's Purse, Platain, Pineappleweed, Groundsel,

WEED CONTROL IN FLOWER AND SHRUB BEDS.

Take a worst case scenario of a large, overgrown, perennial flower and shrub bed, totally choked with quack grass, thistles, and bindweed. One approach is to first trim back larger shrubs to make the area accessible, using long handled loppers, or small chain saw, and shears. Trim back long growth and seed stalks on smaller shrubs and plants. Next, trim off the taller weeds with shears or string line trimmer. After the initial cutting, clear the branches and trimmings off the garden.

180. Overgrown garden

181. Digging out shrubs

If the weeds and grass have totally overgrown smaller ornamental shrubs and perennials, it may be necessary to dig out the usable plants. Then the weeds should be separated from the roots of the plants. Preferably, this type of operation is done in the early spring or fall.

182. Hoeing weeds

Perennials should be divided and then replanted after the garden soil is reworked and cleaned up. If the weeds have not grown into the plants, a sharp, sturdy hoe will cut the weeds off under the soil surface.

Weeds that have been hoed from a large area are more easily cleaned up if they are allowed to dry out for a day or two. The hoeing will need to be repeated about every two weeks, until the weeds are starved into submission.

Depending on the space between plants, hand cultivating, or roto-tilling may be an option, root damage and the destruction of seasonal bulbs can result, from working the soil too deeply.

183. Rototilling

GARDEN MAINTENANCE

Mulching perennial flower and shrub beds with 8-10 CMS of bark-mulch, wood-chips, or sawdust will help to control weeds. After four or five years, the mulch will break down and will probably need top dressing. One cubic meter of mulch will cover 10 – 12 square meters of soil area. Applying a thin layer of mulch directly onto garden soil is okay, as a soil amendment but will not stop weed growth.

184. Mulch shrubs

How can I control a mass of hard to kill weeds and grasses, without too much hard work.



Heavy gauge, black polyethylene sheeting, can be used as a weed control medium. To gain control of a weedy garden, a quantity of bark mulch, peat moss, or even sawdust, should be at hand. The polyethylene is laid out on top of the weedy garden soil, starting from one end of the sheet, and cuts are made to allow the desirable plants to be exposed. As you proceed, a thin layer of mulch is placed on the sheeting, to hold it in place. It will take two or three months for the weeds to die under the plastic. The materials can be removed and reused, or when the soil has been properly prepared and contoured the polyethylene and mulch can be installed as a permanent weed barrier.

Landscape cloth is an option as an underlay to mulch. However, on large areas of garden, weeds and plant roots can grow through the fabric making maintenance in the future more difficult.

If no other method is appropriate, chemical control may be an option for a serious weed problem. Careful application of a suitable formulation of herbicide can be effective in gaining control of hard to kill weeds. Always apply the product as directed on the label. Never use a soil sterilant or unapproved chemicals on an acreage. They can kill more than weeds and you could have traces of them in your tap water.

185. Install poly

TO REDUCE MAINTENANCE STRESS IN THE GARDEN

- Do not create new gardens until you are sure that you can maintain them.
- Wherever possible, utilize low maintenance or natural landscaping.
- Remove weeds from the garden before they flower or seed.
- Eliminate small weeds on a regular basis. This is much more effective than controlling masses of mature weeds once or twice a year.

TYPE OF PLANTS OR GARDEN	MAINTENANCE LEVEL	TYPE OF MAINTENANCE	REDUCING MAINTENANCE
Narrow borders of annual bedding plants and bulbs.	High	Soil preparation, planting, watering, weeding, dead-heading, fertilizing, edging.	Plant annuals as feature groups in highly visible areas, and use deep mulch around the groups.
Small flower garden areas around the base of trees.	High	Same as above plus the need for extra watering and care not to damage tree roots.	Install a weed barrier and mulch or a ground cover.
Rock gardens.	High	Most of the above, plus extra difficulty in weed control around the rocks	Use a rock garden as a concentrated feature, highly visible, easily accessible.
Carefully planned foundation, and feature beds, with a balance of well-spaced shrubs in mulch, with groups of perennial and annual flowers in strategic areas.	Moderate	Maximum effect can be realized, the areas of higher maintenance will be accessible, and of limited size.	Have a supply of water close at hand, and choose plants that require the least possible maintenance. Do not allow weeds to become established.
Highly Manicured Lawn	Moderate To High	Mowing, trimming edges, fertilizing, weed control, watering, rake leaves.	Lower the manicured standard, prepare mowing strips around edges.
Modest standard country lawn.	Low to Medium	Mowing with ride on mower, trimming, rake leaves.	Use mulch in hard to trim areas.
Utility country lawn	Low	Minimal mowing with ride on mower.	Bribe someone to cut the grass.
Selected areas of natural vegetation.	Minimal	Annual trimming back of overgrowth.	Plant more areas to selected natural species.
Flower and shrub beds with no defined edging.	More than necessary.	A long term challenge to keep the lawn from invading the edge of the garden.	Install an edge board, curb, mowing strip.

UNDERSTANDING TREES

Trees have many attributes, as well as being visually appealing, they can provide shade from sun, an effective wind and snow break and act as a noise or dust barrier. They can be a source of firewood, lumber, fruit and nuts, and an attraction for birds and wildlife. They also help to retain groundwater.

186. Different trees

187. Planting small tree

The life expectancy for different species of trees can range from less than ten years, to hundreds of years in ideal growing conditions. Before planting, pruning, or trimming trees it is important to understand the trees growing habits, as trees react in different ways.

- Determine the mature size of the tree.
- Does the tree prefer sun or shade?
- Will the tree develop a large root system?
- Does the tree take well to pruning or trimming?
- Is the tree in a good location?
- Will the tree provide to much shade?
- Will the tree block a view?

188. Methods of pruning and trimming

Several objectives need to be considered when maintaining trees. Pruning can improve the health of the tree, by removing diseased or broken branches, increase fruit production, and enhance the appearance. Trimming can improve safety, create a better view or provide better access.

Maintaining Trees

Effective maintenance will help to prevent trees from damaging buildings, power lines, fences, or perhaps your crop of tomatoes. Trees should be planted at a safe distance, so that they do not come into contact with a building. The problems they can cause include structural damage, roots can lift concrete, break apart asphalt, plug drains or the septic disposal field. Growing trees can shade your garden or greenhouse, and rob them of moisture and nutrients. Tall trees growing close to your house or buildings can also present a hazard, as they can attract lightning.

189. sketch safe tree

190. Big tree near powerline

EVALUATING BIG TREES. Large trees growing within twenty-five meters of a building or overhead power line should be examined at least once a year. Look for dead, damaged, or diseased roots or branches, and signs of decay in the main trunk. Areas of peeling bark, sap oozing from cracks, or fungus formations are an indication that there is a problem. Large affected branches should be removed, a.s.a.p. If the trunk of the tree is diseased, the whole tree should be removed.

191. Topping ,pollarding

Topping or pollarding large trees that are growing close to buildings, is not recommended. A mass of new growth will develop where the cuts are made. The new growth is not securely attached to the tree, this will cause problems in the future. However, professional pruning with careful monitoring, could be considered. Trees that are growing in front of a nice view do not always have to be removed to provide clear vision. The trees can be allowed to grow, and the bottom branches removed where they obstruct the view.

DEVELOPING AND MAINTAINING A VEGETABLE GARDEN

This subject is complex so only the most common vegetable garden questions will be looked in to.

Producing food is probably the most satisfying step a person can take toward an independent, self-sustaining country lifestyle.

Developing a productive vegetable garden will involve learning, practice, and hard work and will take a fair amount of time.

Information can come from books, TV and radio programs, how to videos, or the Internet. Probably the best tips come from successful gardeners in your community, as they understand the soils, climate and plant varieties that do well in your area.

192. Holding a basket of veg.

193. Screening soil building beds.

VEGETABLE BASICS

Fresh, healthy vegetables and fruit can be grown in most parts of the country. Many acreage residents produce enough food on their land, to be totally self-sufficient.

Don't assume that home-grown produce will be much less expensive than buying vegetables from a store. Growing your own food is a way of life, and you have the assurance that the produce is grown without undesirable additives.

If you a new, home vegetable gardener, try a small garden plot to get your green thumb in shape. A compact well-managed vegetable garden, will be more productive and much easier to maintain than a large area of poor quality vegetables.

Assess the amount of vegetables that you will need for fresh use and for preserving. Also evaluate how much area of garden you are able to maintain. Soil preparation, planting, weeding, watering, harvesting, and storage will take time and effort.

An intensive vegetable garden as small as 10 – 15 sq. meters (100 –150 sq. ft.) can produce a steady supply of produce.

SUN, SOIL, AND WATER

The vegetable garden must have direct sunshine, nutrient rich soil and a supply of water from spring until fall. Choosing a convenient location for working in is also important.

Soil conditions can vary considerably on a parcel of land. Clay soils, organic soils, or loose granular sandy soils could all be present on your property.

SOIL, NUTRIENTS, SUN AND WATER

Determining the basic fertility of your soil can be done with a soil analysis. These tests can usually be arranged with a farm supply store, or directly with testing laboratories. Often home gardeners rely on a trial and error method of soil improvement.

