

Good Neighbor Handbook

A Guide for Landowners in the Methow Valley





Cover: Balsamroot and a view of the Sawtooths. Above: Twisp River. *Dennis O'Callaghan*

Facing page, left to right: rancher Craig Boesel; skiers on the Methow Community Trail; a ponderosa pine; naturalist Ken White; Taylor Woodruff.

Photos and illustrations throughout are from the Methow Conservancy Collection unless otherwise credited.

Welcome to the Methow Valley

If you own a piece of property or are considering buying land in the Methow Valley, the *Good Neighbor Handbook* is for you.

In one way or another, every person who has ever lived here – from Native Americans to second homeowners to alfalfa farmers – has played a role in shaping the landscape. And nearly everyone in the Methow has also been inspired by the landscape in some way.

This handbook offers guidelines and ideas that come from many sources: resident scientists, amateur naturalists, experienced general contractors and most likely, your future neighbors.

While this collective input comes from people in many walks of life, it has a running theme: a deep appreciation of the Methow Valley. Our hope is that this information will help you enjoy and protect all that creates the unique beauty of the Methow.



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Once a dietary staple of Native Americans, bitterroot usually grows in barren, rocky soil. *Dennis O'Callaghan*

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LOOKING FOR MORE INFORMATION?

Who do you call if you have a beaver in your irrigation ditch? Where can you find recycled material for a renovation or new home construction? A list of resources can be found on pp. 30-31.

A View of the Methow Valley



Low fog clings to the valley floor in autumn. *Sussi Rowntree*

The Methow Valley is a 70-mile-long, 1.17-million-acre watershed that is flanked on three sides by the Cascade Mountains. Eighty-five percent of the land is federally owned, 10 percent is held by private landowners and five percent is owned by the state of Washington.

Three main rivers – the Methow, Chewuch and Twisp – and many smaller creeks flow through the valley and eventually spill into the Columbia River. As with most valleys in the western United States, the lower elevation areas with their deep soil and access to irrigation were homesteaded and claimed for private use.

The climate is diverse, with a temperature range that can span 120 degrees over the course of a year. Hot summer temperatures can bring afternoon work to a standstill,

and in winter, heavy blankets of snow can collapse roofs. It is also a drier climate than that just west of the Cascades: The average precipitation is about 13 inches a year.

Though the valley has been through waves of logging, mining, ranching, hunting and other booms, the driving economic force today is tourism. Over a half million people flock to the valley every year, whether it's to enjoy the cross country ski trails or to stop a while on their journey along the North Cascades Loop.

The resident population of Okanogan County is spread out over 5,281 square miles, for an average of seven people per square mile – far below the U.S. average of 80 people per square mile.

Living near Water

Water is the lifeblood of the Methow Valley. Not only does it support a community of farmers, residents and recreational users, its presence is critical to a vast array of wildlife. Biologists estimate that riparian (streamside or wetland) habitats make up only about one percent of the land in the Methow watershed, yet 80 percent of wildlife species depend on these habitats for their survival. Riparian areas provide habitat for wildlife and also serve as travel corridors for many species. Protecting and maintaining the health and connectivity of these habitats is critical for conserving the rich biodiversity of the watershed.

Species like salmon that depend on riparian areas are particularly sensitive to seasonal water variation and to the sediments and pollutants that are by-products of development. There are local, state and federal riparian policies that protect habitat for three species of threatened or endangered salmonid fish: bull trout, steelhead trout and spring chinook salmon.

PROTECTING WATERWAYS THROUGH CONSERVATION EASEMENTS

A conservation easement is a voluntary, written legal agreement between a landowner and a qualified conservation organization, like the Methow Conservancy.

Easements permanently protect specific conservation values such as riverfronts, wildlife habitat, scenic views, open space, forests, working farms and ranches. To find out more about easement opportunities, contact the Methow Conservancy office or visit our website at www.methowconservancy.org.

Water Moves in Many Ways

While it may seem enticing to live close to a river, the reality is that rivers constantly change shape and location. The Methow River has flooded several times in the past century, and the main bridge south of downtown Winthrop was taken out by the flood of 1948. Annual spring high-water levels often fill basements and damage riverfront homes. You can avoid the expense and inconvenience of flooding by building or buying a home outside of a floodplain area. Floodplain information may be found through the County Planning Department or at the Methow Conservancy office.



Conservation easements help protect riparian areas in the Methow Valley.

What You Can Do

The most significant way to protect our waterways is to keep any new development out of riparian areas. Maintaining a healthy and undisturbed riparian area increases water absorption, which prevents rapid water runoff, erosion and stream sedimentation. Soils with air spaces and organic materials hold moisture and release it slowly, sustaining plants through dry summer months. Timely replanting of native vegetation after any development ensures that roots will hold soil in place.

If you're mitigating potential fire hazard by thinning near rivers and wetlands, use extra caution. Extra shade from thick vegetation helps keep water and air temperature down for fish and amphibians. Leaving snags and debris in place maintains a rich habitat for nesting birds and other wildlife.

Keeping livestock out of riparian areas protects critical vegetation while reducing sedimentation and nitrogen-laden waste, which can decrease aquatic oxygen levels and suffocate stream invertebrates, amphibians and small fish. Also, there are many times of the year when unseen salmon eggs and redds (nests) are vulnerable to human and animal disturbances.

Finally, disposing of both liquid and solid wastes carefully – including drain water, septic waste, herbicides and household trash – reduces harmful contamination of riparian habitat. Fish, amphibians and aquatic insects are extremely vulnerable to chemicals and they can carry pollutants further into the food chain. Leave a buffer zone between sprayed areas and streams, and avoid applying fertilizers or pesticides during wet, rainy periods as they will quickly run off toward low-lying riparian areas.

