

# *Welcome to the Eastern Sierra*

*A Property Owner's Guide to Living Lightly in*





## Mono County Building 101

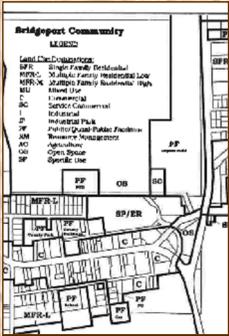
So, you are fortunate enough to own land in Mono County. What next?

### Land Use Designations

The first step a property owner should take is to find out the **land use designation** of the property. These designations are an essential part of the Mono County General Plan, which defines the land use of all property in the county and assures the compatible growth of communities.

A property's land use designation will provide information on the requisite setbacks, the types of structures that can be built, and what kinds of activities are permitted on the property. The designations can be found within the General Plan ([www.monocounty.ca.gov/departments.html](http://www.monocounty.ca.gov/departments.html), click on Planning), or by calling the Mono County Community Development Department directly.

Property owners should engage the Community Development Department early on to make certain their plans comply with existing regulations before investing in plans that may not be permitted.



### Electricity, Water and Sewer

Among the first considerations a property owner will make is how to connect to electricity, how to provide water, and how to deal with wastewater.

If the property is within existing service districts, a phone call to the respective district will provide information on service availability and connection fees.

If the property is outside existing service districts, property owners will have to consult with Mono County Environmental Health for well and septic permits, and hire contractors to carry out the improvements.

For electricity, property owners will contact either SCE (Bridgeport and south) or Sierra Pacific Power (Antelope Valley) for service. If the property is "off the grid," any power-generating systems must be designed and approved by the Mono County Building Division before installation.



### Site Planning

The initial decisions a home builder makes regarding the building site are critical because good ideas result in increased efficiency and cost savings, while poor decisions can lead to problems that, unlike many design considerations, are irreversible for the life of the home.

A well-designed site plan can positively influence a great many factors. From saving on up-front costs like utility hook-ups and grading requirements, to long-term effects like the building's compatibility with the surroundings, its energy efficiency, and the preservation of options for future additions.

Home builders should **spend time on the property**. Note where the sun rises and sets, where there is full sun in the winter and shade in the summer. Contemplate the desired views, and design rooms and windows to realize them. Consider where adjacent development might occur.

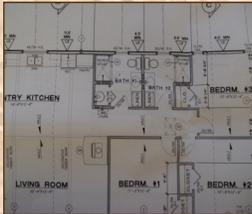
When possible, **maximize south-facing windows** and minimize north-facing windows. During frigid winter temperatures, a south-facing window becomes a depository of free passive-





solar heat, while a shady north-facing window draws heat out of the home.

**Respect communal views.** Consider the impact your project will have on the views of your neighbors and how it will appear from other vantage points. Although some impact is inevitable, consider how the project might be sited to minimize that impact. By preserving the viewshed, all property owners will enjoy a higher quality of life and property value. The collective effort of today's builders will help define the natural setting of the future.



## The Building Plans

After deciding what to build on the property and where to build it, the next step is to develop a set of plans. Approved modular homes require only site plans and foundation plans, while stick-built homes require detailed building plans.

Property owners can find standard building plans on the Internet, can design a house themselves, or hire an architect. Each approach has its pros and cons.

Standardized plans are relatively inexpensive, but Mono County's snowload, seismic and wind shear requirements can create necessary alterations that amount to considerable extra costs.

A self-designed home will no doubt be a labor of love, but might produce a non-compliant building. All designs must eventually pass structural muster, which is no easy task for an amateur draftsman. During the process, designers should be in contact with the Mono County Building Division to assure they are designing to requisite codes.

Architects come in all different pay grades, earning their money through design expertise and knowledge of local building codes that will almost always expedite a project.



## The Permit Process

With a finalized set of plans in hand, the property owner will then apply for a building permit. A deposit will be required, and the County will take the plans and evaluate them for compliance with applicable codes. This process usually takes six to ten weeks, depending on the complexity of the project.

During this time, many things can be underway. The search for a contractor may have already started, but now proceeds in earnest. Whether the property owner hires a contractor or wants to complete the project as an owner/builder, tentative construction scheduling should begin.

During plan approval, wells and septic systems can be installed (as permitted by the Environmental Health Division).



## Building

Once a building permit is issued, or "pulled," the property owner (or contractor) will be issued an inspection card that will guide the rest of the process. As each step of construction is complete, building inspectors will be called to the property to inspect the work completed and assure it is consistent with the approved plans.



## Certificate of Occupancy

Once the construction of the project is complete, a Certificate of Occupancy will be issued. This is the point at which the homeowner can borrow against the new home, and more importantly, move in.