At least sixteen nutrients, which are derived from the soil, air and water, have been determined as essential for plant growth. They are;

- Nitrogen
- Phosphorus
- Potassium
- Sulfur
- Calcium
- Iron
- Magnesium
- Boron
- Copper,
- Manganese
- Molybdenum
- Chlorine
- Zinc
- Oxygen
- Hydrogen
- Carbon

The three nutrients most commonly applied to gardens are Nitrogen (N), Phosphorus (P), Potassium (K). If chemical fertilizer is used, these nutrients are represented by numbers on the bag, i.e. **6 8 6** is 6% N, 8%P, 6%K.

Soil testing can determine a large number of factors about the soil including the presence of toxic substances. A typical soil fertility analysis would determine pH & conductivity, organic matter, ammonium, nitrate, phosphate, potassium, and would make recommendations for lime and fertilizer.

194. Soil sampling

The components and structure of soil should provide for fifty % of the volume, to be pore space for air and water. Soil amendments and conditioners, as well as nutritional additives are usually required to develop productive garden soil. Garden soil consists of mineral particles, dead organic matter, live organisms, air, water, soluble elements and nutrients. With these components in balance, the garden will be productive.

195. Diagram close up soil

Loam soil: A mixture of sand, silt, clay, organic constituents, air and water. The solid components in loam soil would consist of about 1/3 sand, 1/3 silt and clay and 1/3 organic matter.

- Sand: The larger mineral grains fall apart when wet or dry.
- Silt and clay: Fine soil particles are sticky when wet and set hard when dry.
- Organic Matter: Peat, decayed vegetation, compost, manure, and a teeming mass of microbes including algae, fungi, bacteria and other little gismos.

VEGETABLE GARDEN SOILS

BALANCING THE pH

Acidic or pH levels: Soil pH levels affect the nutrient availability for plants, a neutral pH level in soil is 7. A highly acidic soil is in the 4.5 – 5 range, and an alkaline soil above 8 on the pH scale. Specific species of plants thrive in soils on the ends of the acid or alkaline range. Most vegetables prefer soils which are neutral too slightly acidic pH 6.0 – 7.0.

The majority of soils tend to be too acidic, the addition of lime to 'sweeten' the soil is recommended.

196. pH balance

197. Handful of soil

FRIABLE GARDEN SOIL

The consistency of the soil should be loose enough to easily dig or work to a depth of 30 cms., but firm enough to support or plants. When soil is 'friable', a hand full of moist soil should crumble apart after being squeezed into a firm ball.

Garden soil should not contain weed seeds or roots, toxic or harmful chemicals, or de cease organisms. Soil will need to be screened or cleaned up if it contains rocks roots or other debris.

CLIMATIC CONDITIONS

A minimum of six hours of direct sunlight per day is required for a reasonable vegetable crop yield.

Locate your garden away from the deep shade of buildings or trees.

The type and variety of vegetables grown will depend upon the amount of frost free days in the growing season, and the average daytime temperature.

High wind and hot sun together are not good for a vegetable garden, if the area is exposed to high winds a wind-break or shelter belt is advised.

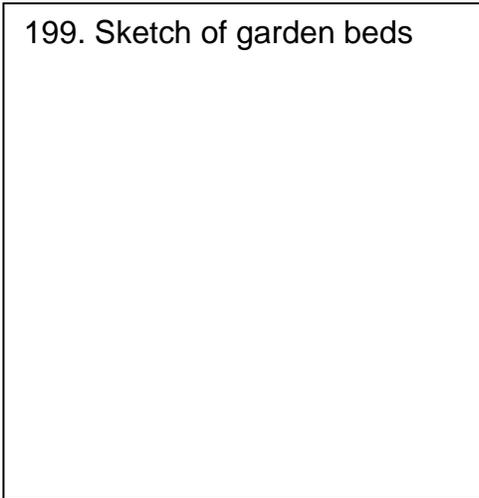
198. Sketch sun shade angle

VEGETABLE PRODUCTION

PLANNING THE CROP

Salad vegetables, peas, beans, or carrots, or strawberries? Which types of produce do you need, how much you can utilize, and where to plant them in the vegetable garden? These questions should be answered before you proceed too far. Perennial plants will expand in size and stay in the ground for several years. Salad crops have a shorter growing season, so they can be planted in succession. Greens and Cole crops can be grown from early spring to late fall. Root crops, frost sensitive plants like tomatoes and peppers, and soft fruits will need a space in the garden.

199. Sketch of garden beds

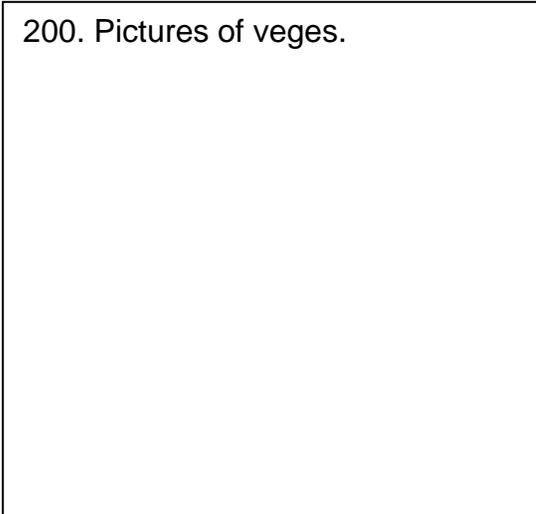


TYPES OF FOOD PLANTS.

Perennial plants	<ul style="list-style-type: none">• Asparagus• Most herbs• Strawberries• Bush fruits
Greens, Brassicas, or Cole crops.	<ul style="list-style-type: none">• Spinach & chard• Cabbage• Cauliflower• Broccoli
Root crops	<ul style="list-style-type: none">• Carrot , parsnip• Turnip, radish• Potatoes
Bulb crops	<ul style="list-style-type: none">• Onion, Garlic
Salad plants	<ul style="list-style-type: none">• Lettuce• Celery• Green onion
Legumes	<ul style="list-style-type: none">• Peas & beans
Sub tropical type plants	<ul style="list-style-type: none">• Tomato• Pepper, eggplant• Cucumber
Vine plants	<ul style="list-style-type: none">• Melons• Squash & pumpkin• Zucchini

Seed catalogues are a good method of leaning about the different varieties available. They can simplify the job ordering seeds and other plants.

200. Pictures of veges.

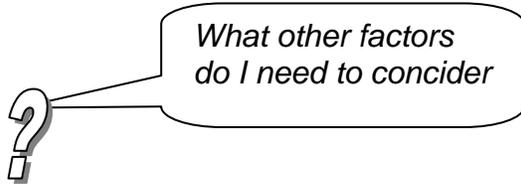


OTHER TYPES OF FOOD PLANTS

Small fruits	<ul style="list-style-type: none">• Strawberry• Raspberry• Currents• Gooseberry• Grape
Herbs	<ul style="list-style-type: none">• Mint, sage, oregano• Parsley, thyme, etc.

SEEDS OR PLANTS?

The growing process can start in one of three ways. Direct seeding into the garden, seeding in trays indoors or in a greenhouse to produce your own bedding plants. Purchasing plants at a greenhouse or garden center is another alternative. Trial and error is one way to find out which method works for you.



The most common vegetable garden frustrations are;

- Weeds.
- Bugs, cutworms, caterpillars, root maggots etc.
- Short season, i.e. late frost in spring, early fall frost.
- Pests, rabbits, deer, raccoons.
- Water shortage.
- Blights and fungus.
-

201. Weed control

WATERING

During the late spring and summer months, a readily accessible water supply is essential in most gardens. A piped supply or a large water tank should be located close to the garden. Depending on the type of garden area, hoses, sprinklers, drip irrigation, soaker hoses, or a watering can will be needed.

WEED CONTROL

Weeds come many shapes and sizes, their main purpose in life is to go forth and multiply. Their method of propagation will involve seeds, or vegetative development, and many weeds use both techniques at the same time.

Weed seeds are found in most fertile soils, they can remain viable in the soil for many years.

Preventing new weed seeds from invading your garden is important. All of the weeds and grasses within one meter of the perimeter of the veggie plot should be prevented from seeding. by mowing or cultivation. Wind blown seeds, from plants like Canada Thistle travel for a long distance, these weeds should be prevented from seeding anywhere in the home-site area. Many weed seeds are imported with new topsoil, compost, manure or mulch. If weed-seeds are suspected in these materials, they should not be used on the garden.

KEEPING WEEDS UNDER CONTROL

How do you kill weed seeds in topsoil, manure or compost.



If you have topsoil or organic materials that contain weed seeds, there are two methods of control. Controlled germination involves spreading out the soil, compost or manure, in a confined area and working over the material regularly with a cultivator until the weeds stop appearing. Alternately, covering suspect materials with black polyethylene for an extended period, particularly if this is done during the heat of the summer. This will stimulate natural decomposition and heating of organic materials.

The best time to kill weeds in the garden is when they are very small. Hoeing, cultivating, or roto-tilling the top 2-4 centimeters of soil every two weeks for a period of up to two months will be necessary for an initial cleanup. Raised beds or small plots can be weeded, using a sharp hoe. Larger gardens will require a by-weekly shallow pass with a roto-tiller. If the soil has previously been worked deeply, the weeds will be controlled, by just scratching the surface with the machine.

