

A young child wearing a dark cowboy hat, a light blue denim jacket over a red and white plaid shirt, and blue pants is smiling and reaching out to touch the nose of a white horse. The horse is wearing a brown halter and is positioned behind a rustic wooden fence. The background shows a blurred landscape of rolling hills under a bright sky.

LIVING ON A FEW ACRES

A landowners guide for developing small acreages in Natrona County

A joint project of the Natrona County Conservation District
and the University of Wyoming Cooperative Extension Service

At no other time in America's history have there been so many people moving to rural settings. Since the beginning of the 17th century's European settlement in America, there has been a continuous movement of people across the country. Settlements and cities were established along the major travel routes of rivers and overland trails, but, as the frontier advanced to the west coast of America, individuals eventually established homesteads and ranches throughout the "wilderness." They trailed cattle and broke sod to produce food for themselves and for a growing nation.

The rural experience has always been associated with the values of freedom, independence, and self-sufficiency. An appreciation of the wide-open spaces as well as the beauty and abundance of America's natural resources was also developed in America's pioneers. Today, those values continue to call many individuals to the rural lifestyle. However, today's settlers are establishing homesteads of 40 acres or less and they don't plan to "live off the land." The wide-open spaces aren't nearly as wide or as open and there is the realization that America's natural resources are limited. From electrical power and paved roads to school busses and garbage pick-up, the new settlers enjoy many conveniences that earlier residents could never have imagined.

Whether you are considering a move to the country or are already there, it is hoped that this guide will be used as a resource for communicating with agencies serving small acreages in Natrona County. The Natrona County Conservation District and the UW Cooperative Extension Service want you to succeed with your rural living experience in Natrona County. This resource guide has been developed to help new land-owners every step of the way in establishing a small homestead--from evaluating site locations, to obtaining building permits.



Living On A Few Acres©2001



ACKNOWLEDGEMENTS

An outstanding group of individuals representing both urban and rural settings worked together on this publication. Our thanks go to George Davis, Kirk Faight, Jamie George, Mike Jennings, Ruth Stevenson, Daryl Stilwell, and Genn Taucher for their invaluable ideas and information based on their experiences of dealing with small acreage development.

In addition, we appreciate the co-sponsorship of this publication by the University of Wyoming Extension Service and the Natrona County Conservation District Supervisors: Jerry Eichorn, John Leman, Al Parmely, Ed Strube, Dennis Sun and former Supervisors Scott Keith and Ruth Stevenson.

Finally, our thanks go to Judy Logue and Tom Heald who wrote and compiled the information, and to major contributors Bonnie Baures-Wassenburger and Mildred Duckworth.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Glen Whipple, Director, Cooperative Extension Service, University of Wyoming, Laramie Wyoming 82701. Persons seeking admission, employment, or access to programs of the University of Wyoming shall be considered without regard to race, color, religion, sex, national origin, disability, age, political belief, veteran status, sexual orientation, and marital or familial status. Persons with disabilities who require alternative means for communication or program information (Braille, large print, audio tape, etc.) should contact their local UW CES office. To file a complaint, write the UW Employment Practices/Affirmative Action Office, University of Wyoming, PO Box 3434, Laramie, Wyoming 82701-3434.

All programs, services, and assistance are provided to you by the Natrona County Conservation District on a non-discriminatory basis, without regard to age, color, creed, marital status, national origin, physical or mental handicap, politics, race or sex.

SITE CONSIDERATIONS

When selecting a building site on a small acreage in Natrona County, one would be well advised to take into consideration the environmental factors that will influence the function and comfort level of living in a rural setting.



Natrona winds can bend fences and drift sand.

WIND

Prevailing winds in Natrona County come from the southwest. Consequently, the southwest corners of a home will be the most difficult to keep warm in the winter months. Snowdrifts will usually form on the northeast side of any obstruction whether it is a building, shrubbery or a high spot in the terrain itself. When planning the placement of doors, windows and walkways around buildings, and even in planning the alignment of roadways, consider the prevailing wind direction.



Snow drifting on a road.
Windbreaks need to be strategically placed

SOILS

In Natrona County there are two soil types that influence home site development the most. Sand and clay. Clay has the capacity to swell and shrink a great deal, depending on the moisture content. The heaving of the soil that takes place as the soil expands and contracts can often crack concrete floors and walls.

Much of Natrona County is covered with dormant sand dunes. This soil is exclusively sand, and once the vegetation has been disturbed or removed from the surface, the soil will blow easily and become an active sand dune again.