## Good Neighbor Construction is the County Policy

Building a home is an exciting process. The land is prepared, foundations are laid and walls are tilted into place. For the homeowner, few things rival the thrill of watching their long-anticipated dreams coming to fruition.

But for those who live on adjacent properties, a construction project is often a nuisance that temporarily disrupts the serenity they have come to enjoy for years; serenity that they and their new neighbors will eventually enjoy together.

Mono County actively enforces a number of common sense building principles that aim to minimize disruptions caused by construction activity.

### Work Hours

The County Code establishes daily work hours from 7 a.m. through 8 p.m., and 9 a.m. to 5 p.m. on Sundays. Construction workers should refrain from disturbing the ambient noise levels of a neighborhood outside of these hours.

### Dust Control

The gusty winds common to Mono County produce tremendous dust events, particularly when land has been recently cleared of native shrubs and brush. The County Code requires builders to maintain preventative measures to control blowing dust from construction sites. The typical way of eliminating dust is by watering the site. If water is available, a basic timed sprinkler system should be sufficient. If water is not available, a water truck can be used to accomplish the task.

YES PLEASE



NO THANKS



### Controlling Runoff

When a construction site is subject to runoff from rain or snowmelt, measures must be taken to prevent the runoff from inundating adjacent properties with sediment. Fiber rolls and straw bale barriers can be used to reduce erosion and collect sediment during runoff events.



### Controlling Trash

Many items common to construction sites (housewrap, plastic, tar paper) can be transported great distances by errant winds. Proper efforts should be made to secure these items in trash receptacles so they do not end up decorating the landscaping of surrounding properties.



### Maintain Your Site

A well-maintained and organized job site is not just aesthetically pleasing, it also makes for a more productive workday. Lumber piles should be well stacked and covered with well secured tarps or plastic. Piles of construction waste should be strategically placed where they can be easily removed, and preferably out of sight from adjacent homes.





## Attractive, Safe Fuel Breaks

The California Department of Forestry and Fire Protection (Cal Fire) has designated all of Mono County as a fire hazard severity area. These classifications mean that the entire county must adhere to Cal Fire regulations on defensible space. For most properties in the county, that means a 30 foot perimeter of **Defensible Space** around all structures. For properties larger than one acre, Cal Fire has mandated a 100 foot defensible space.

### Please abide by these basic fire-wise rules to minimize risk to your property, and your neighbor's property.

1. Use non-combustible roofing (asphalt, metal or clay tiles) and siding (log, masonite, stucco or brick) on your home.
2. Accessibility to your home is critical. The width, overhead clearance, grade and surface of your drive can make a difference in emergency response.
3. Keep plant material lean, green and clean at least 30 feet from home. Trim shrubs and trees regularly and remove any dead plant material.
4. Remove "ladder fuels" that provide a flammable path from the ground to the treetops.
5. Avoid planting evergreens or other flammable shrubs within 5 feet of structures. These plants burn intensely and can be receptacles for firebrands.
6. Remove debris from under decks & screen-in posts or lattice with 1/4-inch screen.
7. Stack woodpiles at least 30 feet from your home and clear 10 feet on all sides. Place propane or other flammable gas tanks 30 feet from any structure.
8. Plant in small, irregular clusters and islands, not in large masses. The plants nearest your home should be more widely spaced and smaller than those farther away. Landscape according to the recommended defensible-space zones.
9. Use a variety of plant species to support a mixed and healthy landscape. Diversity of plants in the landscape will result in fewer insects and diseases and will better resist catastrophic fires.
10. Remove annual plants after they have gone to seed or when the stems dry out. Use non-woody (herbaceous) plants that stay green.
11. Use mulch to conserve moisture and reduce weed growth. Mulch can be organic (wood chips or small bark pieces) or inorganic (gravel or rock). Avoid pine bark, thick layers of pine needles or other materials that can easily catch fire.
12. Deciduous trees/shrubs are acceptable if they are kept green, free of dead limbs and all ladder fuels are removed.
13. Mow or trim grasses to a low height within your defensible space. Keep grass shortest in the inner part of your defensible space and no more than six inches high in the outer portions.



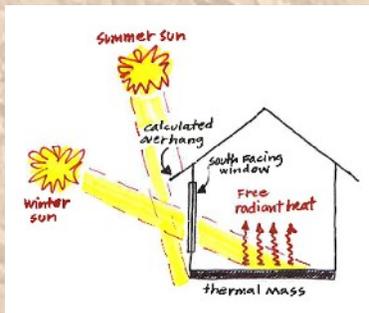


## Green Building

Green Building has become increasingly popular in recent years—even to the point of being trendy—but it’s not only tree-huggin’ Hippies who are practicing it. These days, if someone is interested in keeping money in their pocketbooks and out of the hands of utility companies, they will wisely adopt green building practices.