202. Covering pile with poly sheet

203. roto till

Gardens that are infested by established grasses or other stubborn weeds, can be brought under control, using the frequent cultivation method. The key is to persevere with the 'every two week' routine until the weeds are starved into submission.

Another approach is to use heavy black polyethylene, covered with a thin layer of mulch, sawdust or wood-chips. This should be left in place for at least three months or from late summer to spring, before removing and working the soil.

Maintaining a vegetable garden is much like keeping a pet. It will not survive without necessities of life such as food (nutrients) and water. The commitment is continuous and long term, and the time spent with grooming and pampering the garden will be rewarded by ongoing and productive return.

SUMMARY OF VEGETABLE GARDEN REQUIREMENTS

VEGETABLE GARDEN COMPONENTS	A SUCCESSFUL VEGETABLE GARDEN WILL NEED	IMPROVEMENTS THAT CAN BE MADE TO EXISTING CONDITIONS
SOIL	Fertile loam soil, composed of approximately. 1/3 sand, 1/3 silt and clay and 1/3 weed-free organic matter, worked to a depth of at least 30 cms.	Heavy clay soils will benefit from the addition of granular sand and organic materials. Gravel and granular soils will improve with fine silt and organics.
NUTRITION	Soils containing an ample supply of Nitrogen Phosphorus and Potassium as well as a wide spectrum of trace elements	Natural sources of nutrients include compost, weed free manure, seaweed, bone-meal etc. or Balanced chemical fertilizers.
ACIDITY	The acidity or pH level of the soil should be between 5.5 to 6.8 for most crops.	Lime will raise a low pH level and help to sweeten an acidic soil.
WATER	A supply of water should be sufficient to maintain soil moisture levels during an extended growing season.	Adding mulch to a vegetable garden and using drip irrigation or soaker hoses will minimize water use.
CLIMATE	The length of the growing season will determine the type and variety of crops grown Become familiar with localized climatic conditions	A cold frame, greenhouse, or cloches can extend the growing season. Choosing a protected, south-facing location will help.
SUNSHINE	A vegetable garden should receive more than six hours of sunshine per day	Trim or remove trees that heavily shade the garden, or if the problem is too bad , relocate the garden.
SIZE OF GARDEN	The size of a garden should be in proportion to the amount of vegetables used. Surplus home grown vegetables are often wasted.	Successive planting of seeds e.g. lettuce, peas and beets, will produce crops that will mature over an extended period.
FENCING	In many locations, secure garden fencing is essential. Hungry deer, rabbits, raccoons, or even your own free range chickens may be a problem.	Keeping deer from you vegetables will require at least a six-foot fence, with small mesh at the bottom to keep out rabbits and other critters.
TOOLS	A good selection of gardening tools are a must. If the garden area is more than 100 sq. meters you will probably need a rotary tiller.	It is a good idea to keep garden tools clean, oiled and under cover. Prolonged exposure to sun and rain will cause unnecessary deterioration.
WEEDS	No weeds	Always control weeds before they flower, never introduce weed seeds to the garden in mulch or manure.

GARDENING CALENDAR OF ACTIVITIES

WINTER

- LANDSCAPE PLANNING,
- ORDER SEEDS,
- CHECK AND SORT STORED VEGETABLES AND FRUIT,
- SERVICE AND REPAIR GARDEN TOOLS AND MACHINERY.
- PRUNE WOODY TREES AND SHRUBS.
- CLEAN UP TREE LIMBS.

204.

LATE WINTER, EARLY SPRING

- FINISH PRUNING,
- PLANT TREES AND SHRUBS,
- DORMANT SPRAY FRUIT TREES,
- SOW SEEDS INDOORS.
- SOW LAWN GRASS IF SOIL CAN BE WORKED.

EARLY SUMMER

- PLANT SUCCESSION OF VEGETABLES,
- WATER AS NEEDED,
- 'THIN OUT' (SPACE) SEEDLINGS,
- HILL POTATOES,
- CUT GRASS,
- CONTROL WEEDS,
- PICK SOFT FRUIT,
- TRIM SHRUBS & HEDGES.
- PLANT FALL PRODUCING FLOWERS & VEGETABLES.

SPRING

- PREPARE GARDEN SOIL,
- CLEAN UP BEDS,
- PLANT SMALL FRUITS & HARDY VEGETABLES,
- CONTROL WEEDS,
- PLANT OUT HARDY ANNUALS,
- RAKE LAWN, and SOW LAWN GRASS. MOW GRASS,
- ADD NUTRIENTS TO SOIL,
- ADD MULCH TO BEDS.

SUMMER

- WATER AS NEEDED,
- CUT GRASS,
- KEEP WEEDS UNDER CONTROL,
- HARVEST FRUIT & VEG.,
- PRESERVE & FREEZE PRODUCE,
- SEED LAWNS OR GRASS LATE SUMMER.

LATE SPRING

- FINISH SEEDING AND PLANTING OUT MAIN VEGETABLE CROP,
- WATER SEEDLINGS,
- CONTROL WEEDS IN GARDENS,
- CUT GRASS,
- PLANT TENDER ANNUALS.

FALL

- HARVEST MAIN CROP POTATOES,
- HARVEST & STORE ROOT CROPS,
- PICK REMAINING APPLES AND PEARS
- CLEAN UP FLOWER AND SHRUB BEDS
- PLANT SPRING BULBS,
- PLANT TREES & SHRUBS AFTER FIRST HEAVY RAINS,
- SEED FALL RYE OR WINTER CROP IN VEG. BEDS.
- CLEAN UP FALLEN LEAVES,
- PULL UP DEAD ANNUALS AND TRIM DEAD FOLIAGE.

205.

BEFORE HEAVY FROST

- DRAIN EXPOSED WATERLINES AND HOSES,
- MOVE FROST SENSITIVE PRODUCE & PLANTS TO A PROTECTED LOCATION,

UNDERSTANDING ACREAGE SERVICES AND UTILITIES.

The water supply, waste water disposal, electric power, natural gas, telephone, cable TV, fire prevention, security, solid waste disposal, recycling, as well as driveways, parking and storm water management. These services or at least many of them are required on an acreage, and are usually developed, modified and maintained at the discretion of the property owner. This is quite a contrast to urban services and utilities, which are generally the responsibility of the municipality or utility providers.

The Acreage Water Supply:

Assuming your water supply originates on your own property, and is not part of a community water system. Your water will be pumped from either a shallow well, deep well, cistern, dugout, lake or spring. The most common source of rural water is from a shallow or deep well.

A shallow well is generally less than 7.5 metres (25 feet) deep, often dug with a backhoe or excavator. Concrete well rings about 1 meter across, form the casing and usually the well has a concrete top with a tapered lid. The water in a shallow well usually originates from surface seepage, the quality and volume can be affected by nearby land use activities.

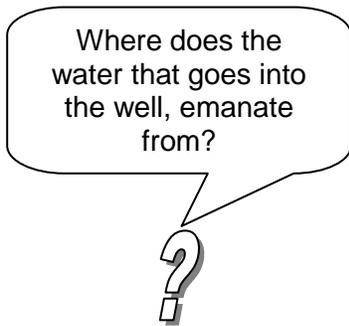
206.

207.

A deep well is usually drilled to a 20 – 30 cms. (8 – 12 inches) diameter, and can range from eight meters to more than one hundred meters deep. A steel casing is usually driven into the well hole down to a layer of solid rock or hardpan. Deep wells are not so readily affected by land use activities. However proper construction standards and maintenance techniques are crucial to a safe water supply.

OTHER WATER SOURCES Springs, ponds, lakes, rivers, rainwater storage cisterns, can be usable sources of water. In almost all cases the water should be tested, and filtered or purified before being used for human consumption.

THE WATER SOURCES



Hydrology is a very complex subject. The water in a well can originate from a combination of surface water percolating down through the soil, residual groundwater, and recharge from watercourses, lakes, and wetlands, or a single source such as a confined aquifer. If a marked seasonal variation is noticed in the water level, or if the water appears murky after a heavy storm, a high proportion of surface water is entering the well.

The rate at which water moves through the ground will depend upon the geologic formation, the degree of slope, and the amount of precipitation. Some highly permeable materials such as clean coarse gravel can transport water at more than 30 meters an hour. Other formations of clay or rock are impervious to water.

Ordinary, high percolating soils will transport water and contamination at many meters per day. The question that is not clear is; how well does the soil, filter and purify the water?

An aquifer defines a natural storage area for underground water. This supply could be recharged on a continuous basis, from underground streams and seepage, or 'old' water that has been retained into a confined space.

208.

Water quality and quantity can be affected by activities which occur a considerable distance, from your pumping source or well. These could include land clearing, road building, residential, industrial or other development, intensive agriculture or livestock operations, wetland drainage, dams, mining, and high volume water extraction. Many of these factors will be out of your control, however you can ensure that your water supply is not adversely affected by activities on your own property. Minimizing water loss and chances of water contamination, and maximizing the potential for water retention are important.

209.

WATER SUPPLY, IS IT SAFE ?

Any water source, can be subject to degradation or contamination. It should not be taken for granted that the transparent liquid that comes out of the tap is safe for human consumption. Water should be tested and the results compared to the Canadian Drinking Water Guidelines or similar specifications, if chemical, mineral or biological contamination is suspected specific tests may be required.

