



Living in the Foothills



**A guide to
living in
Western
Nevada
County**



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INTRODUCTION

Welcome to living in the foothills of Western Nevada County! This booklet is a starting point for information to help you effectively take care of your property, provide for personal safety.

Living in the country has its challenges, spotty and poor cell phone reception, unreliable GPS, streams, rivers, and lakes that swell and flood property and roads, treacherous single lane sometimes dirt or gravel roads and wildlife and livestock that may wander into roadways. Take a deep breath, slow down, and enjoy the simpler country life and mother nature at work.

If you have moved here from an urban area, you might not be aware of the many natural resources just outside your door, or how to help improve and sustain them.

- Adequate supplies of clean water
- Wildlife to observe and enjoy
- Healthy ecosystems with native plants
- Clean air to breathe
- Farm Safe communities, public lands and personal property

All these resources need care and protection. This booklet is designed to help you do your part in the conservation of our natural resources to understand your share of the responsibilities so that you may continue to enjoy your surroundings in the years to come, and that we may pass them on to future generations.

WATERSHED

A watershed is where a drop of water would flow from the top of a ridge down to the lowest point, where it joins together with water from other watersheds. Water flows from small streams to larger streams and rivers. It doesn't care about country or city lines, as it flows the path of least resistance to its final destination, the ocean.

Water is an important commodity to all living organisms. Although it appears as if we will never run out of water, 97 percent of the earth's water is salt water which is unusable. Only 3 % is fresh, and of this 3%, two-thirds is locked up as ice and is unusable. Only 1% of all water on the planet is available for us to use. Since only pure water evaporates, pollution is left behind. Even though this pollution does not enter our water cycle, it is still present in our streams, rivers and oceans. For this reason, we must be concerned with what we put into our water systems.

Where does your water come from?

In Nevada County, you may have a well, or you may be purchasing water from the Nevada Irrigation Department (NID). If you have a well, unlike public drinking water systems, private well owners do not have experts regularly checking their water's source and its quality. It is the private well owners are solely responsible for monitoring the quality of their drinking water. Regularly scheduled water testing is important to monitor water safety.

NID is a diversified water resource district that supplies both treated drinking water and irrigation water to nearly 25,000 homes, farms and businesses in Nevada and Placer counties in the foothills of Northern California's Sierra Nevada Mountains.

NID collects water from the mountain snowpack and stores it in an extensive system of 10 reservoirs. As water flows to customers in the foothills, it is used to generate clean hydroelectric energy and to provide public recreational opportunities. NID is an independent California special district governed by an elected board.

WATER QUALITY

Clean water is essential to life as we know it. There are many things you can do as a property owner to help ensure safe, clean water for yourself and for others in the watershed. Proper septic system care, erosion control, and fire hazard reduction all have far reaching effects on water quality. Ensuring the proper disposal of hazardous and solid wastes, will help protect water quality whether you are on a well or a community water system. Everything you do on your property affects the whole for better or worse.

How does pollution get from your backyard to the local reservoir, aquifer or river and beyond? Rain or snow falls and either soaks in to the ground or flows away to find a body of water, carrying with it traces of everything you've applied to your landscape - insect spray, weed killers, nitrogen fertilizer, etc.

At least half the households in the U.S. use pesticides, fertilizers or both in their yards. Pollution caused by storm runoff from sources such as backyards, parks and fields, parking lots and streets, is called non-point source pollution. Non-point source pollution is a leading cause of water-quality degradation and impairs drinking water supplies, recreational opportunities, fisheries, and wildlife habitat.

There are many alternatives to chemical fertilizers and pesticides. Some are as easy as a homemade vinegar/pepper sprays. Compost and manure are two of the best fertilizers available. Ask your local nursery or pick up a publication on organic gardening.





WATER CONSERVATION

Nevada County depends on rain and snow that generally falls from late October through March for our drinking water year-round. Historical precipitation and water use records used to be fairly reliable when planning for future water supply. But more recent documented changes in local snowpack, precipitation, and temperatures show that is no longer the case.

With more of our precipitation likely falling as rain instead of snow, and warmer temperatures causing decreased snowfall to melt faster and earlier, water supply is likely to become more unreliable. In addition, drought is predicted to become more common. This means less water available for use over the long run, and additional challenges for water supply reliability, especially during periods of extended drought. What can we do to help maintain the health of our watersheds? Use less water! Small changes can add up. Here are some suggestions:

In the House

- Check pipes and faucets for leaks. One drop per second wastes 2,700 gallons of water per year!
- Test for toilet leaks by adding food coloring to the tank. If color appears in the bowl after 30 minutes, your toilet is leaking. One leaking toilet wastes 200 gallons a day!
- Turn off the water or install a flip on/off aerator for use when brushing your teeth or shaving.
- Install low-flow shower heads and save up to 40 gallons per shower.
- Run your dishwasher and washing machine only when you have a full load.
- Take short showers instead of baths. Baths can use 30 to 50 gallons of water. Showers use 5 gallons of water per minute, or less if a flow constrictor is installed.

- When washing dishes by hand, don't let the water run freely to rinse. Fill up the second side of your sink with rinse water.
- Catch shower sink warm up water in a pan or bucket and use it to provide water for plants and pets.
- Install a hot water recirculation system, this can potential save 15,000 gallons of water annually.

Outside

- Water lawns and gardens during the coolest part of the day.
- Use a drip irrigation system, instead of sprinklers to apply water slowly exactly where it is needed.
- Collect rain from the gutter system on a house in a rain barrel to use for watering.
- Use a bucket of water and a spray head on the hose to wash your car. A running hose wastes over 100 gallon of water in the time it takes to wash the car.
- Choose plants that are native to the area where you live and/or plants that are drought resistant for landscaping.
- Reduce the use of chemicals, fertilizers and pesticides that can get into the water table.