BUILDING NEAR SHORELINE AREAS

The Okanogan County Planning Department regulates building near rivers and wetlands. The county's Shoreline Ordinance defines the shoreline environment as any area 200 feet from the ordinary high-water line (OHW line), or to the edge of the 100-year floodplain, whichever is greater. In the Methow Review District, Rural Residential District and Low Density Residential District the standard setback in the shoreline environment is 50 feet from the OHW line, and residential development is prohibited in the floodplain. You can learn more about zoning districts and shoreline regulations on the county website at www.okanogancounty.org.

A Home in the Woods

The Methow Valley contains large stands of conifers (trees with needle-like leaves) and other trees, including black cottonwoods and quaking aspens. Conifers withstand the weight of heavy snow in winter and the drought-like conditions of summer.

For thousands of years, ponderosa pines have dominated the lower elevation forests of the Methow Valley. Ponderosas are distinguished by their long needles in bundles of three and their vanilla-scented orange bark. Douglas-fir is the second most common conifer. With their flat, short needles and distinctive, “hairy” cones, they are more shade tolerant and typically grow beneath larger ponderosa pines or on north-facing slopes.

When mature, both conifers have thick, fire-resistant bark. Some of the remaining old trees in the Methow show scars of numerous past fires, and forest historians estimate that low-intensity fires burned through Methow forests every five to 15 years. These ground fires were hot enough to kill understory vegetation, but they did not kill the large, widely spaced trees. Today the Forest Service sets low-intensity fires in Methow forests each spring and fall to mimic the frequent fires that historically burned in this watershed.

Wide spacing helps trees resist the spread of insects and disease and allows more rain and snow to reach the forest floor. Stable forest soils absorb moisture and gradually release it throughout the summer. This slow release of moisture helps recharge underground aquifers, maintains late-summer stream levels and sustains plants through dry months.

Fire Danger

Past fire suppression and the removal of many large, fire-resistant trees has left many forests in the Methow Valley primed for large fires. Where forests are dense (more than one tree every 10 feet) with small-diameter trees and no understory vegetation, fires can become very hot and move quickly. Frequent fires have always been a part of the natural cycle in the valley, and they will continue to be present here. Limiting burnable fuel close to your home is the best way to help prevent the loss of the things you have worked hard to create.



The July, 2001, 30-Mile Fire quickly spread from five to 2,500 acres in two-and-a-half hours. *Dennis O'Callaghan*

What You Can Do

- Thin and remove vegetation around your home, leaving trees over 12 inches in diameter
- Dispose of slash by chipping or burning; burn only small piles of woody debris (see “Burning Piles”)
- Stack firewood away from your home
- Keep your roof swept clean of pine needles
- Water a 30-foot (or more) protective radius around your buildings
- Build roads at least 20 feet wide with less than 8 percent grade, and with room for a fire truck to turn around
- Keep your driveway clear of dry plants and anything that could get in the way of fire crews
- Install hoses that can carry at least 50 pounds of water pressure
- Use fire-resistant (nonwood) roofing and siding
- Screen your chimney or stovepipe, and install spark arresters in woodstoves

BURNING PILES

It is legal to burn piles of wood during low-risk seasons. (Check first to see if a burn ban is in effect.) Piles must be smaller than 10 feet in diameter, and you will need water, raking tools and a weather check before you start. See the resources section, pp. 30-31, for more information.



A forest before thinning.



A recently thinned site.

Out in the Open



Balsamroot blankets a shrub-steppe hillside near Studhorse Mountain. *Dennis O'Callaghan*

While a shrub-steppe landscape (a complex mix of drought-adapted shrubs, grasses and flowering plants) may initially appear uninteresting, it is biologically rich and provides habitat for a wide variety of wildlife. In spring, the shrub-steppe is covered with yellow balsamroot, purple lupine and many other vibrant wildflowers.

Although this landscape is remarkably hardy, a shrub-steppe hillside is extremely sensitive to soil disturbance. Native shrubs and bunch grasses grow slowly and stabilize seemingly weightless soil that, when exposed, is commonly referred to as “moon dust.” Without the deep, anchoring roots of shrubs and grasses, moon-dust soil may quickly erode or blow away. Eroded, low-nutrient soil tends to support only invasive plants, which decrease species diversity and reduce water absorption in the soil.

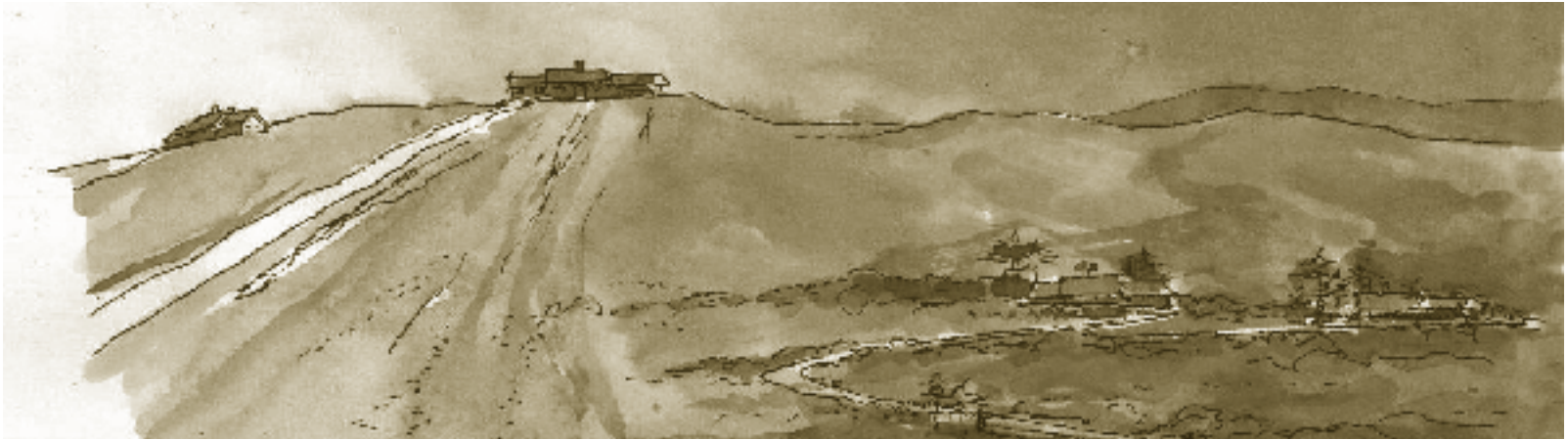
What You Can Do

To minimize the amount of disturbed ground, replant any disturbed soil as soon as possible with drought-tolerant natives and remove invasive plants before they gain the upper hand.