210.

Wells must not be located within thirty meters of a septic system drain field, livestock yard or animal waste storage area, this distance should be greater if the well is located in very porous soils. On sloping land the well should be located uphill from any source of contamination. Drainage or run-off from a barnyard or a source of livestock or pet manure should be directed more than thirty meters from your well. Surface run off or storm water should not be allowed to accumulate close to a well, the soil level around the well should be raised in relation to the surrounding ground level.

The dumping of chemicals such as anti-freeze, paint thinner, waste oil etc. should be avoided anywhere on your property.

The water source and the delivery system should be checked out and maintained on a regular basis.

The well casing should be protected from accidental damage. Inconspicuous well caps can be damaged during snow removal, they should be clearly marked. Shallow wells are usually covered with a concrete lid, this should always be in place and secured perhaps with a padlock. Livestock, dead deer, raccoons, muskrats, and many other creatures have been found in wells. They do not help the flavor of the water.

211.

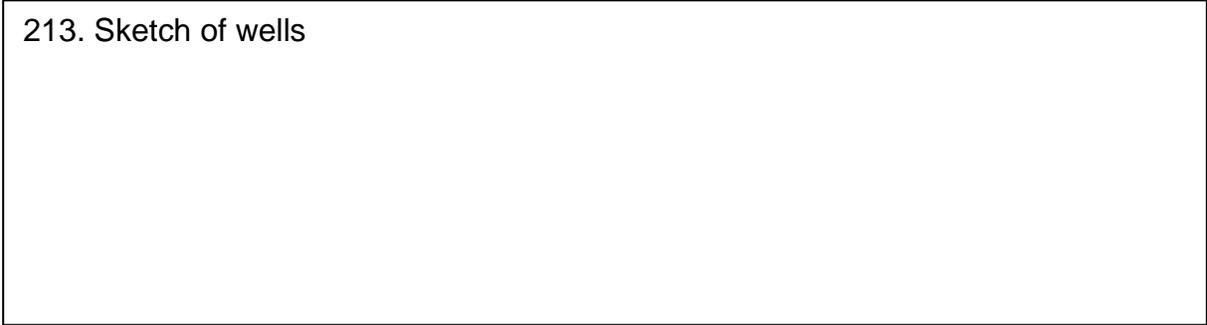
212.

The location of water supply pipes, from the well to the house and any other supply pipes, should be marked on a layout plan of your yard. It is also handy to have the location of underground services marked with paint where they pass under sidewalks or into buildings as buried

WATER WELL, WELLNESS

The well heads or both deep and shallow wells needs to be protected from damage and from surface run-off water.

213. Sketch of wells

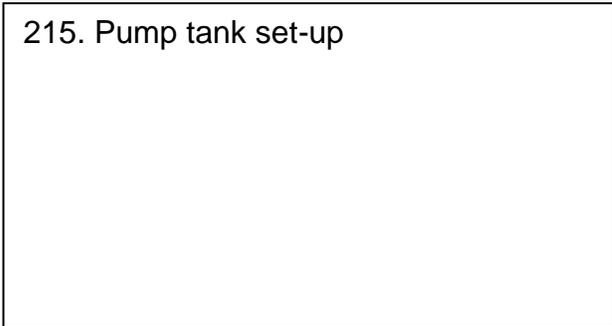


Deep wells are usually seen above the ground as a capped steel pipe. A cement pad around the casing will seal the surface, and prevent weeds and grass from growing around pipe. Installing a small insulated box, will protect the well head make it more visible.

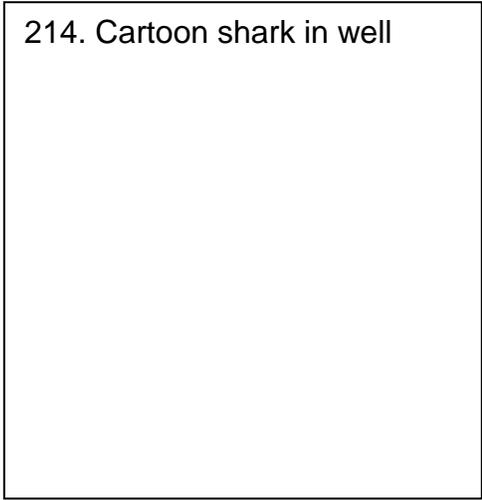
Shallow dug wells are more susceptible to problems and should be checked regularly. Remove the lid and inspect the inside of the casing and the water with a flashlight. Look for anything swimming or floating in the water, you could get a surprise. Look for cracks or gaps in the top well sections, these gaps can be the one way entrances for frogs or snakes which find your well very refreshing on a hot day. All openings in the top two meters of well casing should be sealed with grout.

The water should be clear and the well should not have an unpleasant stale smell. If any of these conditions are cause for concern the well should be pumped out, cleaned and disinfected. Guidelines for well disinfecting are available from your local Health Department.

215. Pump tank set-up



214. Cartoon shark in well



WATER SUPPLY All above ground components of the water distribution system must be **protected from freezing**. Additional insulation and supplementary heat are often required during cold weather.

Maintenance of the system includes checking for leaks, cleaning or changing filters, and flushing out pressure and hot water tanks.

The risk of electric shock is high where water and electricity are close together. Installations must comply with electric codes. Pumps, switches, wiring, etc. must be secure, grounded, correctly fused and in a dry location.

SEWAGE DISPOSAL SYSTEM

The on site sewage disposal system is an essential component of the modern rural homestead. In the past, sewage and waste-water disposal often consisted of an outhouse over a pit, and a pipe drain from the kitchen sink into the orchard.

A conventional sewage disposal system handles all of the homes waste-water, including sinks, toilets, showers, washing and dishwashing machines. The volume of water processed by this system can range from --- liters to --- liters per residence each day, which could add up to --- liters or --- gallons each year. Failure of the system due to inferior construction, improper use, or inadequate maintenance pose a human health risk, and can contribute to water contamination problem on a larger scale.

216. Cartoon outhouse

217. Diagram of system

THE SYSTEM

All sewage disposal systems must meet health standards and require approval by the appropriate authority.

Several types of system are in use in rural areas. Conventional residential sewage treatment, consists of a septic tank which receives the wastewater from the house. Anaerobic bacteria help to break down organic components. Gravity, settles out the sediments and a layer of floating scum forms on top of the liquid. The partially treated effluent drains into a distribution chamber, from there it drains, or is pumped into a network of perforated pipes, which are buried in the ground.

The amount of purification that occurs in the ground depend upon the soils consistency and porosity, the temperature, the water table, rainfall and the type of effluent. Usually, **most** of the harmful biological and chemical contaminants are removed before the water percolates into a watercourse, the groundwater, or your well.

LOCATE THE SYSTEM

The location of the septic tank, distribution box and disposal field should be identified on your property. A sight plan, should be drafted showing the appropriate measurements and distances from buildings. These areas should be kept free of heavy traffic, excessive water run-off, excavation or plantings of trees or large shrubs.

PREVENTING PROBLEMS WITH THE SEWAGE DISPOSAL SYSTEM.

A sewage disposal field has a limited effective life expectancy, as little as ten to twenty years. That time can be extended, with proper use and regular maintenance. Signs that the system is failing include pipes becoming plugged, and high moisture and smell on the disposal field area.

Bacteria and other crap-munching critters, play a major roll in breaking down sewage. Part of the maintenance of a sewage system involves keeping those little guys alive and well.

218. Cartoon bacteria eating sewage

219. Sketch of do's & don'ts

Preventing septic problems,;

- Avoid putting harsh chemicals, cleaners, solvents, etc into the system.
- Do not flush non-digestible materials, napkins, grease, coffee ground and filters etc. into the system.
- Do not overload the system with excessively high volumes of wastewater in one day.
- Don't leave the system unused for long periods especially during the winter months.
- Protect the inlet pipes and tank from freezing, eight to ten straw bales will help.
- Your septic tank should be inspected every year, and serviced, i.e. pumped out, usually every two and three years.

SOLID WASTE and THAT GARBAGE

If you live in a rural area, you may not have a garbage collection service. A rural responsibility is in not contaminating the land with waste materials or chemicals. The 3 R's, reduce, reuse, and recycle are good start. Recycling facilities are usually located in town or at a landfill or transfer site. Hopefully in the future most waste materials will be recyclable, reducing the amount of garbage that we produce. Many areas have facilities to dispose of oil, paint and other chemicals, check with local authorities to find the locations.

220. Recycling

ELECTRIC POWER SUPPLY

The electric power supply is important to most country residents. Interruptions in the service are inconvenient, downed power lines can be dangerous. Primary power lines, that carry very high voltage, often extend onto rural properties. A transformer reduces the voltage; secondary lines carry the power to the main switch and fuse panel in a building or power shed.

Check the overhead power lines at least twice a year, for;

- Trees or branches that are close to the wires.
- Trees that are leaning toward power lines.
- Power poles that have decay or rotting at the base.
- Power poles that are leaning.
- Cables, insulators, support wires, or other components that appear to be damaged.