Water Regulations

The emergency drought declaration and Nevada Irrigation District Rules and Regulations aim to eliminate water waste. As such, to ensure efficient water use, permanent water use restrictions include:

- No outdoor watering in the heat of the day (10:00 AM to 6 PM);
- No outdoor watering during and 48 hours after rain;
- Washing down driveways and sidewalks is prohibited unless for health and safety;
- No washing a motor vehicle with a hose unless the hose is fitted with a shutoff nozzle;
- No use of potable water in a fountain or decorative feature unless the water is re-circulated;

- Hotels and Motels must provide guests with the option to not have towels and linens laundered daily;
- Irrigation with potable water of ornamental turf on public street medians;
- Irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.

Septic Care

Failing septic systems may result in the release of raw sewage into the environment, which can affect water quality in surrounding water bodies and impact drinking water supplies in nearby wells. Improper maintenance may result in expensive repairs. Surfacing sewage may expose your family and pets to disease causing bacterial and viruses.

Some Guidelines

- Never dispose of paints, varnishes, thinners, pesticides, or other hazardous chemicals into your septic system. Septic tanks drains water through your local soils and watershed.
- Coffee grinds, diapers, kitty litter, sanitary napkins, grease, paper towels and other household items will clog your septic system.
- Fix leaky faucets and running toilets, and use washing machines and dishwashers only when full. This will prevent saturation of the soil in the drain field, which can affect the quality of the soil and its ability to naturally remove toxins, bacteria, viruses, and other pollutants from the wastewater.
- Annually inspect your septic system to ensure that it is working properly and to determine when the tank should be pumped.
- The frequency of pumping your tank depends on the tank size, the number of people living in your home, and recommendation is from 3 to 5 years.
- Maintain and repair your septic system if it is defective, leaking or experiencing problems.

Recommended Native Plants

Western Redbud	<i>Cercis occidentalis</i>
Interior Live Oak	<i>Quercus agrifolia</i>
Mountain Mahogany	<i>Cercocarpus betuloides</i>

Shrubs

Evergreen Currant	<i>Ribes viburnifolium</i>
Golden Currant	<i>Ribes aureum</i>
Fuchsia-flowering Gooseberry	<i>Ribes speciosum</i>
Holly-leaf Cherry	<i>Prunus ilicifolia</i>
Wild Lilac	<i>Ceanothus spp.</i>
Coffeeberry	<i>Rhamnus californica</i>
Silk Tassel	<i>Garrya elliptica & fremontii</i>
Coyote Brush (well maintained)	<i>Baccharis pilularis</i>
California Wild Rose	<i>Rosa Californica</i>
Yucca	<i>Yucca whipplei</i>

Perennials

Yarrow	<i>Achillea millefolium</i>
Coral Bells	<i>Heuchera micrantha</i>
Monkey flower	<i>Mimulus spp.</i>
Beard Tongue	<i>Penstemon heterophyllus</i>
Royal Beard Tongue	<i>Penstemon spectabilis</i>
California White & Blue sages	<i>Salvia leucophylla & mellifera</i>
Purple & Black Sages	<i>Salvia leucophylla & mellifera</i>
Hummingbird Sage	<i>Salvia spathacea</i>
California Fuchsia	<i>Zauschneria californica</i>
Blue & Yellow-Eyed Grasses	<i>Sisyrinchium bellum & californicum</i>
California Poppy	<i>Eschscholzia californica</i>
Matilija Poppy	<i>Romneya coulteri</i>
Western Columbine	<i>Aquilegia formosa</i>

Ground Covers

Creeping Oregon Grape	<i>Mahonia repens</i>
Prostrate Wild Liliac	<i>Ceanothus griseus horizontalis</i>
Stonecrop	<i>Sedum spathulifolium</i>
Sonoma Sage	<i>Salvia sonomensis</i>

NATIVE & DROUGHT TOLERANT PLANTS

You can reduce your water consumption, help to protect your home against fire, and use fewer pesticides and fertilizers by planting low-maintenance native or drought tolerant trees, shrubs, and perennials in your garden. Native plants are better suited to local soils and can be more resistant to all pests.

Noxious weeds and Landscaping

Noxious weeds are non-native plants that have an extraordinary capacity to spread and become pests. One of the primary problems weeds in Western Nevada County is yellow star thistle. a spiny plant that is poisonous to horses. Yellow start thistle has a deep, thirsty root system that takes the water needed by native plants. It produces enormous numbers of seeds each year, helping it increase its range rapidly.

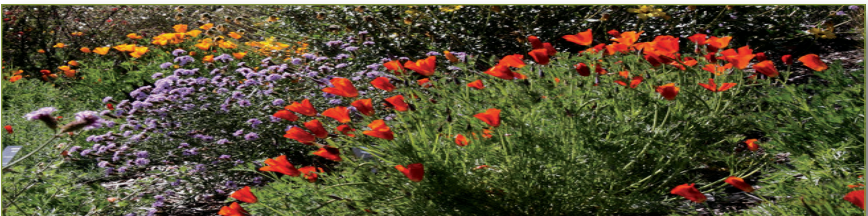
Where a noxious weed such as yellow start thistle expands and displaces desirable plants, ecosystems become degraded and can no longer provide good wildlife habitat, livestock forage, or native wildflower displays. Noxious weeds often take over in areas where the vegetation and soils have been disturbed, so maintaining healthy soil and diverse native vegetation helps deter weed expansion. Areas such as roadsides and overgrazed pastures tend to be ideal sites for weeds to get a foothold. Weeds can be spread by vehicles, heavy equipment, contaminated hay and straw, or anything that moves contaminated soil to a new place. Some pests plants are actually still sold as ornamentals.

