



Eldorado National Forest

Recreation Residence

Caldor Fire Rebuild Guidelines

Recreation Residence permit holders have traditionally been partners with the Forest Service in caring for our forest. We encourage you to think of yourself as a forest steward, and to share with cabin co-owners and cabin users the overall objective of the Recreation Residence Program:

Minimizing impact to the forest and providing a forest-related recreation experience.

Recreation Residence Program Objectives

Protect the forest environment including soil, vegetation, water quality, wildlife, air quality and historic resources.

Prevent urbanization of recreation residence tracts.

Help assure safety of the general public and you, the permit holder.

Maintain the national forest setting.

Comply with requirements for protection of threatened and endangered species, historic cabins and tracts, and archaeological properties.

While developing your proposal, please remember that unlike traditional home construction, cabins on National Forest Lands should be designed to visually recede into the landscape, enhancing the environment around them.

Recommended Materials

*Materials that mimic nature and blend
with the surrounding environment*

- Heavy timber
- Battered stone & rock
- Paint and stain colors that align with the natural setting



FOREST SERVICE POLICY DESIGN STANDARDS

- The total combined square footage of decks, porches, staircases & walkways is not to exceed 60% of the cabin's square footage
- Unpartitioned lofts are allowable, however enclosed second stories are against Forest Service policy
- Cabin height should not exceed 26 ft. when measured from lowest adjacent grade to the peak of the building rooftop

Underpinning & Base



Environmental Considerations

- Recreation Residences should be built on strong bases, which help protect the cabin in inclement weather.
- The area between the foundation and floor must be enclosed to comply with fire-safe guidelines.
- In the event of a fire, this is where the hottest temperatures can occur if flames become trapped; adding a firewall will mitigate this risk.
- Insulated Concrete Forms (ICFs) are a durable option for walls and the base of a cabin. They are made of solid concrete which helps regulate temperature and prevent fires from spreading inside a cabin.

Historic Considerations

- Battered stone, rock or concrete have been noted as longstanding fire and pest resistance materials for bases throughout cabin tracts.
- Cabin bases in the Sierras are often designed to give the appearance of being anchored to the ground, comprising a large portion of the wall.

Entryways



Environmental Considerations

- South facing entries allow optimal natural light and radiant heat which minimizes the impact of freezing temperatures
- North facing entries will keep your cabin cooler in the summer heat
- Covered eaves and extruded gables help shield and protect entrances
- Making overhangs shorter on the south side of an entry will maximize daylighting

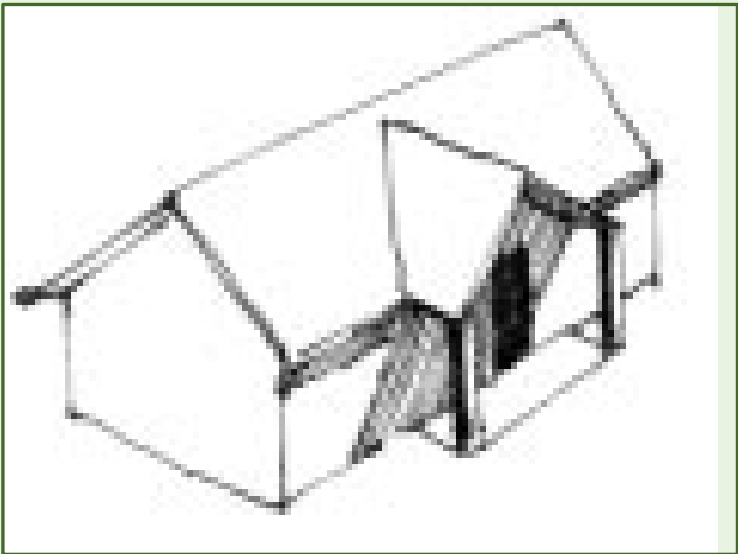
EXAMPLES OF PROTECTED ENTRYWAYS



Extruded Gable Porch



Continuous Eave Porch



Added Gable Porch

Roofing



Environmental Considerations

- Complex, flat and gambrel roofs can all trap snow and cause roof failure or collapse
- A steeper pitch roof with shorter overhangs is ideal for heavy precipitation and allows fire embers to roll off before they can burn through
- Gutters, unprotected rafter tails and eave soffits can create maintenance problems when overloaded and can easily become tinder if ignited by flying embers
- Non-reflective solar panels that blend with the roof and don't require routine removal of tree cover will be considered

Historic Considerations

- Large roofs frequently dominate the architectural composition in Cascadian design (Example: range from 6:12 to 12:12)