All work that is required to the main power supply must be done by qualified persons. Never approach, downed power lines, or touch anything, (a tree or wire fence for example,) that could be in contact with the

221. Tree clearance

222. Downed lies.

223. Telephone connection box

224. Gas meter

wire

OTHER ABOVE AND BELOW GROUND SERVICES

Telephone lines and cable TV and are usually attached to the power poles, below the power lines.

Check with service providers to determine if their supply lines, are above or below ground. Above ground services are most often damaged by trees, or by the wires rubbing against buildings, buried lines can be damaged during construction, trenching, fencing or landscaping.

Natural gas supply lines are buried in the ground and can be damaged by excavation, tree roots, heavy equipment, or the installing fence posts. The location of these pipes and any other underground services should be marked on a sight plan. If there is a need to excavate in an area where underground services could be located, there are toll free numbers to telephone for buried service locations. Maintenance would involve keeping any exposed pipes and the gas meter, area clear of obstructions. Also tall grass, weeds or any materials should be prevented from

FIRE PREVENTION

The risk of fire losses are higher in a rural area than in an urban setting. Significant damage or total loss of your home and buildings can result from an accidental fire. Bush or grass fires, chimney, vehicle or machinery, lightning, or fuel fires, and spontaneous combustion of bulk materials, (hay, feed, or bedding) are potential threats.

Fire prevention tips include.

- Fire extinguishers should be located in a kitchen, workshop, garage and next to heaters and fuel storage.
- Fire and CO2 detectors, should be installed in the home and other buildings.
- Water supply outlets, and hoses should provide for coverage to all significant structures.
- Use fire resistant building materials where possible.
- Ensure that wiring is in good shape, and protected from damage.
- Fuels, solvents, and other chemicals must be stored and used safely.
- Grass and vegetation should be mowed around buildings and yard area.
- Good housekeeping.
- Ensure that buildings with high fire hazards, (e.g. welding equipment, heat lamps, fuels etc.) are spaced apart from the residence.

226. Fences & gate

225. Fire fighting



Should I be concerned with security, in the country

SECURITY

Rural properties are vulnerable to theft, vandalism, uninvited hunters, or intruders. Also, you don't like to think that your horse or 4H calf is wandering loose around the neighborhood.

Fencing, and strategically placed gates help to prevent unwelcome visitors. Gates can be padlocked at night, or if you are away for a while.

Secure fencing keep your pets and livestock on your property. When animals are in a breeding mode a strong fence may be needed to keep out a neighbors excited 2000 lb. bull for example.

Lighting is a deterrent to prowlers. Yard lights, and motion detector lights, are a good investment.

PLANNING STRATEGIES, FOR AN ACREAGE HOMESTEAD

The project could be modifying, or expanding an existing homestead, or building a new home on undeveloped land. Good planning will prevent costly and time-consuming mistakes. Consider these factors when developing a home-site on a country property.

Individual plans should include.

- **Survey plan** *property dimensions.*
- **Water & drainage** *well, sewer, surface, subsurface, creeks, ponds, etc.*
- **Buildings** *house, other structures.*
- **Transportation** *driveway, parking. paths, etc.*
- **Utilities** *power, water, etc.*
- **Topographical** *elevations, soils, trees etc.*
- **Landscape** *lawns, gardens, fields, paddock, etc.*

227. Slope of land

Topography

Is the land suitable for the project?

- The soil conditions should be stable and suitable for construction.
- Is the site safe from flooding.
- The slope of land around the buildings should be between 2% to 6%.

Property

Is the parcel of land large enough?

- Your property boundaries should be located and clearly marked, before clearing land, building an access road or drilling a well.
- Is the area of the building site, large enough to accommodate all of the structural components?

228. Sketch plan

Compliance

Does the project meet land use and zoning requirements?

- Prospectus requirements, covenants, easements, set backs, development permit areas, forestry, agriculture, fisheries, environment, health and other regulations may be in place.
- Has a sewage disposal permit been granted?

Economic

- Does the project make economic sense?
- Are there other options that are more feasible, e.g. renting, and leasing?

Timing

- How long will this project take?
 - When is the best time of the year to start?

Skills

- Do you have the necessary skills and knowledge to manage the project?

Well located

Finding a reliable source of water and an approved site for sewage disposal, is a pre-requirement for land subdivision in many jurisdictions. A property that does not have a dependable water supply or suitable sewage disposal capacity is not a good choice as an acreage homestead.

- Determine the location of the well or other water source.
 - Make sure that the well is productive and the water is safe to drink.
- Conclude that the well is not directly affected by surface or storm water run-off.
- Plan so that the well will not become contaminated from sewage effluent, animal waste or chemical contamination from your property or surrounding land.
- If your property is located downhill from potential sources of contamination, steps may be needed to divert water seepage from the well area.

Sewage disposal

The sewage disposal field and sometimes an alternative disposal field area, should be approved before the planning process proceeds too far.

- The disposal field is down-slope from the well.
- The location will be more than 30 m (100 ft.) from the well.
 - The set backs from property lines, water pipes, natural water courses are okay.
- Driving or parking on the field area will be avoided.

230. Drainage sketch

229. Well and sewer layout

Surface and subsurface drainage.

- Areas with high water tables should be avoided.
- Drainage water must be directed away from buildings, roadways, parking areas etc.
- Contouring land for buildings is often required.
- 1% - 2% slopes drains water in pipes.
 - 2 % - 6% slopes drain water from land.
- More than 6 % slope can cause erosion.
- Ditches are not recommended around a home-site.
- Swales are preferred.

PLANNING TO DEVELOP A HOME-SITE

231. Buildings plan

HOME AND BUILDINGS

The development of a country homestead usually includes planning for buildings, in addition to the home. The site layout plan could provide space and services for.

- Home
- Workshop
- Pump house
- Wood shed
- Garden shed
- Chicken house
- Root cellar
- Garage
- Machinery storage
- Power shed
- Greenhouse
- Barn
- Feed storage
- Outhouse

UTILITIES AND SERVICES.

The planning process should consider the following;

- Electric power
- Sewer
- Telephone
- Natural gas
- Cable TV
- Satellite disk
- Back up power
- Water
- Storm drainage
- Intercom
- Propane
- Solar power
- Yard lighting
- Security censor
- Services may be needed in several buildings or locations on an acreage.
- The layout and routing of pipes and cables should be drawn on a site plan.

Vehicular access and parking.

- Allow 5 meters (16ft.) for roadway width. Plus 2 m cleared on each side.
- Each vehicle parking stall, at least 2.75 m (9ft.) wide, by 5.50 m (18 ft.) plus turning space.
- Provide enough access room, parking, and turn around space for a larger vehicle, e.g. fire truck.

232. Site plan

233. Parking layout

ACREAGE PLANNING

Landscape fencing and pathways.

Without getting into fine details, draw a sketch plan, roughly to scale showing the.

- House
 - Other buildings
 - Patio and deck
 - Existing trees
 - Garage
 - Driveway & parking area.
 - Sewage disposal field
 - Natural vegetation
- Designate areas that are appropriate for.

- Children's play area
- Orchard
- Shrub and flower beds
- Pathways
- Fenced Storage area
- Screen trees
- Fences
- R V and machinery storage
- Vegetable garden
- Lawns areas
- Feature trees
- Pet enclosure
- Hedges
- Wind break
- Pond

234. Sketch layout

Environment

Will the project cause excessive impact on the environment?

- Plan to protect or enhance existing natural features.
- Protect and enhance ponds, and wetland areas.
- Provide a minimum 15 m set back for the riparian areas beside creeks and watercourses.
- Introduce desirable native species to improve diversity.
- Leave natural corridors for the movement of wildlife.
- Retain groupings of native trees and shrubs to provide food and a nesting place for birds.

235. Sketch.

PLANNING PERSPECTIVES

Sun and shade

The location and orientation, and the degree of slope of the land can determine if you have a warm sunny, or a cool shaded home.

238. Building

- Buildings with southern exposures should utilize the free solar energy for winter heating.

239.

- Land sloping to the south will warm up earlier in the spring than land sloping north

Take into account areas that will be shaded from the sun by trees or buildings. The vegetable garden will need at least six hours of direct sunshine per day.

Mark in the direction of the prevailing wind, and plan windbreaks accordingly. Wind, snow and dust problems can be reduced with shelter trees and shrubs, or planted screens.

236. Sun angle

- Mid summer the sun's angle is about 65 degrees as seen from southern Canada.

237. Sun angle

- The winter sun angle is as low as 16 degrees above the horizon in mid-winter.

240. Shade trees.

HOME-SITE LAYOUT PLAN

Locate the components that you need on a site plan.

- House
- Guest parking
- Well
- Pathways
- Natural vegetation
- Garage
- Patio
- Utility poles
- Vegetable garden
- Other buildings
- Sewerage disposal field
- Lawn areas
- Orchard
- Driveway
- Ornamental gardens
- Tall trees

234. Layout plan

MAJOR CONSTRUCTION ON AN ACREAGE

If you are a first time do it yourself general contractor, for a building project, don't be afraid to ask for advise. Mistakes, inefficiency and accidents are best avoided.



What will I need to mark out the site

Some extra equipment that you will need;

- Builders sighting level
- 30m or longer tape
- Lots of stakes
- Flaqqing tape

Make sure that permits are in place, if required.

Site and building plans are drawn.