An ounce of prevention...

Preventing the spread of noxious weeds is far cheaper than waiting until they have spread and require expensive control measure (and herbicides). Although noxious weeds will forever be newly introduced into our mountain area, recognizing and eradicating plants before they have a chance to proliferate will go a long way toward protecting our landscape.

What you can do:

- Plant only non-invasive species in your garden. Contact the California Native Plant Society at www.cnps.org for a list of safe plants.
- Remove weed seeds from your clothing, gear and pets' fur when you are in a contaminated area. Store the seeds in a small paper bag until you can dispose of them by burning.
- Drive only on established roads and trails. Rinse off all soil and plant particles from tires before moving from an infested area to a non-infested one.
- Ask for certified weed-free hay and straw from your supplier.
- Practice good land management. Keep your native and landscape plants healthy to resist noxious weed invasion.
- Manually pull weeds as soon as they appear.
- Report infestations to landowners or land management agencies.
- Join volunteer eradication efforts through your local Resource Conservation District or Noxious Weed Alliance.
www.cdfa.ca.gov.
- Please note that there are many other noxious weeds in our area. They include: Spotted Knapweed, Bull Thistle, Italian Thistle, St. Johnswort, Scotch and Spanish Broom. For more information: check our website www.ncrcd.org/index.php/resources-and-links/weeds/ or visit the weed management areas of the California Department of Food and Agriculture web sites. www.cdfa.ca.gov/wma



SOIL CARE & CONSERVATION

Healthy soil goes hand in hand with a healthy environment. Land owners need to be aware that poor soil quality is linked to: invasions of non-native weeds; erosion; sediment in our streams, rivers and lakes; reduced land; and an effective water cycle, leading to reduced water in springs and wells. Increases in noxious weeds, erosion, and low spring and well levels are all indicators of poor soil health. Some basic practices are to avoid compaction and tillage, conserve topsoil by preventing erosion, increase organic matter with compost, cover crops, and mulching. Be sure there is adequate water, nutrients and air for plants to grow well.

What you can do:

- Protect cut-and-fill slopes with stabilizing material such as vegetation, fibre cloth, straw, riprap, gabions, or retaining walls.
- Install culverts according to local, regional and California State Code standards.
- Maintain vegetative ground cover in riparian areas.
- Divert water away from driveways and pathways to prevent gully erosion. Water bars may be used where appropriate.
- Minimize soil surface disturbance. Maintain vegetative cover.
- Do not remove naturally fallen pine needles if possible.
- Clean and/or remove undesirable or human-caused debris from riparian areas.

Re-vegetate all bare or disturbed soil with grass seed or native plants, and mulch. The optimum time to do this is between October 15 and November 15. For more information on organic matter in soil, visit these sources;

Soil Biology Primer, a complete view of the ecological processes regarding soil. www.nrcs.usda.gov/wps/portal/nrcs/site/soils/home/

Information on “Brittle” vs. “Non-brittle” environments and management for social, financial, and ecological benefit.

www.managingwholes.com

Common Nevada County Conifers

Beech Family	Birch Family	Buckthorn Family	Citrus Family
<i>Tan Oak, Scrub Oak Blue Oak, Oregon Oak, California Oak, Interior Live Oak</i>	<i>Grey Alder, White Alder</i>	<i>Tobacco brush, Whitethorn hybrid, Cascara</i>	<i>Western hoptree</i>
Cypress Family	Dogwood Family	Heath Family	Laurel Family
<i>Incense Cedar, MacNab Cypress, Western Juniper</i>	<i>Brown Dogwood, Miners Dogwood</i>	<i>Pacific Madrone, Sticky Whiteleaf Manzanita</i>	<i>California Bay Laurel</i>
Olive Family	Pea Family	Pine Family	Rose Family
<i>California Foothill Ash, Oregon Ash</i>	<i>Western Redbud</i>	<i>White Fir, Red Fir, Whitebark Pine, KnobCone Pine, Jeffrey Pine, Sugar Pine, Western White Pine, Western Yellowpine, California Foothill Pine, Mountain Hemlock, Douglas Fir</i>	<i>Birchleaf Mountain Mahogany, Desert Mountain Mahogany, Desert Peach, Bitter Cherry, Kalamath Plum. Chokecherry,</i>
Soapberry Family	Walnut Family	Willow Family	Yew Family
<i>Rocky Mountain Maple, Bigleaf Maple, California Buckeye</i>	<i>Southern California Black Walnut, Northern California Black Walnut</i>	<i>Fremont's Cottonwood, Quaking Aspen, Black Cottonwood, Red Willow, Pacific Willow, Arroyo Willow, Sandbar Willow Gooddings Black Willow, Shining Willow, Dusky Willow, Coulter's Willow</i>	<i>Pacific Yew, California Nutmeg</i>

FOREST LAND MANAGEMENT

There are many wonderful properties you may find to purchase in Nevada County, but keep in mind that land ownership also comes with responsibilities. Property owners are solely responsible for adhering to local regulation for fire resilience. This means you'll need to maintain your land or at the very least pay someone to do so.

In those areas you wish to thin yourself, use the following formula to determine tree spacing: Use the standard D+ factor, where the "D" is the diameter in inches changed to feet, plus the standard factor. Example: cedar, pine and fir, D+6. Diameter of tree is 7 inches. 7 feet + 6 feet = 13 foot spacing distance. In general, leave healthy, full crowned, well-formed trees. Remove trees that are crooked, forked, dead or dying, diseased or injured. The seedlings should be thinned so they are in full sun and at least six feet apart.