Green building is the practice of increasing the efficiency with which buildings use resources—energy, water, and materials—thus reducing building impacts on human health and the environment. This is achieved through better siting, design, construction and maintenance.

### Passive Solar



Ever since Mark Twain embellished tales of Mono County weather, it seems people are ready to believe it’s always cold, snowy or windy around here. Truth is, if it’s anything, it’s sunny. Mono County is in the top 5% of sunniest places in the country. Even on frigid sub-zero days, or gale-force windy days, sunlight passes through windows and warms homes for free. Passive solar design takes advantage of that free energy with south-facing windows where winter sunlight enters, and collects on thermal mass inside the home. This heat is then re-radiated back into the home after the sun sets, having a dramatic impact on heating bills. In the summer, well-designed eaves keep the warming rays outside entirely.

### The R Word

A home’s insulation works all year long. In the winter it keeps heat from escaping, and in the summer it keeps heat from entering. It is arguably the most important factor in determining a home’s energy efficiency and future utility costs. An insulation’s ability to impede heat flow is known as its “R Value,” with increasing values indicating a greater capacity. Smart homeowners will pay close attention to this number, as it will directly correlate to energy bills for the life of the home. Each construction method has a corresponding R Value, usually based on the thickness of the walls.



### Build What You Need



Just because a home graces the cover of a real estate magazine doesn’t make it a well-planned and efficient habitation. In fact, it is frequently the opposite. Although many of these homes utilize alternative energy and green building materials, they often forget the first lesson of building green: Build only what you need.

#### Not So Green

When a home surpasses the 4,000 sq ft mark, the green zone is also passed. The sheer volume of materials required to construct a home that size will eclipse all efforts towards eco-consciousness design. Regardless of how “energy efficient” such a home may be, the simple reality is that every superfluous square foot requires heating and cooling for the life of the home. This fact is exacerbated when applied to second homes that are used just 1 month a year, while consuming utilities year-round. Design and build only the space you need, and you will have taken the most critical step toward building green.



#### Greener

### Window Coverings



Insulated window coverings provide additional R Value to the areas where cold air will most often enter and leaves a home: through the windows. Whether quilted drapes or cellular blinds, insulated window coverings will help the homeowner control solar gain and will keep the inside temperature inside. They are among the easiest and most energy-wise improvements that can be made to an existing home.



### Materials



Green building materials are those materials which reduce energy use more than conventional materials or are manufactured in a way that has less of an impact on the environment. These materials typically boost the cost of homes anywhere from 3% to 5% with homeowners expecting to make up the cost in energy savings.

The greenest building material is no material at all, so design to your needs and make efforts to limit waste. One wise way to do this is by designing with 4-foot increments in mind: since building materials come in 4-foot increments, a 32' room will require nearly the same material as a 29' wall, with smaller dump runs.

### Solar Panels



There are two types of solar panels. Photovoltaic Cells (PV) turn sunlight into electricity, and Flat Plate Collectors (FPC) turn sunlight into hot water.

PV systems are used “off-the-grid” where power is not available, and also in “grid-tie” applications where a homeowner has electrical service. Off-the-grid systems utilize a battery bank to store electricity for later delivery, such as nighttime or during extended stormy periods. Grid-tie systems effectively eliminate electrical bills, selling electricity to the power company and storing electrical “credit” for when a home’s usage outpaces their production.

Flat Plate Collectors are simple devices that use the sun to heat water. Sunlight passes through glass into an insulated box where black copper tubes absorb the rays and conduct the heat to the fluid inside. In Mono County, most FPC systems will heat a glycol (antifreeze) solution and then transfer the heat to water through a heat exchanger. Domestic hot water comprises roughly 1/3 of a home’s total energy consumption, and a properly designed FPC system will provide 100% of that need for roughly 10 months of the year. Since these systems are simple (are accepting heat to be used as heat), they are relatively inexpensive and provide a great bang for the truly green buck



### Wind

Harnessing the wind is another means of generating electricity in Mono County. Although wind is not practicable, or economically feasible in many areas when compared to solar, it has become an important complement to many solar systems. There is a county ordinance that regulates the height, location and permitted noise of wind generators throughout the county, but they are permitted in most communities subject to the health and safety provisions of the California Building Code.