The **Natrona County Conservation District** has maps indicating what kind of soil is on the property in question. In addition, they have information regarding erosion control.

(307) 261-5436.



Cracked foundation caused by heaving clay soil

UTILITIES

Once the environmental factors have been considered and suitable property is found for a home site, utility service availability needs to be assessed. Some individuals may want to live self-sufficiently and "off the grid", but most individuals plan to connect their properties with electricity, telephones and sometimes natural gas or propane supplies. Almost all the utility suppliers require the landowner to bear the cost of installing the delivery lines. Keep in mind that a property easement must be available to all utility delivery services.

TELEPHONE

Most telephone lines are installed underground so the route from the delivery line to the home should be free of large trees, debris and obstructions. Qwest is the supplier of basic telephone service in Natrona County. If a "land line" is not feasible in your area, there are several cellular phone companies servicing Natrona County. There may be a delay of several weeks from the time the telephone service is ordered and the time it is actually delivered to the home, depending on your location.

CALL BEFORE YOU DIG!

Utility companies that provide underground lines all have phone numbers you can contact to locate underground delivery lines. In addition, locator services will respond quickly to determine where underground lines may be located on your property before you dig.

Call Before You Dig Locator Service

1-800-849-2476

1-800-348-1030



Pacific Power photo

ELECTRICITY

Pacific Power supplies most of Natrona County with electricity, but there is a section of the western part of the county served by **High Plains Power**. The landowner should have a service pole and breaker box installed prior to the time the electrical lines are brought to the property. Contact the power company to learn the specific requirements of the service pole and breaker box. Often, there may be a month or more from the time the service is requested before it is delivered, so ordering the electrical service should be a priority in developing a property.

Pacific Power 888-221-7070

High Plains 800-826-3446

UTILITIES cont.

PROPANE AND NATURAL GAS

Some rural areas of Natrona County are provided natural gas by KN Energy through underground pipelines.

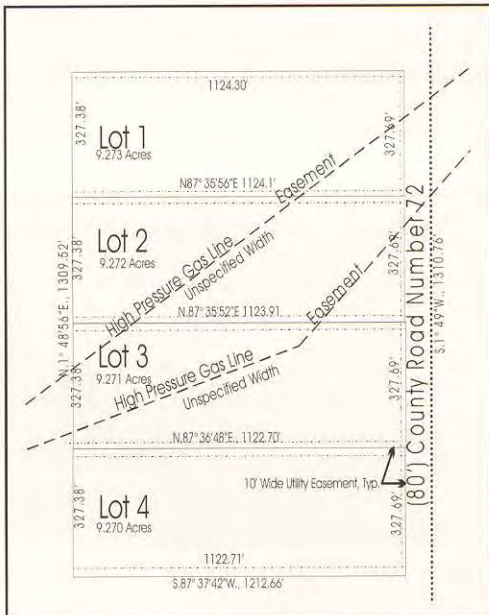
KN Energy 1-800-563-0012

However, most of the county's residents may have to rely on bottled, liquid petroleum (propane) supplied by a number of vendors in the county. Check the yellow pages to contact propane suppliers for regulations regarding location of the pressurized tanks on your property.



Calico Hill photo

This home demonstrates a wildland fire-safe location of a propane tank downhill and at least 50' away from the building.



A Typical Easement Map

EASEMENTS

A public access or utility access easement is a legally established route for a road or utility delivery line. Without an easement, any road or utility line may be trespassing on someone's property. Your property may also have an easement on it that would allow utility suppliers to dig through the middle of it to supply utilities to a neighbor. It is important that you determine what easements may affect your property before building. Easement information can be obtained by taking a legal description of the property in question to the Records Office in the basement of the Natrona County courthouse.

Natrona County Courthouse 235-9200

WATER SUPPLY

MUNICIPAL WATER—WELL WATER— IRRIGATION WATER

If your small acreage is not in an area where municipal water is available, then consideration must be given to drilling a private water well or buying municipal water by the tank-load. If you plan to take water from an existing stream for personal use, you must comply with established water rights and the Wyoming Department of Environmental Quality's health standards. Contact the **Wyoming State Engineer** (307-577-1304) regarding water rights and the **Wyoming Department of Environmental Quality** (307-473-3465) regarding water quality.

BUYING WATER

Water can be purchased from the Natrona County Regional Water System and is distributed from a location adjacent to the fairgrounds. You can contract with a commercial water hauler or transport the water yourself with truck or trailer mounted tanks.

**Water-fill station: 1600 SW Wyoming Blvd.
(307) 234-5101**



Calico Hill photo
Loading and hauling water from the water-fill station.