Before the start of any construction, mark soils and plants you want protected to reduce “jobsite spread.” Save any displaced topsoil in separate piles so you can reuse it, restoring the valuable nutrients. This also reduces the chance of importing soil that is contaminated with nonnative seeds.

Replanting appropriate drought-tolerant species can help ensure that replanted areas persist and native plants can compete with weeds over time.

Ridgelines



Where you place your home has significant impact on the scenic beauty of the Methow Valley. *Malcolm Wells*

For many people, ridgelines look like the ideal place to build in order to admire the view. Unfortunately, ridgeline houses permanently mar the scenic beauty that many treasure in the Methow Valley.

While there is currently no ordinance in place to limit ridgeline building, there is strong community resistance to ridgeline homes.

Before you build out in the open, spend time on your property in the heat of summer, in the icy cold of winter and on windy days. Get a feel for the extremes you may experience living on an exposed site.

What You Can Do

- Site your home so that the roofline is below the skyline when viewed from the valley floor
- Choose a roof and siding color that blends into the natural landscape (brown, tan, dark green, grey)
- Contour your driveway around the slope (not zig-zagging across the hillside) and quickly reseed disturbed soil with native grasses
- Landscape around your home using native species as camouflage for your home

Wildlife

The Methow Valley is one of the few remaining places in the lower 48 states where people share space with most of the historical wildlife. To many residents and visitors this is one of the most enjoyable aspects of being in the valley. Here is a short list of wildlife that you may encounter. Understanding their habitat and behavior can go a long way toward helping you learn to live with them.

Bears and Cougars

Black bears are common in the Methow Valley and range over large areas. Research indicates that the territory of a male black bear often exceeds 100 square miles; a bear can cover 40 miles in two days over mountainous terrain as it exploits seasonally abundant natural forage. In general, bears peacefully coexist with people in this valley, and they are seen on occasion. However, once a bear finds human food, it may become a “nuisance bear.” Unfortunately, the old saying that “a fed bear is a dead bear” often applies in this circumstance.

Cougars are also common and widespread in the valley. They are usually most active at dawn and dusk but because of their secretive nature they are rarely seen. Deer are the primary prey for these large cats, and any behavior that concentrates or attracts deer is also likely to attract cougars. Unattended pets and small livestock can also attract cougars.



Snow bunting,
Dennis O'Callaghan

Deer

The Methow watershed supports the largest mule deer herd in the state, and deer are a common site in pastures and on hillsides throughout the valley. Whitetail deer are also common in the brushier habitat in the valley bottom and along major watercourses. Deer seem to appear when you least expect them: On average, about one deer per day is hit by a car in the valley.

Rattlesnakes

The Methow Valley is prime northern Pacific rattlesnake habitat. These unique predators winter in communal dens that are usually on south-facing rocky slopes below 4,000 feet. Snakes usually move up to a mile from their winter dens and hunt for small mammals in optimal temperatures of 80° to 85°F. Rattlesnakes are not aggressive, and they would rather escape than bite you.

Bats

Thirteen species of bats live in the Methow Valley, and many have learned that human structures (barns, bridges, cracks and holes in homes, overhanging porches) provide suitable habitat. They are present in the valley year-round, but are obvious only in warmer months.

Unwanted Guests

Yellowjackets, leaf-footed bugs, mice, packrats, chipmunks and woodpeckers will gladly move into your home. It is almost inevitable that you will create some unintended wildlife habitat.

What You Can Do

As the valley's population grows, the greatest threat to wildlife is loss of habitat through development and human disturbance. But there are things you can do to promote a more peaceful coexistence with wildlife.

- Leave as much of your land in a natural state as possible. Protect wildlife habitat by leaving snags, rock dens, wetlands, native vegetation and some woody debris for animal food and cover.
- Learn to recognize sensitive species and look for ways to protect the conditions that they require to survive.
- Attract birds to your garden by planting native fruit-bearing shrubs such as elderberry, chokecherry and wild roses.
- Food stored outdoors – including garbage, fruit, pet food, compost and bird seed – attracts and “rewards” bears and other creatures. If you must store food outside, place it in a sealed bin.
- Cultivate a healthy sense of awareness when hiking or mountain biking; don't let small children run too far ahead or trail behind.
- Drive carefully, especially at night (45 mph), to reduce your chances of maiming or killing deer.
- Fence off your vegetables, ornamental gardens and fruit trees to keep deer out of your garden.
- Do not feed animals. Feeding deer or other creatures may introduce harmful foods into their digestive tract, draw them too close to domestic pets or train them to look for easy meals.

- Screen off attic access points and leave old buildings, snags, mines and caves as undisturbed bat habitat.
- Use chemicals carefully. Fertilizers, herbicides and pesticides are toxic to some animals if improperly applied.
- Use lights at night only as needed. Some animals, like flying squirrels, require darkness for survival and are vulnerable in lit areas.
- Use owl decoys, hawk silhouettes or Mylar streamers to keep birds from hitting large windows.
- Screen, seal and caulk all vents, windows and doors. Box in your eaves to remove nesting platforms.

PETS

The Methow Valley may seem like paradise for a pet, but pets can wreak havoc for native wildlife. A dog or cat may never catch anything, but a well-fed pet forces wildlife to spend precious energy during the chase. Also, unvaccinated pets can spread a host of diseases to wild animals.

Washington State law holds dog owners liable for any wildlife harassment, and under the law a dog can be destroyed on the spot by a game warden, sheriff or livestock owner. If an owner receives a written complaint from the sheriff or game warden about their dog, the owner will be held liable and may be found guilty of a misdemeanor. The best protection for you, for wildlife and for your dog is to train it to stay close – or to use a leash – whenever you're outside.