Forest Land Management

There are over 65 tree species that are native to Nevada County, and there are some things you should know about water, diseases, thinning, and fire danger. One place to start gathering information is to contact the California Department of Forestry and Fire Protection (CDF), or hire a private forester for a consultation. CDF's goal is to maintain the sustainability of California's natural resources. The Department funds and administers State and Federal Forestry Assistance programs for land owners that are supervised by RPF's, demonstrates sound management practices on eight state demonstration forests, enforces the California Forest Practice Act on all non-federal timberlands, provides research and educational outreach to the public on forest pests such as Sudden Oak Death and bark beetle, and coordinates efforts for fire hazard reduction to reduce risk of wildfire and improve the quality of California ecosystems.

The removal of almost any conifer requires a state-issued permit. Such permits must be prepared by a Registered Professional Forester.

Care of California's Native Oaks

Native oaks, when young trees, are very tolerant of their environment and make excellent and adaptable landscape assets. The mature native oak is an invaluable part of our environment, but does not tolerate many changes once established.

Most native oaks in California evolved in an environment with cool, moist winters and hot, dry summers. Homeowners should attempt to approximate the natural environment for these trees. They should be very careful in fitting buildings with these magnificent giants.

Any substantial change in the mature oak's environment can weaken or even kill a healthy specimen. A good rule of thumb is to leave the tree's root protection zone (RPZ) undisturbed. This area, which is half again as large as the area from the trunk to the drip line, is the most critical to the oak.

To protect a mature oak, pay particular attention to drainage, and avoid filling, trenching, or paving near its root zone. It is best to leave the natural grade within the root zone alone. Poor drainage is a common cause of oak tree death. Too much moisture, particularly in the warm, dry months, can smother the roots and encourage growth of fungi.

When an oak appears unhealthy, consult a certified arborist to determine the cause. Pruning should be performed by a certified arborist. Excessive pruning may cause a decline in vigor or kill a tree.

To manage oak woodlands appropriately and according to the California State Law, consult a certified arborist or Registered Professional Forester (RPF) when management projects cover more than a few landscaping trees.

When growing under natural conditions, native California oaks are relatively tolerant of most diseases. The two oak diseases most often encountered in irrigated settings are crown rot and oak root fungus. Symptoms are a decrease in vigor, twig die-back and wilting, abnormally yellow leaves and lesions on the bark with oozing, dark-colored fluid.

Treatment includes removing lawn and plants that require irrigation from the RPZ. Remove soil and other debris near the trunk. Do not water in the RPZ during the summer. Improve drainage around the tree and prevent mechanical damage.

Mistletoe is a parasitic plant that grows on the branches of many oaks and can cause structural weakness that make branches more vulnerable to breakage. Small infestations can be removed and the bark around the spot where the mistletoe stem entered the branch cut back. Major infestations are difficult to control. An arborist should be consulted.

Because oak woodlands also contain significant rangeland, for rangeland consulting either a RPF or a Certified Range Manager are the appropriate professionals (also per California State Law).





FIRE HAZARD REDUCTION

Nevada County, exists in a Mediterranean climate, with hot, dry summers followed by cold, wet winters. Neither seasonal condition provides a good medium for rapid fungal decay of dead forest material. This phenomenon creates an ever-increasing accumulation of forest material on the forest floor. Mother Nature periodically reduced this fuel load with lightning fires and volcanic eruptions.

For the last 12,000 years, Native Americans utilized fires to supplement Nature's cleansing method. Every acre from the foothills up to around 5,000 feet in elevation burned every seven to fifteen years dramatically reducing the establishment of thickets of young trees and brush, keeping a separation of fuels between the forest floor and the crowns of trees. Most historic forests retained widely spaced trees in stands of generally 60 to 90 trees per acre. (Four or five times less dense than today's forests).

With the migration in America from east to west, uncontrolled accidental fires became increasingly common. The US Forest Service was formed in 1906 and a few years later decreed wildfire suppression, the law of the land. With the good intention came the unintended consequence of the slow but dramatic buildup of forest fuels and the creation of much thicker forest densities. Since the enactment of fire suppression policies, most of the Sierra has missed 5 to 10 fuel reducing, forest cleansing burn cycles.

Nevada County's history includes cattle ranchers and sheep herders driving their animals into the high elevation of the Sierra for summer grazing. In the fall, as they drove their herds down-elevation, they often lit fires in their wake. Periodic fire maintained the grasses and forbs in upland meadows while burning the encroaching lodge pole pine and other meadow-shrinking species. Fire also consumed brush too tall or decadent to provide good forage, replacing it with sprouted or seed germinated lush new growth.



DEFENSIBLE SPACE

Recommended spacing of trees and bushes based on steepness of slope

SLOPE	0-20%	20-40%	+40%
Shrubs*	2x	4x	12x
Trees	10'	20'	40'

* times the height of the bush. For example, a 2' high bush on a 20% slope will need 4' spacing.

Remember: Clearing need not be bare mineral soil for entire 100 feet. To learn how to properly create defensible space: www.fire.ca.gov/dspace

Know your Zone

www.nevadacountyca.gov/3223/Evacuation-Zones

In the event of a wildfire or an emergency situation, law enforcement and fire agencies issue evacuation warnings or evacuation orders for impacted areas. These notices are issued for a Zone with an evacuation Status.

Sign Up for CODE RED

www.public.coderedweb.com/CNE/en-US/CA8B57E20D17

CodeRED is an opt-in notification system used by the County of Nevada to notify residents in an emergency. These alerts may be received as text, email, landline, cell phone, and TTY. Message and data rates may apply to sent and/or received texts.