IRRIGATION WATER

Some small acreages in Natrona County have rights to irrigation water supplied by the Casper-Alcova Irrigation District. Contact the District to determine water allotments, release schedules and easements for your property.

Casper-Alcova Irrigation District (307) 234-8690

TYPICAL WATER USE AMOUNTS

- 1 acre of hay=3.3 acre-feet
- 1 acre of corn=2.7 acre feet
- 1 acre of barley= 2.0 acre-feet
- 1 acre of sugar beets=2.7 acre feet
- 1 average person=158 gallons/day
- 1 200 lb. pig=4 gallons/day
- 1 1000 lb. beef cow=10 gallons/day
- 1 horse= 12 gallons/day
- 1 laying hen=0.5 gallon/day
- 1 200 lb. ewe=2 gallons/day

WATER SUPPLY cont.

WELL DRILLING CHECK LIST

-Determine water needs: 75-150 gal. daily per person

-Determine well location: Away from any potential sources of contamination. Convenient for power supply and close to the home. Accessible for drilling and pump servicing.

-Obtain well permit: Wyoming State Engineers office 577-1304.

-Select Driller: References, well established, experienced, insured.

-Test Water: Have water tested by a certified testing lab for bacteria, organic, and inorganic contaminants.

-Report Findings: Complete reporting process to State Engineer



The welcome result of successful water well drilling.

For more information about water wells, drillers and driller certification contact:

Wyoming Water Well Association
P. O. Box 424
Wheatland, WY 82201

Minimum Recommended Separation Distance Between Wellhead and Potential Sources of Contamination

<u>Recommended Distance From the Well (in feet)</u>	<u>Potential Source of Contamination</u>
10.....	neighboring property line, building or home
50.....	animal shelter or corral, feed storage, filter strip, building, sewer drain
100.....	fuel oil/gasoline storage tanks, manure storage, liquid tight pesticide/fertilizer storage facilities, streams or water courses, other sources of water supply, septic tanks and leach fields
150.....	springs or wells not sealed the first 50 feet of depth, septic system leach fields 3 feet below land surface

WATER QUALITY PARAMETERS

These are only guidelines suggested by the EPA. There are no legally established limits except for those of Bacteriology-Total Coliform.

NO ONE IS RESPONSIBLE FOR TESTING YOUR PRIVATE WATER WELL EXCEPT YOU!

It is recommended that a private well be tested for contaminants on a regular basis and always after the well has been serviced.

Total Dissolved Solids 1500 ppm or less

The EPA has recommended that domestic public water supplies should not contain more than 500 ppm total dissolved solids.

Sulfates..... 750 ppm or less

The EPA recommends 250 ppm or less for public water supplies.

Nitrates..... 10 ppm or less

10 ppm is the EPA's maximum allowable amount of nitrates in public water supplies.

Sodium

The EPA recommends a maximum sodium level of 20 ppm for people on low sodium diets or who have high blood pressure or heart problems. Good drinking quality water may contain up to 115 ppm sodium.

Bacteriology-Total Coliform

Unsafe: Greater than 1 per 100 ml or greater than 1/5 per 100 ml MPN

SUITABILITY FOR LIVESTOCK USE

Total Dissolved Solids 1000mG/L or less

Sulfates 500mG/L or less

Nitrates as N 10mG/L or less

Sodium 500mG/L or less

WASTEWATER/SEPTIC SYSTEMS

One of the principle requirements for rural homeowners in Natrona County is proper wastewater disposal. If your property lies within a sewer district, you will need to contact the local district board for information on taps and tap fees.

If a municipal sewer system is not available in your neighborhood, you must construct your own wastewater system. The following are the steps that must be taken by you or your contractor:



Exploratory Trench—Health Department Inspection

-Obtain a Zoning Certificate from the **Natrona County Planning Department, (307) 235-9435**, 120 West 1st St. This certificate ensures that your property is properly zoned for your proposed structure.

-Fill out and pay \$125.00 for a Small Wastewater Permit application from the Natrona County Health Department.

-Arrange to have a backhoe cut an exploratory trench on your property with the Natrona County Health Department present. A representative from the Health Department will do a site assessment at this time.

-Conduct percolation tests to determine if your soils are suitable for septic systems. If your soils pass the percolation test, the Health Department will sign off on the Zoning Certificate.

-You or your Licensed Septic Installer submits your septic system design for Health Department approval and the system shall be inspected by the Health Department prior to backfilling.

REMEMBER, WE ALL LIVE DOWNSTREAM!