Cats take a significant toll on small mammals, bats and birds. Cats often fall victim to coyotes, cougars and other predators. You can protect both wildlife and your cat by keeping the cat indoors.

Agriculture: A Living History

Today approximately 55,000 acres of private land in the Methow watershed are used for some type of farming, rangeland or fruit production. As of 2000, agricultural businesses on these lands employed about 14 percent of valley residents. Although in the past decade tourism and services have outpaced agricultural employment, farmland still provides important services to the valley. These services include maintaining open space, providing food, providing wildlife habitat and keeping part of the valley's history alive.

If you own agricultural land, or if you neighbor it, you may want to learn about fence maintenance agreements, grazing leases, water rights, wildlife-friendly fences and access road

agreements. If you own fruit trees, you should control insect pests and diseases to reduce risks to your neighbors' trees and especially to nearby commercial orchards.

Before you build on farmland, consider the viability of a farm operation around your home. Any trees or structures in the middle of fields make farming more difficult. Consider placing your home at the edge of the best soils and not on top of them. If your land has been farmed before, consider making it available to a farmer who can carry on the agricultural heritage of the valley, help control weeds and contribute to our local economy. See the resources section, pp. 30-31, for more information.



A barn on a farmland conservation easement.

TOP FOUR METHOW VALLEY EMPLOYERS BY INDUSTRY

Education and Health Services	18 %
Recreation and Tourism Services	15 %
Agriculture	14 %
Retail Trade	10 %

Source: Methow Valley Census Data



Freshly cut agricultural fields in the Methow Valley. *Dennis O'Callaghan*

Developing Private Land

The fragile and beautiful character of the Methow Valley has been a subject of debate and careful planning for decades. Many volunteers have donated countless hours to developing sensible land- and water-use plans for the valley, along with the Okanogan County Planning Department and the Washington Department of Ecology.

Okanogan County regulates private land development through the Okanogan County Zoning Code. From north of Carlton, the minimum lot size allowed in most of the valley is five acres on the valley floor and 20 acres in the uplands.

As increasing numbers of people move to the valley on a full- or part-time basis, land-use planning will continue to be a hot topic, and rules and ordinances are likely to continue to evolve. The stalwart participation of community members from all walks of life will help to guarantee that the future of the Methow Valley remains locally directed, designed and implemented.

NIGHT VS. LIGHT

Step outside on a new moon night and you'll see more stars than most people in the United States. While one bright outdoor light may seem insignificant, it takes only a small number of lights to wash out pure darkness. By shading outdoor lights and keeping them close to the ground, you can help reduce light pollution and protect the valley's night skies.



A yellow-bellied marmot. *Joyce Bergen*

The Shoreline Master Program, the Critical Areas Ordinance and the Department of Ecology also limit development and residential wells in certain areas to protect homes from flood danger and to limit water extraction. In general, each developable residential lot is allowed one well, which can provide up to 5,000 gallons of water per day.

As part of the building permit application process, you will be required to submit a site map to the County Planning Department. The map must show that your development will meet the requirements for lot-line setbacks, septic system type and location, water availability and road access. Checklists for your site map and permit application are available on the county website at www.okanogancounty.org.

AERIAL PHOTOS

Aerial photos of your property are available at the Methow Conservancy or the Okanogan County Assessor's office. These photos are helpful for visualizing your project and seeing ways to cluster your buildings, protect native vegetation and plan ahead for landscaping.



A home site during excavation and after five years of soil improvement, annual planting, watering and weeding. It takes time to reclaim the disturbed area around your home.

Site Selection

Where you put your house will determine how it blends into the surrounding landscape. It is a decision as important as the design of your home and deserves ample time, planning and discussion.

Before You Select a Home Site

- If possible, spend time in each of the four seasons on your property before you build. Plan for snow loads and snow removal, spring runoff and drainage, summer landscaping and weed control, year-round wildlife patterns and fire safety.
- Try to see your property from other places in the valley. Will your home be visible to the public? If so, what can you do to help your home blend into the environment?
- Assess the potential sunlight on your property. Western exposures tend to be hot and dusty, especially in the late summer. Conversely, the steep walls of the upper Methow Valley significantly diminish direct sunlight north of Winthrop in the winter months. Bring a compass to your property and watch how the sun tracks across the sky.
- Consider using the topography of your site to your advantage, using earth-berming and solar gain to reduce your energy costs and provide natural heating and cooling for your home.
- Locate your property boundaries and research all restrictions. Carefully read your title report, covenants and county zoning rules. Be aware of setback rules, septic system requirements, wetland and well buffers, road easements and floodplains.
- Ask your neighbors about their well productivity, past forest fires, weed invasions, wildlife sightings and neighborhood fire-safety plans.

Before You Place Your Home

- Use chalk dust, flagging and poles to visualize the actual location and size of your house before you excavate. Bring a ladder to see the potential view from your house.
- Sketch outbuildings and landscaping along with your home. These features may include a fenced garden, a woodshed (away from your house), a plowed snow storage area and a recycling/trash shed.



A well-sited home is easily accessible, properly oriented and blends into the landscape.

Sketching a Site Map

A simple site map that shows the location of buildings, well and septic system is legally required in order to obtain a building permit. However, a more detailed map is a valuable way to visualize and plan the layout of your property. Aerial photos and topographic maps are useful in this process, but nearly any type of sketch can help you see how your building may complement your land.



Site Map Details

- Contour lines (elevation)
- Orientation (aspect)
- Vegetation and forest types
- Wetlands
- Water sources
- Sunrise and sunset points
- Wind direction
- Roads
- Wildlife trails
- Recreational trails
- Protected areas/favorite spots
- Potential building areas
- Septic system area
- Utility access
- Emergency rescue access

Using Water

Accessing and disposing of water are important building considerations in the Methow Valley. The water supply is not inexhaustible: It is allotted for household consumption, agriculture and maintaining a healthy riparian habitat.