Ready Set Go

www.nevadacountyca.gov/2777/Ready

This on-line resource will be your guide to being prepared and ready for wildfire. **READY** - is your home ready? **SET** - are your friends, family, and neighbors set and prepared? **GO** - Do you know where to go? Get familiar with the Fire Safe Council of Nevada County: www.areyoufiresafe.com/

Additional preparation for Fire Season

- Clean all vegetation from roof, eaves and rain gutters.
- Keep your flues clean.
- Cover chimney outlets and flues with a spark arresting half inch stainless steel mesh screen.
- Complete your pile burns by May 1st. Get a permit.
www.nevadacountyca.gov/2753/Burn-Permits
- Keep emergency phone numbers and evacuation routes clearly posted.
- Keep vehicles full of gas.
- Prepare a “Grab & Go” bag for each family members & pets.
- Plan your escape route in advance and make sure everyone knows it.
- Make sure your address is clearly visible from the street in all weather.
- Keep a two-week supply of water, candles, non-perishable food and medications.
- Keep cash, bank and insurance info handy.

Fire in the Sierra The annual Mediterranean climate weather pattern with an added constant source of ignition, becomes a fire evolved ecosystem. Add the fact that at the end of summer, when live and dead fuels reach their dried point, the Sierra experiences episodes of high winds, this typifies a fire evolved ecosystem on steroids.

Fire Physics Heat, Oxygen and Fuel form the “Fire Triangle. Eliminate any one side of the triangle and fire dies. Heat to initiate combustion, a constant supply of oxygen to maintain combustion and fuel, in a condition available to burn, to maintain combustion.

FIRE vs. FIRE Historically, forest fires were generally low-intensity affairs. Fires might cover large areas, but flames stayed close to the ground with relatively modest temperatures, and animals could generally avoid the immediate effect of flames. Today’s infernos sometimes tower above the ground and reach 3,000° F, hot enough to melt metal. They can travel 20 miles in a day and sterilize soils.

GROUND FIRES Ground fires are slow moving, smoldering fires that burn under the forest floor. Ground fires can flare-up into surface fires under certain conditions, but usually follow fast moving fires and consume tree roots and other materials they leave behind. Ground fires are relatively easy to control.

CROWN FIRES Flames from crown fires leap from treetop to treetop with flames anywhere from five to 200 feet high or more, they most spectacular and lethal of all fires. They tend to be wind-driven, and the most difficult to fight.

IGNITION SOURCES (HEAT) Accidental ignition as well as arson will never be completely eliminated. We can reduce ignition incidences but never eliminate the 'heat' side of the fire triangle.

OXYGEN Water and fire retardant coats much of the available fuel temporarily reducing the heat and/or access to oxygen. However, large fires can consume so much oxygen that they draw in massive air creating their own fire winds. Especially on large wind driven fires, removing the 'oxygen' side of the fire triangle remains marginally affective.

FUEL Contiguous forest floor fuel perpetuates a wildfire. Substantially reducing the amount of available fuel can dramatically reduce fire severity and greatly improve firefighting success. Every landowner can address the one leg of the fire triangle and mitigate fire by reducing fuel. First, the huge backlog of accumulated forest vegetation and second a maintenance program.

FIRE WEATHER Local and regional storm winds mostly come from the south to southwest. Knowing the direction of a south/southwest bearing and an east/northeast bearing will let landowners know the direction of periodic high wind events.

THE CHANGED SIERRA LANDSCAPE Virtually every forested acre today bears no resemblance to the appearance or condition of historic landscapes. Older, larger, widely-spaced conifer forests with open understories have been converted to smaller, tightly packed trees with dense understories.

BEEBLE INVASIONS Bark beetles have thrived with the onset of unnaturally dense forests. Bark beetles have already killed up to 33 percent of the trees in some parts of the Tahoe Basin and nearly half of the pine trees are dead in the San Bernardino and San Jacinto Mountains. Without enough nutrients to go around, trees become stressed and susceptible to insect attacks. With forests unnaturally dense, trees have barely enough moisture to produce the sap needed to keep out bark beetles even in relatively wet years and cannot resist attack during dry years.

INTRODUCED PLANT SPECIES California retains around 6,600 native plant species. Humans have introduced around 1,400 non-native species. Today, non-natives grasses represent the vast majority of species surviving in meadows and grasslands. Yellow star-thistle invades and dominates huge swaths of the foothills. Himalayan blackberry chokes the riparian zones of most foothill and lower Sierra streams. Scotch Broom can be found throughout California and maintains dominants in many foothill and Sierra landscapes. Large and small subdivisions sprang up in mass turning rangeland and timberland into residential areas. Within the last 50 years, tens of thousands of homes popped up in the foothills and forests of each Sierra county. The habitat for resident native species and animals migrating downslope in the fall and winter continued to degrade as the number of roads, homes, fences, and the subsequent infrastructure to support people increased. The huge influx of domestic dogs and cats injected healthy, well fed predators into the wildlife food chain. Whether owners accept the reality or not, their pets kill native species like ground nesting birds, rabbits, mice, voles, lizards, and other species at the bottom of the food chain.

THE WILDLAND/URBAN INTERFACE Living amongst the trees without caring for and thinning the forest has proven to be lethal. Over 8 million people now live in the wildland-urban interface and are at significant fire risk. California is expected to add another 6 million people in the next 15 years, so danger in our forests is only likely to increase.