You have prepared to start the project in the spring or early summer.

The source of materials, equipment, and labor or trades-people, has been checked out.

235. Seasonal calender.

AN APPROPRIATE TIME FRAME FOR A MAJOR PROJECT.

Seasonal and climatic conditions have an effect on the efficiency of a building project. Adverse conditions can slow progress, and prevent a job from being completed on time.

- Heavy rain and saturated soil conditions often make a site unworkable and inaccessible for equipment, particularly in clay soils. Proceeding, if conditions are too wet often create a big mess.
- Although freezing conditions may not affect logging, and tree falling, operations. Heavy frost will disrupt or stop sight preparation or concrete work.
- Building projects, during very windy or heavy snow conditions have an increased risk of accidents or structural collapse.

Land clearing The site plan should define how much land is to be cleared, and the areas that are to left natural. Clearing enough land is important. Clearing too much land could destroy the very reason that you wanted to move to the country. Stay away from areas where native trees and shrubs can be used to enhance the home-site. A tracked excavator with a skilled operator, is the most efficient machine for intricate land clearing. Retain topsoil for landscaping rather than using it as fill material.

236. Excavator clearing

MACHINERY OPTIONS FOR CONSTRUCTION.

Major building projects will usually involve several types of machinery and equipment. On the other hand, one machine can clear the land, excavate footings, grade the area, build the roadways, and landscape the site. If time, efficiency and economy are factors, that choice of equipment must be considered. Some landowners may purchase an older, well used machine, only to find that they spend a small fortune on repairs, parts, and in the end, find that the project takes far too much time because the machine is too small.

237. Cartoon man on small tractor.

238. Heavy excavation

SELECTING THE MOST APPROPRIATE EQUIPMENT.

The efficiency and cost effectiveness of choosing to purchase a machine, contract the work, or rent equipment will depend upon the size and complexity of the project. A medium sized backhoe can dig out a large stump in 20 minutes, while a large excavator could remove, split, and place the same stump on a burn pile in less than a minute. The same scenario will apply to any heavy excavation, road building, moving materials or other operations; the choice of machine should match the particular project.

Four factors need to be assessed, when determining which machine is best for the job. The first being the sheer volume of work to be done, the second relates to the intensity or power needed, the third is in the subtlety of the unit for fine accurate work, and the fourth is the cost.

HIRING TIME

Before hiring a heavy equipment contractor, obtain a couple of estimates from different companies. Ask for references, from customers in the area, which have had a similar work done. It may be worth a drive to see the results. Always find out how much experience the operator has had. Ask their hourly rate and set up charges, as well as an estimate of the maximum, and minimum time the project could take. It may be practical to hire the machine and operator by the hour, as long as someone is available to check on progress. A contracted price will usually allow for some unforeseen problems or weather delays.

239. Adds for contractor

MAKING THE MOST OF HIRED EQUIPMENT

In order to maximize the efficiency and cost effectiveness of the equipment, it is essential to provide the operator with a complete set of plans and other job-site instructions. You could arrive at the site to find that the trees you wanted to save are in a burn pile, and a large amount of topsoil is piled where you planned to drill your well. All property lines, areas not to disturb, and hazards such as well casings, underground services, etc should be clearly marked with flagging tape.

A person who understands the project should be on site, or available by phone at all times during major excavation work. Unexpected situations can require a judgement call, and a long delay in making a decision can cost big time.

240. Showing plans

241. Machine view from seat

DOING IT YOURSELF

Operating heavy equipment requires skill and a lot of practice to produce satisfactory results. Learning on the job is okay under experienced supervision. However, a large powerful machine in the hands of an inexperienced operator is often dangerous, unproductive, and not kind to the land or environment.

Unsafe conditions that can develop include trenches that collapse, trees that fall causing damage, bush fires, landslides and erosion, flooding etc.

UTILIZING EXISTING MATERIALS

During development and site preparation work, existing on site materials should be totally utilized. Trees for lumber or firewood, smaller roots and vegetation can be composted rather than burned. Topsoil, gravel, boulders, subsoil can be separated and used to the best advantage, rather than being buried as fill.

242. Piles of topsoil & logs

HEAVY EQUIPMENT FOR LAND DEVELOPMENT

TYPE OF EQUIPMENT	TYPICAL JOB	ADVANTAGES	DISADVANTAGES	HOURLY COST With Operator
<p><u>EXCAVATOR</u> TRACKED MACHINES, HYDRAULIC POWERED DIGGING OR CLEAN- OUT BUCKET, AND CLEARING RAKE</p>	Excavating trenches, building site preparation, Digging basements, wells, ponds, road building, and land clearing, demolition, truck loading.	Versatile, large machines have considerable digging power, 360 degree turning radius, high and low reach.	Limitations when the machine is needed to transport materials over a long distance.	Large machine will range form \$80 - \$110 per hr. smaller unit \$50 - \$80 per hr.
<p><u>BULL DOZER</u> HEAVY TRACKED MACHINE WITH HYDRAULICALLY POSITIONED BUCKET, BLADE, OR CLEARING RAKE, SOME BLADES HAVE AN ANGLE AND SIDE TILT, CONTOURING CAPABILITY</p>	Stump removal and brush clearing for large open areas, stripping and pilling topsoil, road building, and site preparation.	Heavy packing capacity when leveling subsoil, grading capability, for larger areas. Clearing rake will remove roots and large boulders.	Limited in confined, wet or muddy situations. Can tend to bury topsoil during leveling.	Large machine \$ 80 - \$110 per hr. Small unit \$50 - \$80 per hr.
<p><u>RUBBER TIRED BACKHOE</u> WITH FRONT END LOADER MAY HAVE EXTENDABLE HOE OR FOUR WAY FRONT BUCKET</p>	Trenching, smaller area excavation, sight preparation, back filling, moving materials. Light brush clearing	Easy road trans- portation, versatile, especially with a four- way bucket and four wheel drive.	Limited to medium – small jobs, will not handle large stumps, hard-pan subsoil or shale	Large machine \$ 60 - \$80 per hr. Small unit \$40 - \$60 per hr.
<p><u>SKID STEER LOADER</u> CAN BE EQUIPPED WITH BUCKET, BACKHOE, POST HOLE AUGER.</p>	Small and light excavation, light trenching, back-filling, landscape Preparation.	compact and maneuverable, good for small areas, quick operation and change over	Not good in wet or muddy conditions, Limited digging capacity, tend to pack soil.	Large machine \$ 60 - \$80 per hr. Small unit \$40 - \$60 per hr.
<p><u>FARM TYPE TRACTOR</u> FROM 20 – 100 H.P. CAN BE EQUIPPED WITH FRONT-END LOADER, BACK HOE, CULTIVATING MOWING, LEVELING, AND OTHER ATTACHMENTS.</p>	Light trenching, landscape or field cultivating, grading and soil preparation, moving materials, post hole drilling, mowing.	Versatile with many types of three point hitch attachments, some have four wheel drive for maximum traction	Size and power limitations for heavy work, not great in wet and muddy conditions, driver protection should be installed	Large machine \$ 60 - \$80 per hr. Small unit \$40 - \$60 per hr.
<p><u>GRADER</u> SIX WHEEL UNIT WITH A 3M TO 5M CENTER MOUNT BLADE, VARIABLE ANGLE AND PITCH.</p>	Leveling, grading, and contouring land, roadways, and large area site preparation e.g. parking areas.	Very efficient for level and angled grading for large areas, cutting swales	Soil and ground conditions should be favorable, not efficient in confined areas.	Large machine will range form \$80 - \$110 per hr.
<p><u>ROAD ROLLER</u> A RANGE OF SIZES AND STYLES, DOUBLE DRUM RIDE ON OR SINGLE DRUM.</p>	Packing sub-grade and surface grades for building sites, roadways, and on rocky ground	Produces a solid, more durable base which will not subside or absorb water	Soil and ground conditions must be favorable, transportation may be a problem	Small machine \$25 - \$40 Large machine \$40 - \$80 per hr.

HEAVY EQUIPMENT FOR CONSTRUCTION

243. Excavator	244. Bulldozer
245. Backhoe	246. Skid steer loader
247. Tractor.	248. Grader
249. Roller	250.

LAND SHAPING

Most building sites require excavation and relocation of soil in order to provide a stable base for footings and good drainage.

251.

- Topsoil and any organic materials should be removed from the building site.

252.

- Terracing may be necessary on sloping land.

253.

- The final grade at the perimeter of the building should slope at 2 – 6 %.

254.

- The excavation should extend at least 2 meters beyond the building.

Retaining walls or stabilized banks are sometimes required after land is terraced. Several forces need to be considered when retaining a steep bank. Ground pressure, soil slippage, erosion, surface run-off, water seepage, and vegetation management need to be taken into account.

255. Retaining wall

REDUCING THE IMPACT WHEN BUILDING

DON'T MAKE THE NEIGHBORS ANGRY.

Before commencing with a significant construction or development project, explain what you plan to do with your adjoining neighbors. A polite telephone call or a conversation over the fence could save you a great deal or frustration.

Any development activity that you undertake will have some impact on the land and the neighborhood. There is growing concern these days, about the adverse affects of noise, air, and water pollution. Tree removal, soil loss, watercourse disruption, and wildlife habitat destruction. Informing anybody affected, could save the bylaw enforcement officer, or government official from knocking on your door.