WILDFIRE PREVENTION

Living on a few acres means that there probably is no fire hydrant 200 feet from your home and emergency services will need more than 10 minutes to respond to a fire in your neighborhood. Be firewise about your home and property.

- Have your address clearly visible on the road.
- Use 1/2 inch mesh screen on chimney openings.
- Locate propane tanks 50 feet from structures, on the level or downhill.
- Keep a ladder close to your home for firefighters to gain access to your roof.
- Keep combustible vegetation mowed for 50 feet surrounding structures.
- Use fire resistant plants for landscaping.
- Maintain non-flammable skirting around mobile homes.
- Do not store combustible materials under decks.
- Establish an emergency water supply such as a pond or 1000 gallon tank uphill from your home with a hose for firefighters to use. A couple of stock tanks would work.
- Roof materials should be of a composite material such as metal, asphalt or fiber glass shingles. Concrete roofing is also available. Wood shake roofs may be attractive but are the most flammable.



Clyde Young photo

For more information call:

Natrona County Fire Prevention District
(307) 234-8826

Wyoming State Forestry Department
(307) 234-6116

HEALTH & SAFETY



RADON

Radon is a naturally occurring, colorless, odorless gas that is radioactive and is the number two cause of lung cancer with cigarette smoking being number one. Radon is present in Natrona County and concerned individuals can obtain test kits to check levels in existing homes.

Should the test results warrant it, there are ways to remediate existing problems. For new construction there are building techniques that can be incorporated into homes that make it much easier to prevent or remediate the presence of radon gas. For testing information, contact:

Casper-Natrona County Health Department
(307) 235-9340.

CONTROLLED BURNS

You may burn your own household garbage **ONLY** if commercial garbage pick-up is not available in your neighborhood. Incinerators must have a spark-arresting screen and a 50 foot radius of non-combustible material surrounding the incinerator.

Burning of weeds and slash piles may be permitted by contacting the Natrona County Fire Protection District. Neither household garbage or larger weed burns are permitted on Red Flag Fire Hazard days.

Natrona County Fire Protection District
(307) 265-8656

EMERGENCY SERVICES

In any emergency situation, the first action should be to phone 911. It is important to tell the operator WHO, WHAT & WHERE. Give your name, the nature of the emergency (structure fire, vehicle accident with injuries, wildland fire, child choking) and the exact location. Have your address, mile marker, legal description or latitude/longitude location of your home always posted by your phone. For serious medical emergencies more than ten miles from the Casper city limits, Wyoming Medical Center's Life Flight Helicopter may be dispatched.

Large fire trucks need firm road surfaces and space to maneuver when entering your property. The Life Flight helicopter needs a 100' x 100' level, landing area that is free from obstructions such as brush, trees, large rocks and power lines.

Any Emergency:
Dial 911

PREPAREDNESS

Anyone living in Natrona County will experience weather and power outage emergencies. Residents are encouraged to always have 72 hours of supplies on hand to cover these incidents.

When power outages occur, water wells are usually inoperative so in addition to fuel, food, and medications, an emergency supply of water should always be available for both your family and your animals.

During storms, always tell someone where you're going and don't deviate from that plan. If you become stranded, stay in your vehicle or building and wait for assistance.

WEED & PEST CONTROL

Weed Control

There are currently 22 plants included on Wyoming's Noxious Weeds list. The Natrona County Weed District personnel can identify weeds and suggest control methods that work on acreages in Natrona County. The District will cost-share with individuals on herbicides for noxious weed control. In addition, the District has weed sprayers available for rent for a minimal fee.

Natrona County Weed District (307) 472-5559



Canada Thistle

How to Obtain a Pesticide License

A **private** pesticide applicator's license is required of anyone using regulated pesticides/herbicides on their own property. A **commercial** pesticide applicator's license is required of individuals applying any pesticide for hire. Call the **UW Cooperative Extension Service, 235-9400**, to apply for either license.

Wyoming's Noxious Weeds

Field bindweed
Canada thistle
Leafy spurge
Perennial sowthistle
Quackgrass
Hoary cress
Perennial pepperweed
Oxeye daisy
Skeletonleaf bursage
Diffuse knapweed
Spotted knapweed

Russian knapweed
Yellow toadflax
Dalmation toadflax
Scotch thistle
Musk thistle
Common burdock
Plumeless thistle
Dyer's woad
Saltcedar
Houndstongue
Purple loosestrife



Dalmation Toadflax

PEST CONTROL, cont.