It took decades for headwater forests to reach their current degraded conditions and enhancing resilience will also take many years. Yet short-term objectives such as suppressing fires or managing for threatened and endangered species tend to dominate management decisions, and there are few laws or rules that mandate planning for long-term resilience. Likewise, social concern about the effects of forest management on air and water quality, habitat, scenic value, and recreation may constrain landowners' ability to implement actions with long-term benefits.

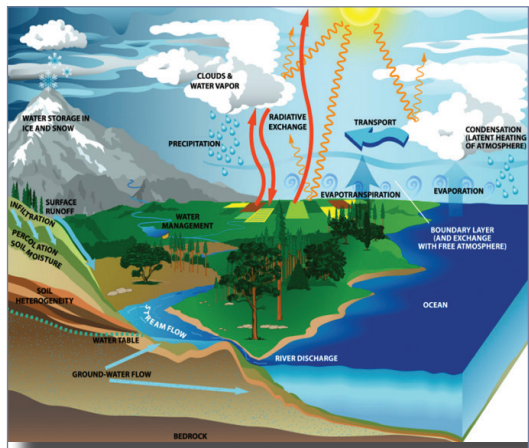
AIR QUALITY

Although we live in a relatively pristine environment, air quality is an increasingly important issue in the Western Sierra foothills. As air quality worsens in the Bay area and Sacramento Valley, the foothill area experiences the repercussions. Poor air quality not only threatens the health of people in our area, but can also damage our ecosystems.

Nearly 60 percent of the air pollution in our area comes from cars and trucks. Other sources include off-road vehicles, water craft, lawn and garden equipment, wood stoves and fireplaces, outdoor burning, electrical generation (from nonrenewable fossil fuels), industrial sources, consumer products and wildfires. Indoor air quality also affects our overall health and well-being. Smoking: some cleaning products; mold: and off-gassing of paint, furniture and carpeting, all contribute to reduced indoor air quality.

Thing you can do:

- Don't use a wood stove, pellet stove or fireplace on days when air quality is poor.
- If you use a wood stove, pellet stove or fireplace insert, make sure it's EPA approved, and that the catalytic converter is functioning properly.
- Choose air friendly product with low, or no VOC's (Volatile Organic Compounds).
- Paint with a brush instead of a sprayer.
- Drive slowly on unpaved roads.



ENERGY CONSERVATION

Choosing green energy is an important way to protect your health while reducing your contribution to global warming. Green energy is electricity from renewable sources - sun, wind, water, biomass and geothermal. These renewable sources emit little pollution and, unlike nuclear production, leave no radioactive waste.

Some things you can do:

- Consider having a comprehensive audit done on your home.
- Check insulation in the attic, basement, and walls. Note the age and condition of heating and cooling equipment, appliances, windows, and water heaters.
- Wrap water heaters with insulating jackets.
- Turn down water heater thermostats to 120°F.
- Turn off lights when leaving a room.
- Set thermostats to 68°F in winter when you're home, and down to 55°F when you go to bed or when you're away.
- Use energy-saving settings on washing machines, clothes dryers, dishwashers, and refrigerators.
- Don't waste water, hot or cold, inside or outside your home.
- Clean your refrigerator's condenser coils once a year.
- Air-dry your clothes.
- Close heating vents in unused rooms.
- Repair leaky faucets and toilets (5% of water "use" is leakage).
- Close drapes (and windows) during sunny summer days and after sunset in the winter.
- Install water-saving 2.5 gallon per minute shower heads.
- Install water efficient faucets heads in your kitchen and bathroom sinks.
- Install programmable thermostats

- In the attic and basement, plug the air leaks and replace and re-putty broken window panes.
- Clean or change the air filter on your warm-air heating system during winter, and on air conditioning units in the summer.
- Insulate the first three feet of hot and cold inlet water pipes.
- Buy energy efficient appliances. Energy Star products power down when not in use.
- Recycle and choose recycled products whenever possible.
- Use energy efficient light such a indoor compact fluorescents, ad motion sensors and solar lights outdoors.
- Seal and insulate warm-air heating (or cooling) ducts.
- Have heating and cooling systems tuned up every year or two.
- Make insulating shades for windows and add insulating storm windows. in hot climates, shade sunny windows or add solar gain control films.
- Insulate hot water pipes in unheated basements or crawl spaces.
- Consider installing other energy sources such a solar panels, wind or water power.
- Ride share or use public transportation whenever possible.
- Consider hybrid, electric, or alternative fuel vehicle when it's time to buy a new car.
- Contact your State Energy Office and utility companies for program information.



RECYCLING

Become a Practicing Conservationist

It has been said that the USA is one of the most wasteful countries on Earth. Whether this is true or not, to conserve our resources and re-use as much as possible is a process that pays dividends and is worth the effort.

County Public Works & Planning

For details of recyclables, hazardous materials:

www.wm.com/location/california/nevada_county/recycling

Nevada County Recycling Services

www.nevadacountyca.gov/3111/Recycling-Resources

Nevada County Green Waste

Western Nevada County

Order Waste Management's 64 or 96-gallon residential curbside green waste bin for regular pick-up: (800) 637-8648.

Drop Off Green Waste:
McCourtney Road Transfer Station. Wednesday – Sunday, 8:00 a.m.-3:30 p.m.
14741 Wolf Mountain Rd,
Grass Valley, CA.
Standard disposal rates apply.

Rent a Green Waste Dumpster:
Rent a 20, 30, or 40-yard green waste dumpster on your own, or split the cost with neighbors.
To reserve a dumpster, call Waste Management at: (866) 844-1508.

Truckee

Go to www.keeptruckeegreen.org/ to order Green Waste Carts: Carts are serviced every other week, May–November. Call Tahoe Truckee Sierra Disposal (TTSD) to order up to 3 carts at (530) 583-7800. Delivery fees apply.