256. Talking with neighbor

257. Smoky burn pile or dusty vehicle

NOISE, SMOKE & DUST

These factors can create health concerns.

- Use consideration when using noisy machinery.
- If wood waste has to be burned chose the right weather conditions and make sure the material is dry and piled correctly.
- Ongoing dust problems can be reduced by, good road building techniques, or adding course gravel to roadways.

The climate can be affected

Land clearing and buildings create localized temperature and wind changes. There is an accumulated impact on the climate when large areas of land are altered by deforestation, and development.

The removal of trees or heavy vegetation will affect the temperature, wind patterns and speed, rainfall effects, snowfall distribution, and humidity.

258. Hillside covered with lots

KEEPING LEVEL HEADED

Land contouring, during and after construction is important for practical, technical and aesthetic reasons. The land area, the gradient and length of slope will determine if;

- Land will be suitable for a variety of uses.
- Drainage and storm water runoff will cause erosion or flooding.
- Areas of the property will be accessible by vehicle, during wet weather.
- The property will maintain or enhance its visual appeal.

259. Original landscape

260. Leveled off

261. Contoured

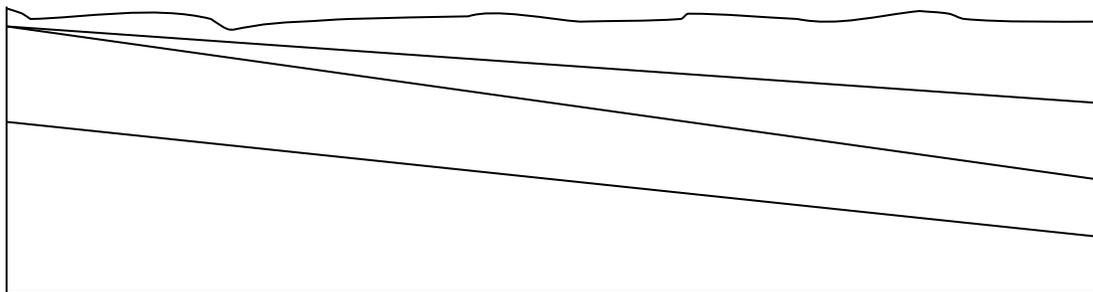
BERMS AND SWALES

TERMS THAT ARE USED IN LAND CONTOURING

262. Berm, swale, ditch, terrace, cut slope

263. Cut bank, fill, cut and fill

264. % of slope diagram



EARTH AND WATER

Retain or Drain, that is the Question.

In the past, draining water off the land, was an integral part of most construction and development projects. Today we understand the accumulative effects of continuously draining land. Surface water and storm water management techniques drain water in a required direction and control the volume and speed at which water is allowed to flow off a particular area of land. This approach helps to safeguard against localized flooding, contamination of streams, and wet basements. A well-planned and properly contoured home-site, can make good use of surface water and reduce the need for irrigation, eliminate erosion, reduce run-off contamination, and provide an aesthetically pleasing pond or other water feature.

265. Old method ditches	266. New swales & pond
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DITCH THE DITCHES Digging deep ditches on or around your property is not always a good option for draining excess water off land. Ditches are difficult to maintain, create problems for fencing and can be dangerous.

Careful grading that work with the lay of the land and enhance the natural water flow patterns, is often less costly and more effective.

267. Ditch and contoured land

WATERCOURSES, PONDS AND WETLANDS

Protection of natural water features is mandated in many areas. Construction and earth moving projects can have a detrimental effect on streams, lakes and fish habitat. Information and guidelines are available from local authorities to advising ways to minimize the impacts.



What kind of impact will my project have on creeks.

268. Diagram natural flows –high flows

- The accumulative impact, of land clearing, road building and development is the biggest factor.
- Trees and vegetation on undulating, uneven land absorb, filter and retain precipitation and moisture.
- Run off from roofs, roads, parking areas and cleared land can amount to 100% of the precipitation. This accumulation of water is rapidly channeled into creeks and rivers.
- Rapid run-off can carry silt and contaminants into watercourses, causing problems for people, fish, estuaries etc. downstream.
- The long term, water retention is diminished which causes the low flows, or drying up of creeks and streams in the summer.
- The rapid loss of water does not provide the percolation time to recharge groundwater supplies, this can also lower well levels in the area.

STREAMSIDE PROTECTION

- Construction activity should avoid damage to stream banks or crossings. Natural vegetation protects stream banks from erosion and provide essential habitat for wildlife and fish food insects.
- Set back strips are recommended allowing for a buffer between the construction and the watercourse.
- Permits are usually required before any stream crossing is allowed. The installation of bridges, culverts, and fords should meet prescribed standards.

269. Cross section creek

RETAINING SURFACE WATER RUN OFF

270. Before construction
271. After construction

Water retention areas, and wetlands are essential for a healthy and diverse ecosystem. The stored water also maintains the soil moisture over an extended area, reducing the need for irrigation during the summer months.

- When the land drainage is required for a building project or roadway etc., it is often practical to develop an alternative water retention area. This could take the form of a pond, or engineered marsh, to compensate for the water loss.
- Ponds can be designed to retain large volumes of run-off during a storm event and slowly release the surplus water over an extended period. This reduces the chances of flooding or erosion downstream.

REDUCING SOIL LOSS, WHEN BUILDING

Topsoil, is an essential component of a sustainable rural lifestyle. Good soil management techniques help to prevent soil loss, degradation, and contamination.

- Do not bury, or use soil as fill material during excavation, or land contouring. Remove the topsoil before excavating for construction and utilize it for landscaping.
- Soil loss can be significant on sloping land. Erosion by wind and water is minimized if groundwork on sloping land is carried out when the land is moist.
- Groundwork on sloping land should be carried out in dry weather, during the spring and early summer. This will provide enough time for the seeding of a fast growing ground cover, such as a mixture of fall rye clover and grass, to stabilize the soil before winter.

272. Seeding sidehill.

ANIMAL HUSBANDRY, KEEPING LIVESTOCK AND PETS

A large number of people move to the country with the desire to look after animals either as a hobby or a small business venture. There are many benefits associated with the caring and nurturing of animals, from the practical, self-sufficiency, and aesthetic reasons. An acreage is not really complete without some form of animal or bird life running around.

However, raising and caring for a few animals, can become a significant undertaking, a couple of calves, a few pigs, a dozen chickens, and a horse for the children, can turn the hobby into a full time job.

The topic is huge, as is the range of potential animals, from Alpacas to angora rabbits, and Brahma bulls to bees, and there is still C to Z to go. Detailed information and some practical insight should be gathered about a particular type of pet or livestock, before jumping into a livestock project.

Key questions that should be asked

• Can you afford the costs of feeding, housing, veterinarian bills, and other expenses?

- Is the property suitable for keeping animals?
- Is the area well-drained and not muddy in wet weather?
- Is the area large enough to support the type of livestock that you plan to keep?
- Is the fencing adequate to keep the animals in and the predators out?
- Are the buildings suitable for housing and protecting the animals?
- Are you familiar with the feed requirements, nutrition, housing, and medical needs of the animals?
- Do you have adequate feed supplies available?
- Is there a year round water supply available with enough volume for summer needs?
- Can the water supply be protected from freezing?
- Will the animals be located at least 30 meters from your well, or your neighbors well or water supply?
- Are the soils and growing conditions suitable, if you are planning to produce the feed for the animals?
- Are their natural, or man made hazards present which could harm the animals. E.g. improperly covered septic tank, poisonous plants, or wire or nails that could injure the animals, or be ingested.
- Do you have a covered area for feed storage?
- Do you have suitable storage, equipment to handle the animal waste?

273. Animal pictures

A BASIC UNDERSTANDING OF KEEPING ANIMALS

• **COMMITMENT** Caring for animals as pets, as a self-sufficiency project, or as a business venture, is a long-term commitment. Animals are sometimes neglected, when the novelty of a new pet, turns into an unpopular chore.

Consideration has to be given to all of the needs, the life expectancy and the reproductive capability of some species. The couple of cute little bunnies you pick up at a garage sale, can result in an overcrowded cage full of hungry rabbits and a pile of poop. A pony that has provided fun in the summer is sometimes left cold and hungry in the winter.

• **LAND**

Determine how much land area your animals will need for the long term. Good pasture management will provide for alternate fenced areas, to prevent overgrazing. Soil conditions, ground water levels, run-off patterns, watercourses, natural vegetation protection, exposure to sun and wind should all be taken into consideration.

The separation of males from females and young from old is also a factor.

274. Pictures of various animals and livestock.

275. Fences

FENCING

Livestock fences have several functions, confining your animals to a field or paddock, and protecting your animals from predators are the most obvious. Also fences can separate animals that you do not want to interbreed. Fencing for environmental reasons, to protect a watercourse, sensitive plant life or wild life habitat, should be considered. Fences can help to prevent erosion, protect animals from man made or natural hazards, and provides the means of pasture management, with grazing rotation.

The condition of fences should be checked on a regular basis, fence posts can rot away in as little as eight years, and fencing hardware i.e. wire, staples, etc. deteriorate over time.