Wyoming's Official Pest List



Mormon Cricket

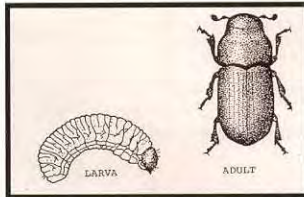
Grasshoppers
Mormon crickets
Pine beetles
Richardson's ground squirrels
Prairie dogs
Pocket gophers



Differential Grasshopper



Prairie Dog



Mountain Pine Beetle



Richardson's Ground Squirrel

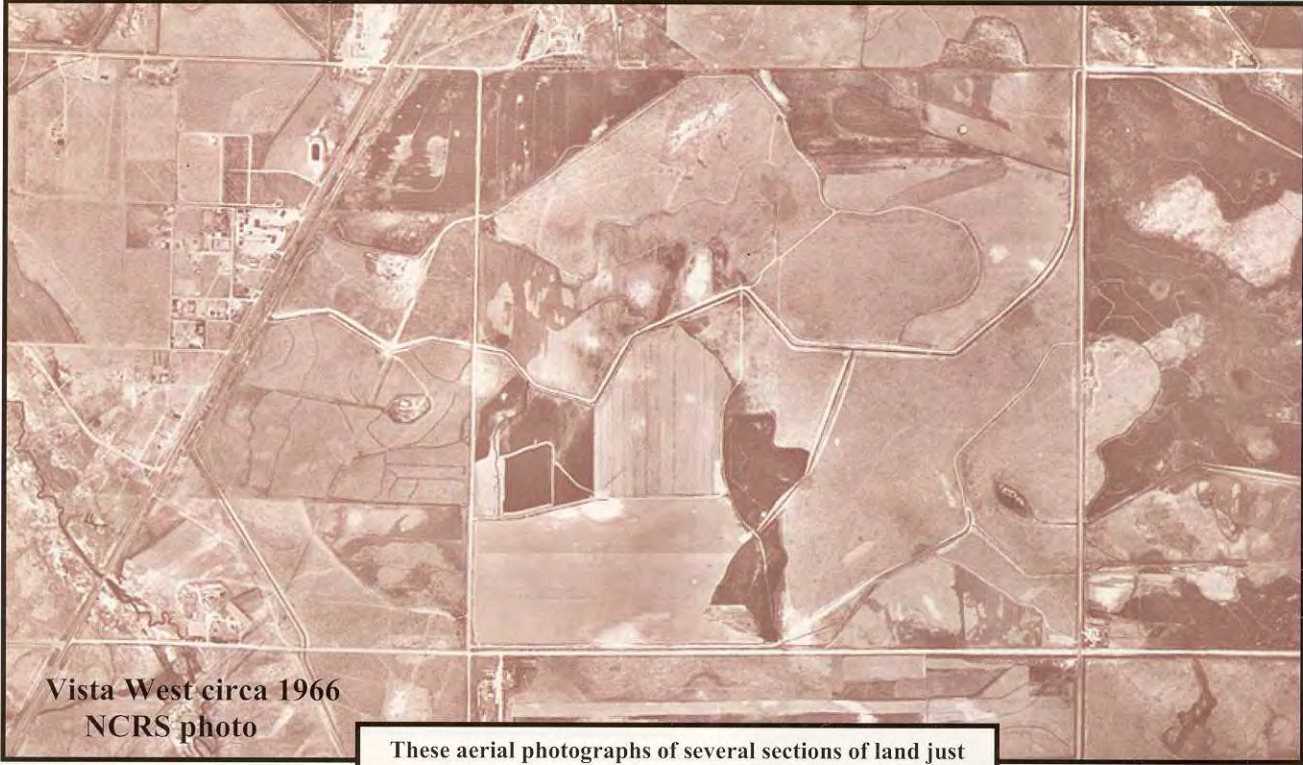
Pest Control

Skunk, raccoon, coyote, fox, snake and marauding dog problems can be reported to Metro Animal Control. Their staff will provide live trapping services for most pest animals, including nuisance dogs and cats. Metro will also investigate animal cruelty cases.

Metro Animal Control (307) 235-8398

Questions regarding deer, antelope and elk should be directed to the Wyoming Game & Fish Department. They will offer suggestions on how to minimize property damage. However, human and wildlife run-ins regarding bears and mountain lions should be reported in a timely manner. Game & Fish personnel will try to remove these animals out of "harms way."

Wyoming Game & Fish Regional Office phone: 473-3400. Web page: www.gf.state.wy.us



**Vista West circa 1966
NCRS photo**

These aerial photographs of several sections of land just west of Casper illustrate a national trend of taking agricultural land out of production to support small acreage living.



**Vista West circa 1999
NCRS photo**