Wells

Outside the town boundaries of Winthrop and Twisp – except in planned developments – nearly every home uses a well to access drinking water from underground aquifers. To be certain that they will have access to water, many people choose rural property with an established well and get a pressure test and a well log. A well log will show how productive an existing well is. If there is no existing well, a well driller will help you determine where to drill.

Wells vary widely in their productivity and depth. Productive upland wells usually yield one-half to 50 gallons per minute, are usually mineral laden and generally range from 150 to 200 feet deep. Some upland wells are over 400 feet deep and produce under five gallons a minute. Also, upland wells are notorious for producing less water as they age. Valley floor wells yield three to 100 gallons per minute and generally range from 60 to 150 feet deep.

Irrigation Ditches

The Methow Valley still has numerous open-air irrigation ditches, although many of these have been changed to pipes over the past five years to conserve water. If you own land adjacent to a ditch, you might own irrigation shares. Most landowners consider ditch shares to be a valuable asset and

will use these water rights so that they are not lost. If you have rights that you do not intend to use, you may consider placing these rights into a revocable water trust. Ask the Methow Conservancy for more information.

Ditches are usually managed through one of three systems: individual family ditches that serve fewer than ten people, private company ditches with shareholders and a board of directors, and irrigation districts, also with shareholders and a board. Easements exist but vary, depending on the size and ownership of the ditch.

Liquid Waste

Outside the Twisp or Winthrop municipal boundaries, you will need a septic system for sewage and wastewater. Two systems are commonly used in the Methow: pressurized-sand and gravity-fed. The system you use depends on your soil type seven feet below the surface; costs depend on the size of your home and site specifics. Loamy soils require gravity-fed systems; gravelly or sandy soils require pressurized-sand systems. Around 80 percent of new systems in the Methow are pressurized-sand.

The minimum lot size for a septic system is one acre (unless the lot is served by a public water system, in which case it is a half acre). Building codes require a 100-foot protective radius around your well, and you may not locate a driveway or build over the septic drainfield (up to 100 feet in length). If a plastic chamber system is used, the drainfield length can be reduced to 42 feet, which is easier to replant and maintain.

Roads & Driveways

As development spreads to more isolated areas, roads and driveways grow longer, wider and more numerous.

Roads are relatively easy to create, yet their impact lasts for centuries. Once created, roads get hotter, drier and dustier than the surrounding soils. They also create a prime location for weeds, which favor disturbed conditions and will quickly change native ecosystems.

The valley's climate is another important consideration when planning a road. Summer's infamous "moon dust" soils will eventually be covered with snow in the winter, then quickly turn to foot-deep muck in the early spring. As a result, roads require good drainage and regular maintenance.

Building a home that can be served by existing roads avoids unnecessary damage. If you build a driveway off of a county road, you will need to obtain a Road Approach Permit from the County Engineer at the Public Works Department. A driveway built off of a state road requires a permit from the Washington State Department of Transportation.

Some Characteristics of a Well-Planned Road

- Does not cross wetlands or riparian areas
- Minimizes erosion and sedimentation
- Uses culverts and drainage ditches to direct runoff
- Follows the contours of the natural landscape
- Blends in with the surrounding area
- Banks are reseeded early and often to discourage the spread of noxious weeds; weeds are continuously controlled
- Grade does not exceed 8 percent (for winter and emergency access)



A poorly planned road will quickly erode.

Weeds

Weeds deserve significant attention in the Methow Valley. They displace native vegetation because they survive in low-nutrient soils, produce large numbers of seeds (one Russian thistle plant may form 200,000 seeds), have few insect predators and are often disliked by grazing animals.

Weeds damage your property by increasing erosion rates, the risk of fire and evaporation rates from the soil surface. They decrease species and habitat diversity and the aesthetic value of invaded sites, and they increase the probability of toxic herbicide use.

A Weed Prevention Strategy

Weeds inevitably appear after any ground disturbance. Minimizing the area of disturbed ground, removing weed seeds and roots, hand pulling and quick replanting are the best approaches to slowing the spread of weeds.

Controlling invasive plants can be time consuming and expensive. Herbicides often require re-application every two to five years, and studies suggest that herbicides such as Round-up and Tordon (commonly used brands in the Methow) persist and accumulate in the soil, decreasing soil fertility over time.

Additional Tips for Avoiding Weeds

- Whenever you scratch the surface of the ground, be ready to immediately re-seed and water for successful germination
- Save your topsoil by creating a designated weed-free area for restoration soil
- Replant or re-seed based on specific conditions of your site
- Water whatever you plant, and continue to remove weeds throughout the growing season



Some of the Methow's noxious weeds. Clockwise from left: cheatgrass, whitetop, Russian thistle. *Joyce Bergen*

Weeds and Fire Risks

Invasive species typically grow quickly and die during the hottest part of the summer, while native plants are more fire-resistant. Dry weeds burn at high temperatures, and wind can quickly spread a brush fire around your home. Sparks from cars, tools, cigarettes or lightning can quickly lead to devastating fires. Establishing a weed-free buffer around your home and replanting native perennial species reduces fire danger. A sprinkler system can establish a well-tended perimeter around your home.

Okanogan County Weed Board

The county controls weeds with herbicide along nearly 1,400 miles of county roads. The Weed Board contacts landowners known to have large populations of newly invasive species and may require removal of the invasive plants. If you do not want your roadside sprayed and prefer to keep weeds under control yourself, you can sign a “No Spray Agreement” with the Weed Board early in the spring.



A “No Spray” sign in front of the Gentle Winds Farm.

Landscaping

The valley’s low summer rainfall, alkaline soils and cold winters support a narrow range of plants that thrive under these conditions. Despite these obstacles, attractive gardens are possible.

The use of native shrubs, trees and flowers minimizes the need for irrigation and soil amendments. You can conserve water by planting grasses, perennials and flowers in early spring when it’s most likely to rain, and woody vegetation such as trees and shrubs in the fall to take advantage of winter’s precipitation and soil insulation.