## Mono County Design Guidelines

Mono County recognizes its spectacular scenic vistas as a valuable and unique resource in rapidly developing California. This resource is important to quality of life for residents and visitors on whom the County's economy depends. Safeguarding the county's scenic beauty and expanses of open space requires special planning considerations.

Pursuant to these concerns, the County has produced Design Guidelines to inspire compatible development. The guidelines are not regulatory in nature, instead achieving their intent through the education of would-be developers about the historical and natural environment into which they will build permanent additions. It is the county's hope that through education, we can influence the next generation of buildings that will grace the lands around us.

### Remember to Blend In.

Non-reflective roofs in dark muted shades matching the darkest color in the surrounding landscape are visually pleasing, enhance building design, and create a harmonious balance with the natural setting. Roofs that blend in with the environment work best. Reflective, light- or bright-tone roofs are discouraged.



### Roof Color Matters!

Roofs do more than keep out rain and snow. A roof is a home's most prominent visual feature. A bright roof attracts the eye, thus diminishing scenic values and detracting from the natural setting and community character. Light and bright primary-colored roofs stand out, as do shiny, reflective roofs.



## Consider Your Surroundings when Choosing Exterior Finish

When designing the exterior finish of your home, many choices arise. Should one use wood siding or concrete fiberboard? Should the posts be surrounded by river rock? Should it be a combination of materials, to create a more visually dynamic appearance?

Regardless of what material, or group of materials is chosen, the color of those materials will eventually need to be addressed. This will become a critically influential decision that will define how the structure will be perceived by neighbors, and even by people miles away, who might glimpse the building from a distant vista point.

Bright colors that are not common to the area become massive blotches of color on a landscape, and detract the eye from the natural landscape. Choosing a non-traditional or bright color makes a statement, to be sure, but it may not be the statement a property owner wants to make: i.e., "I don't care about preserving this view shed"

Non-compatible colors do not blend in



Compatible earth tones blend with the environment



When selecting paint colors for exterior finish, please choose colors that are found on the sage brush slopes, rock outcroppings and forests that make up the Eastern Sierra landscape. .



Please steer clear of bright colors—don't paint a 2,000 square foot wildflower somewhere it doesn't belong. Save eccentric paint schemes for the interior, where they will not detract from the greater landscape.



## Preserving Ecosystems

### Know your Soil, Respect your Land



From the pinyon/juniper woodlands of Bridgeport, to the coniferous forests of June Lake, to the desert shrub environs of south Mono County, there is a wide variety of soils and climates within Mono County. Although finicky, each will support a thriving community of trees, plants and shrubs—so long as they are chosen wisely.

When landscaping or moving earth around your land, try to preserve the natural vegetation as much as possible. Thin out areas instead of clearing them entirely. Not only does this provide for free native landscaping, but it controls erosion and noxious weeds.

On sensitive forested properties, the owner has the benefit of a proud, established forest and also has the burden of keeping it healthy. Try to reduce site disturbance. Establish routes for delivering materials to the site in advance, and keep traffic on those routes. Hire an arborist to prune large trees.

*And remember, whenever the earth is disturbed, revegetate it as soon as possible!*

### Boost your soil--compost!



One way to increase your garden's productivity while reducing impacts to our landfills is to compost. Compost is a mixture of decaying matter that originates in your yard and kitchen, and ultimately becomes a nutrient-rich additive for your garden. There are hundreds of opinions on the best way to compost your waste, but the most basic is to simply collect all green waste from the kitchen and pile it up outside with whatever leaves, grass clippings, ashes and manure are available. Water it to keep it moist, turn the pile every week or so, and as the bottom of the pile breaks down into soil, return it to your garden.

### Drought-Tolerant Landscaping

Water is the most precious resource in the Eastern Sierra. It is incumbent upon us as residents to use that resource wisely to guarantee it will remain abundant for future generations. One of the easiest ways to reduce water consumption is to landscape appropriately. There are numerous plants, trees and flowers that use a minimal amount of water without sacrificing the lush beauty that makes gardens great.



Xeriscape gardens are popping up all over the Sierra for good reason. Not only are they drought-tolerant and require almost no irrigation, they offer incredible diversity of plant colors and textures. Some exceptional xeriscapes even include a limited area of grass, keeping overall water consumption low by surrounding those areas with well-chosen shrubs, flowers and trees that provide ample ground cover, shade and color without revving the water meter.



### **Living with Wildlife**

Another benefit of living in a rural area is coexistence with wild creatures. Bald eagles soar by your window, coyotes will wander through your property, raccoons may visit your deck, bears and deer will come looking for food.

While most wildlife sightings are cause for interest and excitement, sometimes the animals can become a nuisance. All too often, these situations are created by irresponsible behavior on our part, whether it is inadequate trash storage or even the intentional feeding of wild animals.