KEEPING ANIMALS

• BUILDINGS

To prevent unnecessary hardship to pets or livestock, buildings or shelters should be constructed in a way to protect animals from all types of weather conditions, severe cold, heavy snow, wind storms, excessive sun and heat, etc.

Wet muddy ground conditions, poor ventilation, excessive dust and mildew are a problem for animals. General cleanliness of buildings and bedding materials must be maintained to keep animals healthy. A rule of thumb is that the animals permanent living environment should be protected and comfortable enough for you to be able to spend a few hours in yourself.

276. Barn

277. Hauling hay

• FEEDING

Determining feed requirements for animals is very important, particularly if you are dealing with large volumes of winter feed, for horses or cattle, for example. Hauling and storing hay is better done during summer than in a blinding snowstorm.

Knowledge of the nutritive value, and the adverse effects particular feeds is essential. Letting sheep loose in a field of lush clover, or feeding old moldy hay to a milking dairy cow are not good practices. Reading books, publications, and asking experienced people about the needs of the particular livestock, is advised.

Providing basic feed for livestock is not always the complete answer to supplying their nutritional needs. Protein and certain trace elements or minerals can be deficient in feeds, it is often necessary to provide supplementary nutrients, e.g. salt, minerals and selenium.

ANIMAL HUSBANDRY

• WATER

Animals need a clean and constant supply of water. Hauling large volumes of water, is a major chore, so provisions should be made to provide a dependable supply before a long, hot dry summer.

Allowing animals to wander into, and drink from a running creek is not acceptable for environmental reasons. Self contained pumps can be used to prevent stream bank erosion and fouling of the water.

278. Cattle waterer.

279. Hanging meat.

• HEALTH

Maintaining the health of animals, is more involved than providing good food, water and shelter. Most species have physical conditions, which require either preventative care or the attention of a veterinarian. This could include vaccinations, feet problems, bloating, fighting injuries, sunburn, freezing injuries etc. Dogs should be given shots to prevent distemper, several types of animals, should be de-wormed to eliminate intestinal parasites and docking the tails from lambs is common to prevent a problem with maggots. If in doubt ask an expert.

280. Cartoon rabbits breeding.

• SANITATION

The level of sanitation within the animals living environment effects the general health and well being of the pets or livestock, as well as the, people in contact with them. Cleanliness and sanitation is particularly important when food products are produced. Disease carrying bacteria, cysts, parasites etc., can be prevented from contaminating milk, cheese, meat and eggs, if proper food handling procedures are followed. Most animal food products will require rapid cooling facilities. Health requirements are enforced when animal products are processed for sale to the public.

• BREEDING

Understand all of the implications, before starting a breeding program for pets or livestock. Allowing random reproduction can result in unwanted offspring which can be born at an inappropriate time of the year. Inter-breeding can be a problem if males and females are not separated before maturity. Cattle for example, are often cross-bred to produce desired characteristics. However, cross breeding some types of cattle can result in difficult calving, or poor milk production.

PETS AND LIVESTOCK

• PREDATORS AND PESTS

Weasels, coyotes, ravens, cougars, raccoons, wolves, eagles, rats, owls, dogs, bears, etc. Depending on the type of animals you look after, you should be aware of potential problems with predators. Closing the hen house door at night could save your flock of laying chickens from becoming a buffet, for a family of raccoon's. Some species are very vulnerable to predator attack, sheep and lambs are sometimes killed or injured by a pack of roaming domestic dogs.

Pests, such as flies, mosquitoes, fleas, ticks and mites present problems or discomforts which are usually preventable. Most buggy problems can be controlled with non-toxic methods, providing the infestation is caught in the early stages. Rats, mice, and starlings' etc. should not be allowed to multiply to the point of becoming a plague, as they can be responsible for spreading disease.

281. Pests

282. Animal injury

• HAZARDS

Man made or natural hazards can cause havoc with livestock, the list of potential hazards is long and diverse. Physical injury can result from protruding nails, wire, broken glass, broken fencing, holes in the ground to insecure wells or septic tanks. The ingestion of materials such as plastic, string, (especially bailer twine), wire or nails, poisonous plants, or harmful chemicals has to be avoided. Drowning, fire, and strangulation with ropes or in fencing are situations that can usually be prevented.

• CRUELTY & NEGLECT

Even the actions of the most well meaning animal owner, can result in the suffering of their livestock. From things such as forgetting to turn on the water, leaving the ventilation fan turned off, confining animals in too small a space, not feeding enough, or the wrong kinds of food. These and many more types of inappropriate husbandry techniques can result in cruelty. Information, consultation, and shared experience will help to prevent unintended neglect.

283. Horses in mud.

KEEPING ANIMALS

• WASTE MANAGEMENT

The management of animal waste is an important issue, manure can have a detrimental impact on health, water quality, and the environment if handled improperly.

In the past animal waste was dumped behind the barn or spread on a field without concern. Currently there are standards relating to the storage and distribution or disposal of animal waste, which minimize the impact on water and the environment.

It is important to retain and cover manure piles, and to compost the materials if possible before use. Spreading manure on fields during the active growing season is preferred rather than applications in the late fall or winter.

284. Covered pile

285. Butchering

• BUTCHERING

If you have raised animals for meat, you should consider having the slaughtering and butchering done by a licensed, inspected, facility, or butcher. Licensing and inspection is usually required if you are intend to process and sell any animal or meat products.

If you are planning to slaughter and butcher livestock for your own consumption, it is important that you have some qualified instruction, and that you are completely prepared in advance for all of the steps necessary.



What can we do when a pet is old and sick

286. Cartoon old horse

• EUTHANASIA

When an animal has become terminally ill, injured, or has degenerated through old age to the point at which it is cruel to let it suffer, it may be necessary to have it euthanized. An expert in the particular type of livestock or a veterinarian can help with an evaluation.

Learn the life expectancy of pets and livestock to prepare in advance, and avoid the shock of finding a family pet dead of old age.

ASPECTS TO CONSIDER WHEN CARING FOR ANIMALS

• PETS AND LIVESTOCK

Raising pets, is usually undertaken as an interest or hobby, for companionship, they can provide security, an opportunity to socialize, and teach children responsibility and caring. Livestock can be raised for food production; they can also generate an alternate source of income, or just to create a country atmosphere.

Animals of any kind require a daily time and physical commitment, patience, and sometimes a significant financial investment. Pets can cause frustration, loss of sleep, and neighborhood conflict, in addition, problems can arise with noise, and smell, water contamination, bugs, and animals that run lose.

Learn as much as possible about the subject before starting a long-term commitment with animals.

The following will point out some of the good things and possible draw backs.

LARGE DOGS

Good for companionship, security, can keep away predators, can be trained to work with other animals.

Can be noisy, vicious, rambunctious and destructive, can chase or kill other pets and wildlife.

Gestation time weeks.

Life expectancy averages years.

Requires shots for rabies, distemper, etc.

Bitch,- female can be fertile at months.

Should not be bred until months.

Spay – removal of female dog’s ovaries.

Nuter – castration of male dog.

287. Dogs

288. Horses

HORSE OR PONY

Good for recreation, companionship, transportation, trained to work.

Requires adequate exercise, space, shelter, bedding, and fencing, consume lots of food, can need veterinarian or other professional care.

Gestation time approx. 50 weeks.

Life expectancy averages 25 years.

Mare- female can be fertile at 36 months.

Should not be bred until 40 months.

Stallion – breeding male

Colt, foal, - young horse

Gelding – castrated male

Amount of manure with some bedding, produced by an average sized horse is about 700 cu ft or 20 cubic meters each year

RAISING ANIMALS

RABBITS

Cute & cuddly, good hobby for children, and can be raised for meat.

Good at escaping, and reproducing.

Full grown at 15 – 18 months

Life expectancy averages 4 – 6 years.

Gestation time 28 days

Doe – female can be fertile at 5 months

Should not be bred until 6 months.

Usually producing 4-10 young.

Can be weaned at 6 – 8 weeks

Buck – male.

CHICKENS

Fresh eggs, healthy meat, they eat up scraps.

Require good fencing and housing, can be noisy and smelly can attract rats or rodents, can be a problem scratching in gardens.

Life expectancy 4 – 6 years.

Hens can start to lay eggs at about 6 months.

Eggs hatch in about 24 days.

Chicks – from hatching to six weeks.

Pullets – young chickens to point of laying.

Broody – a hen that is trying to hatch out eggs.

Broilers – meat chickens, very fast growing.

289. Rabbit

290. Chickens

291. Ducks

DUCK AND GEESE

Cute to look at, can be tasty, can keep weeds and grass under control, geese are good watch-dogs.

Need for adequate water, can be messy and smelly, also quite noisy.

Goose – female will sit on eggs for about 35 days.

Gander – male goose can be aggressive can attack people.

292. Pigs

PIGS OR HOGS

For meat or can be pets.

Check the availability and cost of feed. Can be smelly, they need shelter and good fencing.

Gestation time 16 weeks

Life expectancy averages 4 – 6 years

Sow – female can be fertile at 6 months

Should not be bred until 9 – 10 months.

Guilt – young female

Wiener pig – piglet ready to leave the sow at about 6 – 8 weeks.

Boar – mature males can be very aggressive.

Feeder hogs – raised for meat butchered at 5 – 6 months at 90 kgs