Deer fencing is essential to protect vegetables, ornamental gardens and fruit trees. As a general rule, deer-resistant plants have hairy, aromatic leaves or silver foliage. For a more complete list of deer-resistant plants, visit the local nurseries (see p. 30) or contact the Okanogan County Extension Office.

RESTORATION HANDBOOK

The Methow Conservancy's *Shrub-Steppe Restoration Handbook* provides information on weed abatement and native plant restoration. Visit the Methow Conservancy office to request a copy.

Energy

The amount of energy your home uses is directly related to two variables: the size of your home and its energy efficiency. Energy efficiency increases when you choose a site with potential solar gain, orient your home to take advantage of natural heating and cooling, and insulate appropriately.

A tool called a solar siter will help you determine whether trees or ridges will block sunlight from your building site at various times of the year. You can make a solar siter with a simple kit available at the Methow Conservancy office.



The Aero Methow building in Twisp has a large grid-interconnected solar-electric system. It allows the owners to participate in Okanogan County PUD's incentive SNAP program. *Cindy Button*

On or Off the Grid

Most of the electrical power in the Methow Valley comes from large dams on the Columbia River. Two power companies distribute electricity in the Methow: the Okanogan County Electric Co-op and the Okanogan County Public Utility District.

Non-grid energy sources are either renewable or combustion systems. Renewable systems include passive and active solar, and geothermal. Combustion systems include propane, oil, wood pellet and wood-burning stoves; these vary significantly in efficiency and in the amount of air pollution they produce.

SUPPORTING RENEWABLE ENERGY

PUD (Public Utility District) customers who want to support local renewable energy generation can install a SNAP (Sustainable Natural Alternative Power) qualified system or make voluntary contributions with their power bill payments. These payments build the fund used to pay SNAP system owners for kilowatt-hours their systems generate.

Solar Energy

Passive solar systems use south-facing windows and thermal mass to collect and store solar heat. Active solar heating systems use pumps or fans to actively move heat. Solar-electric generating systems convert sunlight to electrical energy that can be stored in batteries and used for lighting and appliances.

Solar panels can be used in a stand-alone electrical power system or in combination with utility power. A benefit to combined systems is that you do not need battery storage, or if you want some electricity during a power outage, you need only a small battery bank. Also, every kilowatt your solar system generates offsets one you would buy. (To interconnect with utility power, you must have a qualifying inverter and sign a Net Metering Agreement.) As a rule of thumb, if your house is over three-quarters of a mile from power, it is cost effective to use solar electricity instead of utility power.

Several homes in the Methow have successfully used solar water-heating panels; over time they can significantly reduce your utility bill.

PLACING WINDOWS WISELY

South-facing windows under sufficient roof overhangs collect low-angle winter warmth and shade high-angle summer rays – they are ideal for passive solar gain. To avoid overheating in the summer and fall you can minimize, shade or tint west-facing windows. North-facing windows present a major source of heat loss, with little or no potential for solar gain.

Geothermal Heating and Cooling

Geothermal heat pumps are highly efficient systems for both heating and cooling. These systems circulate a liquid through tubes underground or underwater to take advantage of the enormous thermal potential of the earth. Various types of systems exist; all use a compressor (similar to the one in a refrigerator) and a heat exchanger. Many of these systems can also provide your household hot water. Geothermal systems cost more to install than other systems, but over time they pay for themselves in fuel savings.

LOG ON TO BUILT GREEN'S WEBSITE

BUILT GREEN Washington is a cooperative of the state of Washington's regional green-home building programs. By reducing the environmental impact of home construction, builders can create homes that operate much more efficiently, in addition to saving energy, water, resources – and money, too.

The BUILT GREEN website (www.builtgreenwashington.org) provides a checklist that offers builders a menu of green building strategies. It also contains numerous links to energy conservation incentive programs, building-materials exchange websites and indoor air-quality resources.

A Building for All Seasons

Properly insulating your home will allow you to stay warm in the winter and help keep the valley's hot summer temperatures outside without having to resort to costly air conditioning. A well-constructed home has well-sealed insulation, good quality windows and fresh air circulation.

Local electric utility companies offer a variety of energy-saving information and programs for new construction and renovations. The time to seek energy-efficiency consulting is during the design phase of your new home, before plans are ready to be submitted for a building permit.

Insulation

Heat (energy) flows toward cooler areas, and insulation is rated by how well it resists heat flow. R-value is a measure of resistance to heat flow. The higher the R-value, the more effective the insulation.

U-Value is used to rate the efficiency of windows and doors. The U-value of a window is measured by the number of BTUs that pass through each square foot of area per degree of temperature difference from one side of the window to the other. The lower the U-Value, the more efficient the window or door.

The Washington State energy code sets minimum R-values for all homes, and these vary by climate zone and type of heat used. To get a building permit you must follow these minimums. The more insulation you use above state minimums, the easier it will be to maintain a comfortable home temperature and conserve energy.

RECOMMENDED INSULATION FOR THE METHOW VALLEY

Attic	R-49-60
Cathedral	R-38-60
Wall	R-24-30
Floor	R-30
Slab edge	R-10-15
Doors	<U-0.20
Windows	<U-0.30

Vapor and Air-Flow Barriers

Air-flow barriers block air movement, stop drafts and fill gaps that can lead to leaks. Some materials that block air flow, such as house-wrap, sheetrock and the spaces between plywood sheathing sections, are permeable to vapor. Without a vapor barrier, warm indoor air moves into your walls and condenses on the colder surfaces, leading to dry rot and mold.

Vapor diffusion barriers stop moisture from moving into your walls and attic. Vapor barriers include rubber membranes, polyethylene wraps, glass, some oil-based paints, perm-rated primer paints and foil-faced insulation sheathings. These are typically recommended for use on outside walls, under the interior wall coverings and on the upper side of attic floors.