Animals that grow accustomed to feeding on garbage and other human foods will often do considerable damage in search for more. Bears commonly ransack automobiles and even residences within Mono County. Bears and other critters will turn a tidy garbage can into a sprawling trash heap, ready to be distributed by the next wind.

If you live in a bear-prone area, do not store trash outside unless it is secured in a bear-proof receptacle. Never feed wildlife. Do not encourage return trips, and keep an eye on your pets.



## Successful Landscaping

The following trees, shrubs and flowers have proven their worth in the Eastern Sierra. They require modest amounts of water and maintenance. Consult with your local nursery or garden center about preferences for your specific elevation and/or soil type.

### TREES

#### Large—Over 40' Mature

COMMON HACKBERRY  
WHITE ASH  
HONEY LOCUST  
KENTUCKY COFFEE TREE  
AMERICAN SWEETGUM  
SIBERIAN CRABAPPLE  
COLORADO SPRUCE  
LODGEPOLE PINE  
JEFFREY PINE  
JAPANESE BLACK PINE  
WESTERN COTTONWOOD  
EUROPEAN BIRD CHERRY  
RED OAK  
SILVER LINDEN

#### Medium—20' to 40' Mature

WESTERN WATER BIRCH  
WESTERN HACKBERRY  
GREEN ASH  
JAPANESE CRABAPPLE  
BECHTEL CRABAPPLE  
QUAKING ASPEN  
MOUNTAIN ASH

#### Small—under 20' Mature

AMUR MAPLE  
MOUNTAIN MAPLE  
COCKSPUR HAWTHORN  
DESERT OLIVE  
SCHEIDECKER CRABAPPLE  
BRISTLECONE PINE  
PINON PINE  
FLOWERING PEAR  
SMOOTH SUMAC  
3-LEAFED SUMAC

### SHRUBS

#### High—over 6' Mature

MOUNTAIN MAPLE  
CHOKEBERRY  
BUTTERFLY BUSH  
SIBERIAN PEA-SHRUB  
MOUNTAIN MAHOGANY  
FERNBUSH  
SIBERIAN DOGWOOD  
CREEK DOGWOOD  
REDTWIG DOGWOOD  
FORSYTHIA  
WITCH HAZEL  
PFITZER JUNIPER  
BEAUTY BUSH  
HEDGE CRABAPPLE  
BAYBERRY  
WESTERN SAND CHERRY  
WESTERN CHOKECHERRY  
STAGHORN SUMAC  
BLUE ELDERBERRY  
COMMON LILAC  
VIBURNUM

#### Low—under 6' Mature

BEARBERRY  
GREAT BASIN SAGEBRUSH  
DESERT CEANOTHUS  
SPREADING COTONEASTER  
SULFUR BUCKWHEAT  
WINTERCREEPER  
ARMSTRONG JUNIPER  
SAN JOSE JUNIPER  
SHRUBBY POTENTILLA  
ANTELOPE BITTERBRUSH  
FRAGRANT SUMAC  
GOLDEN CURRANT  
WAX CURRANT  
PURPLE SAGE  
SPIRAEA

### GROUND COVERS

SERBIAN BELLFLOWER  
SNOW-IN-SUMMER  
PURPLE-LEAF WINTER CREEPER  
SWEET WOODRUFF  
DAYLILY  
CINQUEFOIL  
CREEPING JUNIPER  
TAM JUNIPER  
VIRGINIA CREEPER  
MOSS PINK  
STONECROP  
WOOLLY THYME  
WOOLLY SPEEDWELL

### GRASSES

INDIAN RICE GRASS  
NEEDLEGRASS  
NEEDLE AND THREAD GRASS  
GREAT BASIN WILD RYE  
CREEPING WILD RYE  
ALKALI SACATON

### PERENNIALS

YARROW  
HUMMINGBIRD MINT  
COLUMBINE  
DUSTY MILLER  
CLEMATIS  
VIRGIN'S BOWER  
COREOPSIS  
BUCKWHEAT  
CALIFORNIA POPPY  
DAYLILY  
HYSSOP  
GILIA, STAR OR SCARLET  
LUPINE  
LAVENDER  
BLUE FLAX  
CATMINT  
EVENING PRIMROSE  
HERBACEOUS PEONY  
ORIENTAL POPPY  
PENSTEMON  
PHLOX  
RUSSIAN SAGE  
BETHLEHEM SAGE  
BLUE SALVIA  
APRICOT GLOBEMALLOW  
LAMB'S EAR  
PRINCE'S PLUME  
MEADOW RUE  
SPEEDWELL