Drop Off Green Waste:
Drop off up to 6-yards of green waste at Eastern Regional Landfill for FREE, May through October. Residents will receive an address-specific punch card to track yards dropped off.

Rent a 6-yard Dumpster:
Schedule a driveway dumpster rental from Wen. to Wen.
Available May - October.
Discounted dumpster rental rate applies. Call TTSD at (530) 583-7800

LIVING WITH WILDLIFE

As the world becomes increasingly urbanized, more and more wildlife habitat is being taken away. Those living in Nevada County know that coexisting with wildlife involves understanding animal behavior, minimizing conflicts, and creating a wildlife-friendly environment.

The future of healthy wildlife populations may partly depend on our ability to learn how to peacefully coexist. There are alternative methods to deter hungry bears such as inexpensive motion detector alarm or spray devices rather than illegal bear traps or guns that may kill a mother bear and leave cubs to starve to death. Make the effort to lock up garbage cans in barns or storage sheds, simple closures such as carabiniers will thwart a bear. The same goes for unguarded livestock. Secure livestock and outdoor pets in sturdy, covered shelters at night. To keep out skunks or other burrowing creatures out of under your home, spread mothballs in potential bedding areas. Keep your property and vehicles clean and remove potential food sources. Build owl/birds houses to attract birds to help control rodent infestations. Teach your family to avoid mountain lions, most attacks are dusk or dawn. On hikes, make noise as you walk and carry bear spray with you, it works on mountain lions. Don't approach or feed wild animals ever, and keep a close watch on small children. You live in a rural area and wildlife is all around. There is a path to peaceful coexistence that will be worth the effort.

California Department of Fish and Wildlife (CDFW)

The mission of the Department of Fish and Wildlife is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. CDFW is a regulatory agency that manages the 694 species of animals found in the state of California, Nevada County hosts a total of 341 amphibians, 224 birds, 83 mammals, and 23 reptiles. www.wildlife.ca.gov



ANIMAL KEEPING

Now that you have land, wouldn't it be great to have animals? Before you take the next step, consider the monthly expenses, the feed, bedding, pasture seeding, vet bills, housing structures and the time commitment. Usually the benefits out weigh the costs. Farm animals can be natural pest controllers, soil-enriching composters, and even surprisingly entertaining companions.

Check out the County Ordinances and My Neighborhood Map (www.mynevadacounty.com/580/My-Neighborhood-Map) for your area.

	*ZONE: AG, AE, FR, REC, IDR, PD, TPZ, P&OS	RA	R1, R2, R3	COMMERCIAL & INDUSTRIAL DISTRICTS
LARGE ANIMALS	NO LIMIT		NOT ALLOWED	
SMALL ANIMALS	NO LIMIT			
DOGS/CATS	NO LIMIT		NOT MORE THAN 3	
GAME FOWL, POULTRY & RABBITS	NO LIMIT		NOT ALLOWED	
BACKYARD CHICKENS	NO LIMIT*		NOT ALLOWED ON R1 & R3	
	OK ON 1/2 ACRE*		NOT ALLOWED ON R2 & R3	
CHICKENS R1 & RA	6,000 SQ. FT - 4 CHICKENS* 10,000 SQ. FT - 6 CHICKENS* 20,000 SQ. FT - 12 CHICKENS*			
AVIARIES	NO LIMIT			
APIARIES <i>COMMERCIAL: CALL COUNTY AG DEPT. FOR MORE INFO: 530-470-2690</i>	NO LIMIT	NOT MORE THAN 20 COLONIES PER ACRE	NOT ALLOWED	
CHINCHILLAS MINKS & SIMILAR SIZE	NO LIMIT		NOT ALLOWED	
WILD, EXOTIC, OR NON-DOMESTIC	USE PERMIT		NOT ALLOWED	
WILDLIFE REHAB FACILITIES	ADMINISTRATIVE PERMIT		NOT ALLOWED	

*FOR MORE SPECIFIC IMPORTANT INFORMATION: WWW.NEVADACOUNTYCA.GOV/580/MY-NEIGHBORHOOD-MAP

ZONE CODE: AG - GENERAL AGRICULTURE, AE=AGRICULTURE EXCLUSIVE, FR=FORESTRY RESOURCE,
REC=RECREATION, IDR=INTERIM DEVELOPMENT RESERVE, PD=PLANNED DEVELOPMENT BASE DISTRICT
TPZ=TIMBERLAND PRODUCTION ZONE, P&OS=PUBLIC AND OPEN SPACE DISTRICT

COMMUNITY INFORMATION

Find information about the various departments and services provided by Nevada County including; permitting, animal control, property zoning, taxes, maps and to become more involved in your community:

Nevada County Website
www.mynevadacounty.com



**NEVADA
COUNTY**
CALIFORNIA

Nevada County Ag Commissioner

Wildlife concerns and information, weights and measures, consumer protection, agriculture advisory commission, farmer resources, environmental protection, crop reports, pesticide use and safety.

www.nevadacountyca.gov/982/Agricultural-Commissioner

My Neighborhood Interactive Map

With the My Neighborhood map application, you can select individual parcels and obtain parcel-based data such as addresses, assessor's parcel map districting, representatives, valuation, and zoning.

www.maps.nevadacountyca.gov/myneighborhood/

Local Emergency Services

The Office of Emergency Services (OES) is responsible for coordinating with County departments, local cities, and special districts to prevent, protect, mitigate, respond to, and recover from disasters.