In addition to adding insulation that blocks heat loss along studs, rigid insulation on the outside of your home reduces vapor condensation inside your walls. Owners should ask their contractor to be attentive to the continuity of the barrier and to fix punctures made by subcontractors.

Ventilation

To keep indoor air clean, good insulation and sealing should be coupled with fresh air circulation. Building codes require a whole-house ventilation system. Simply opening windows does not ensure adequate ventilation.

The size of fan you are required to install depends on the number of bedrooms; a control timer allows you to decide when to ventilate. Eight hours of fresh-air ventilation per day is recommended. It is especially important to ventilate new homes to remove the inevitable toxins from new carpets and many construction materials.

An air-exchange ventilation system is an efficient way to ventilate your home while also reducing energy costs. In the winter it uses heated exhaust air to warm incoming cold air; in the summer it cools the warm, fresh, incoming air.

Leak-Prone Areas

The areas shown below need extra sealant or caulk to direct air circulation, reduce rodent and insect problems and reduce drafts and heat loss.

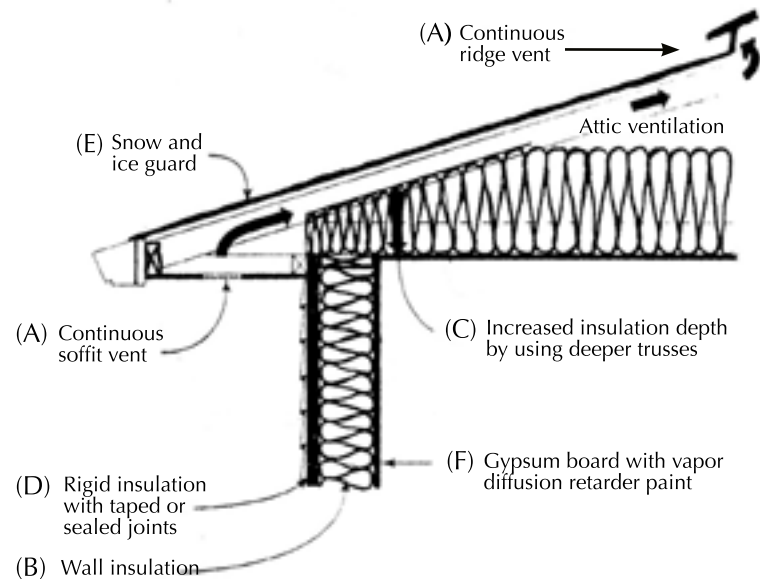
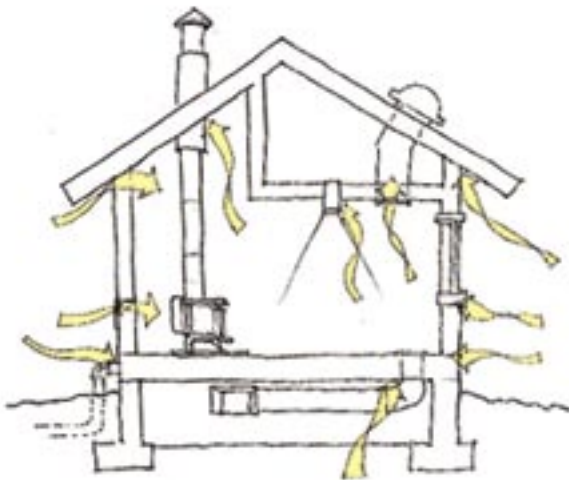


Diagram adapted from the
Cold Climate Builder's Guide

The diagram above illustrates part of a building envelope in which air circulation, sealants and adequate insulation work together to maintain a comfortable temperature and prevent leaks. Note these details:

- (A) Unobstructed air flow from the soffit vent to the ridge vent
- (B) Dense insulation in the exterior wall
- (C) Deep roof trusses for additional insulation
- (D) Rigid insulation on the outside wall, with sealed joints
- (E) Snow and ice guard (a sticky, sheet-like asphalt product) used along the lower edge of the roof to protect the roof sheathing from ice damage
- (F) Vapor barriers to prevent condensation inside walls

Living with Snow

Snow provides residents and visitors alike with recreational opportunities such as cross country skiing, snowshoeing and downhill skiing. Snow that falls in November may not melt until April. This accumulated snow poses significant challenges for builders, architects and homeowners. In the winter of 1996-97 many barns and some roofs in the Methow collapsed because they were not adequately engineered for holding or shedding snow.

Shedding and Nonshedding Roofs

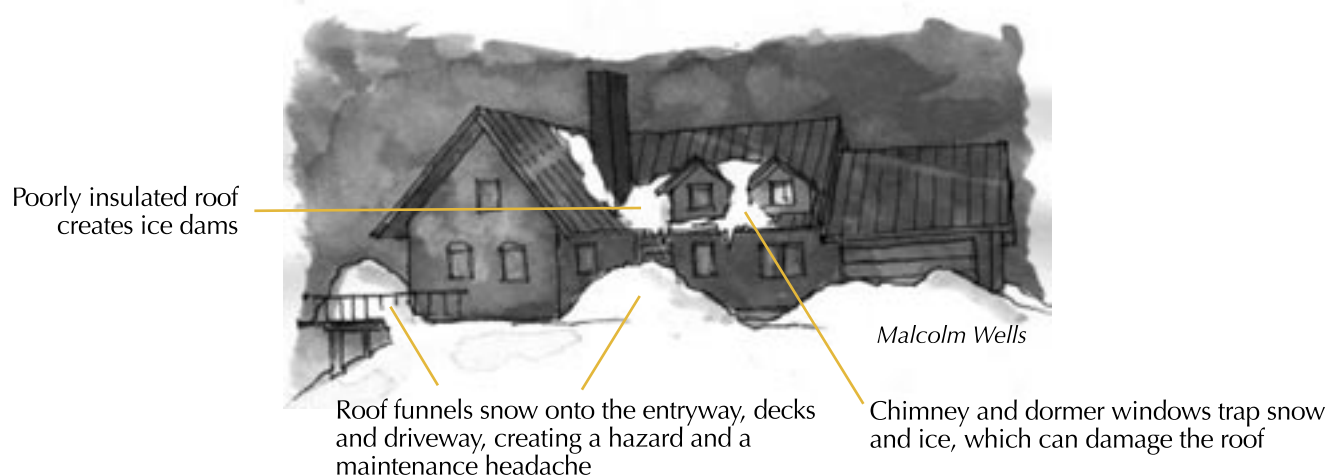
A metal roof sheds snow and also reduces fire danger. Snow slides off a moderately to steeply pitched metal roof and can be funneled away from entryways, stairs and open porches if these features are located at the gable ends and under covered porches.