www.nevadacountyca.gov/3453/Ready-Nevada-County

Nevada County Farm Advisor

The Farm Advisor Division provides information and training to local residents in the areas of agriculture, nutrition, youth and community development.

www.nevadacountyca.gov/1660/Farm-Advisor-Division

Bear Yuba Land Trust

Protecting scenic open space and working lands forever.

www.bylt.org

Master Gardeners

Master Gardeners are here to provide home gardeners in Nevada County with science.

www.cmg.ucanr.edu/index.cfm

COMMUNITY INFORMATION

Nevada Irrigation District

The District will provide a dependable, high-quality water supply for the communities we serve.

www.nidwater.com

Nevada County Resource Conservation District

Our mission is to promote responsible resource management within our jurisdiction through education leadership, technical and financial assistance, and project facilitation.

www.ncrcd.org

Nevada County Farm Bureau

Nevada County Farm Bureau is a membership organization where all county residents interested in ranching, farming and agriculture have the opportunity to join together, stay informed and have a voice managing our agricultural resources. Farm Bureau is dedicated to improving the economic well-being of its members and the lives of rural residents.

www.nevadacountyfarmbureau.com

Nevada County Resource Conservation Service (USDA)

USDA Grants and Technical Assistance Funding for Urban Agriculture and Innovative Production

www.nrcs.usda.gov

Sierra Harvest

Sierra Harvest's mission is transforming lives and strengthening community through fresh, local, seasonal food.

www.sierraharvest.org

4H

4-H helps young people to reach their full potential as competent, confident, leaders of character who contribute and are connected to their communities..

www.ucanr.edu/sites/nevadacounty4h/

UC Cooperative Extension Placer / Nevada

Cooperative Extension was established in Placer and Nevada Counties in 1917

www.ucanr.edu/sites/nevadacounty/

LIVING IN SNOW COUNTRY

There is always the potential for snow in Nevada County in winter months. The elevations of the county range from 1,000 feet above sea level to over 7,000 feet in the areas of the Summit/Sierra Crest. During snowfall, the Roads Department prioritizes snowplow routes throughout the county on county maintained roadways. The goal is to plow these routes often enough to keep them passable to traffic and as free of snow and ice as possible. Typically, routes are plowed at minimum once in a 12-hour period. The Roads Department often becomes a 7-day a week, 24-hour a day operation during heavy storm events and throughout the cleanup stages following.

For private roads, it is important to line-up snowplowing services in advance to ensure private driveways and roads remain accessible. For extensive, urgent storm damage cleanup, consider organizing with neighbors for coordinated tree and debris removal efforts. Private roads are the responsibility of the property owners on that road.

Keep the following vendor contacts on hand for:

- Propane Service
- Emergency Tree Service
- Snowplow Service
- Telecommunications
- Firewood
- Insurance

Drive safely and report hazards on County maintained roadways at public.works@nevadacountyca.gov or (530) 265-1411. Crews are on-call after hours to respond to urgent issues. Nevada County Sanitation District customers can report emergent issues 24-hours a day, 7 days a week at (530) 265-1555. Report downed power lines by calling 9-1-1 and to PG&E at 1-800-743-5000 or Truckee Public Utility District at (530) 587-3896. Never touch or walk in the immediate area of a downed powerline; assume it is energized and extremely dangerous. For more information and tips: www.ReadyNevadaCounty.org/WinterPreparedness or nevadacountyca.gov/Living-in-Snow-Country.

NEVADA COUNTY RESOURCE CONSERVATION DISTRICT

What are your resource concerns? Agriculture in Nevada County? Are we still in a drought? Controlling invasive plants and weeds? Wildlife habitat improvement? Vegetation management on your property? Forest health and bark beetles? We can help you with all these things and more.

The NCRCD offers conservation seminars and workshops throughout the year on conservation issues important to Nevada County and western Sierra County landowners. We sponsor educational and outreach events, spearheaded the Ag in the Classroom Farm Day event, have an Advisory Visit Program and a Manure Exchange Program, sponsor local students to attend Range Camp, and partner with a wide variety of organizations on natural resource conservation.

Our office also has great information that can help you determine if your property can accommodate your planned uses. We have an equipment loan program where landowners can borrow hand tools such as a soil sampler, weed wrench, pond rake, and a seed/fertilizer spreader as well as a Minimum Till Drill for rent. We offer prescribed burn courses, and we recognize the value of grazing to reduce fire hazard and to promote and maintain plant and wildlife diversity.

The NCRCD is here to help with all your land management needs. Call, e-mail, or stop by for more information.

www.ncrcd.org



Nevada County Resource Conservation District

Resource Conservation Districts (RCDs), authorized under Division 9 of the Public Resources Code, are special districts of the state of California, set up under California law to be locally governed agencies with their own locally appointed or elected, independent boards of directors. California RCDs implement projects on public and private lands and educate landowners and the public about resource conservation.



Nevada County Resource Conservation District (NCRCD)

113 Presley Way, Suite 1, Grass Valley, CA 95945

(530) 798-5529

www.ncrcd.org

Nevada County Agricultural Commissioner

Nevada County's Department of Agriculture is dedicated to sustaining a healthy agricultural industry while protecting the environment, the agricultural workforce, and the community. The mission of the Nevada County Department of Weights & Measures is to provide fair compensation and equity in the marketplace and to ensure that the interest of the buyer and seller are protected through education, inspection, and enforcement.



**NEVADA
COUNTY**
CALIFORNIA

**AG
COMMISSIONER**

Nevada County Agricultural Commissioner/Sealer County of Nevada

950 Maidu Ave, Suite 170, Nevada City, CA 95959

(530) 470-2690

www.nevadacountyca.gov/982/Agricultural-Commissioner