Some roofs are designed to hold snow to take advantage of snow's insulating properties. These roofs are engineered to hold the extra weight of snow and usually have a shallow pitch or a textured surface such as composite material. They also have enough insulation to avoid melt-freeze cycles that quickly damage roofing materials.

Proper Roof Insulation

As a general rule, a simple, well-insulated roof performs well under snow. When a ceiling is poorly insulated and the roof is not vented, the bottom layer of snow on the roof melts and refreezes, creating layers of ice. These layers create dams that pool water on a roof and lead to damage and leaks. By adequately insulating your ceiling and venting under the roof eaves and at the ridgeline, you can help ensure that air will flow under your roof and keep it at a more uniform cold temperature.

Common Roof Problems



Keeping the Valley Clean

If you're building a home and have excess materials, if you're not sure how to get rid of your household trash, or if you're looking for ways to recycle, there are many options and resources available to help reduce what goes into our landfill and to preserve the natural beauty of the Methow Valley. See the resources section, pp. 30-31, for more information.

Construction Waste

Waste around a construction site creates an unsafe and inefficient work environment. By including waste management and disposal as part of your building contract, you can encourage systems to sort and reuse materials. Some construction waste is suitable for burning. However, composite (chipboard and particle board) and chemically treated wood are not. Regular trips to the dump to dispose of

materials such as these involve minimal cost. Also, there are many local websites that offer a free bulletin board where you can advertise reusable building scraps.

Household Garbage

Garbage left unattended attracts wildlife looking for an easy meal. This can lead to a dangerous situation for children, pets, visitors and domestic livestock. To reduce the chances of habituating wildlife to people, invest in one of the many residential bear-proof containers available.

Recycling

Methow Recycles, a local nonprofit largely run by volunteers, accepts aluminum, metal cans, corrugated cardboard, paper, plastic, glass and other recyclables at the Twisp Transfer Station.



Heading up Cougar Mountain from the Gunn Ranch. *Larry Miller*

Resources

Public Agencies

Okanogan National Forest: 996-2871

Natural Resource Conservation Service: 509-422-2750

Okanogan County:

Planning Department: 509-422-7160

Building Department: 509-422-7110

Noxious Weed Office: 509-422-7165

Public Works: 509-422-7300

WA State Department of Transportation: 997-3081, 509-826-7364

WA Department of Natural Resources, northeast region: 509-684-7474

US Fish and Wildlife Service: 509-548-7573

WA Department of Ecology: 997-1364

WA Department of Fish and Wildlife, Region 2 office: 509-754-4624

WDFW Methow Wildlife Area manager: 996-2559

Fire

Department of Ecology (burning permit applications): 800-527-3305

To report a wildfire: 800-323-BURN, 800-562-6010 (USFS) or 911

Local Natural History & Restoration Information

The Methow Naturalist: 997-9011

Rendezvous Reclamation (farming): 996-3526

Wild Hearts Nursery: 996-2368

Okanogan Conservation District: 509-422-0855

Methow Natives (nursery): 996-3562

Plantas Nativa (weed control): 997-0379

Injured or Problem Wildlife

State game warden: 509-754-4624

Animal Hospital of Omak: 509-826-5070

Power

Okanogan County Electric Co-op: 996-2228

Okanogan County PUD: 800-922-7011

Energy Solutions: 996-2763

Trash, Reuse & Recycle

Twisp Transfer Station: 997-2025

Methow Recycles: 996-3398

Methow Valley Sanitation: 997-8862

Havillah Shake (recycled wood & beams): 509-486-1467



Canada goose. Joyce Bergen

Publications Available from the Methow Conservancy Library

Living Near Water

Exploring Wetlands Stewardship, A Reference Guide for Assisting Washington Landowners, Washington State Department of Ecology (Pub. 96-120)
Production and Habitat of Salmonids in Mid-Columbia River Tributary Streams, Mullen et. al., US Fish and Wildlife Service, 1992

Fire

Fire Risk Rating for Homes, Northwest Interagency Fire Prevention Group
Protecting Your Home From Wildfire, National Fire Protection Association
Fire Protection in the Wildland/Urban Interface, National Wildland/Urban Interface Fire Protection Program

Local History

A View of the Methow: from Moccasin Lake Ranch, James C. Pigott
The Smiling Country, Sally Portman

Weeds

Weed Invasion! Are You Spreading Noxious Weeds?, Wenatchee USFS office
Biological Control of Weeds in the West, Western Society of Weed Science
Biology and Management of Noxious Rangeland Weeds, Roger Sheeley and Janet Petroff

Building

Building Philosophy: A Pattern Language, Christopher Alexander
How Buildings Learn, Stewart Brand
Cold Climate Builder's Guide, Energy Efficient Building Association
Affordable Resource Efficiency Handbook, Center for Resourceful Building Technology
Super Good Cents Builder's Field Guide to Energy Efficient Construction, OSU Energy Extension Program

CONSERVANCY LINKS

Visit the Methow
Conservancy website at
www.methowconservancy.org
for links to numerous
Methow Valley resources.

THANK YOU!

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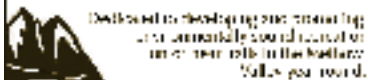
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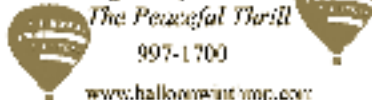
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