Roof Color Examples

Paint Colors – Check with manufacturer or dealer for appropriate primer

<u>Behr</u> Havana Coffee N210-7 North Woods N410-7	<u>Benjamin Moore</u> Oxford Brown	<u>Kelly Moore</u> Barnwood KMA72 Oxford Brown 417 Park Avenue KM4834	<u>Olympic</u> Oxford Brown Coffee
<u>Sherwin Williams</u> Turkish Coffee SW6076 Shade Grown SW6188	<u>Glidden</u> Enchanted Forest Green 30GY 17/051 Bittersweet Chocolate 10YY 08/093	<u>Valspar</u> Deep Earth 6010-2 Blackened Pine 5003-2C Deepest River 5009-3	<u>Olympic Elite</u> Dark Bark Pocono Pine

Metal Roofing Colors –

<u>ASC Building Products</u> Classic Brown Slate Gray Forest Green

Composition Roofing Colors –

<u>GAF</u> Barkwood Charcoal Hunter Green Weathered Wood	<u>Certain-Teed</u> Heather Blend Hunter Green Moire Black	<u>Owens Corning</u> Teak Onyx Black Chateau Green
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Metal roofing must have factory-applied color.

Roofing must consist of fire resistant or fireproof composition tile, shingles, or metal roofing materials that interlock tightly.

For extra protection, build over top a fire-resistant cap sheet.

METAL ROOFING

LRV, or light reflective value, refers to the percentage of light a paint color reflects. To predict how light or dark a color will appear, light reflectance value is analyzed. LRV is measured on a scale from 0%, which is black and doesn't reflect any light to 100%, which is pure white and reflects all light.

Given the loss of vegetation in the Caldor Fire burn scar, high reflectivity from metal roofing is a significant concern. Acceptable Light Reflectance Value (LRV) for materials on National Forests is under 20%.

The Forest Service will accept product roofing that is similar in color and in LRV rating to the ASC examples listed in the previous slide.

Exterior Walls

Historically, cabins in the Sierras were built with walls smaller than the base and roof in order to mitigate the impact of snow in the winter.

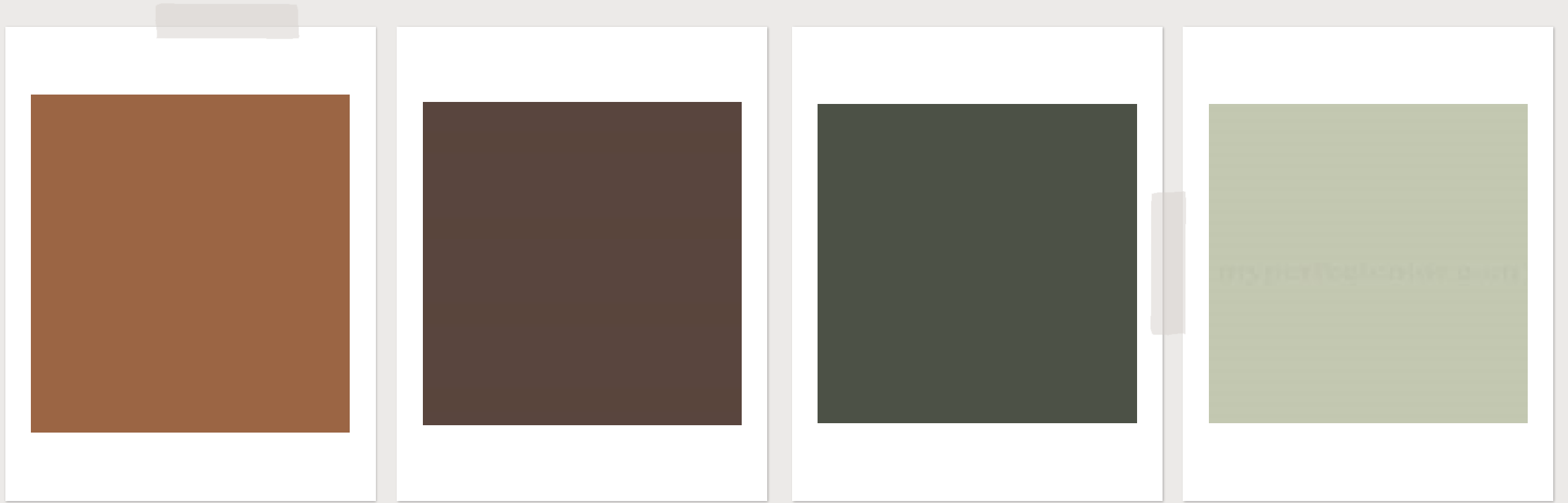


Utilizing vertical and horizontal wall textures gives cabins a rustic feel.

EXTERIOR WALLS

Stone, steel siding that resembles real wood, log-style steel products, steel panels with natural wood grain patterns, and fiber cement all have Class A

Fire Ratings and are great options for your cabin's exterior walls.



Exterior Paint and Stain Colors

Paint Color Examples

<p><u>Ace Valspar</u> Timber Green VR104A Polished Buckeye VR097A Weather the Storm VR075A Thunderbolt VR076A Brown Hen 124Q Brazilian Brown VR098A Momentous Occasion VR096A Deep Desert Shadow VR101A Midnight Forest VR102A</p> <p><u>Ace Clark-Kensington</u> Star Anise N-W32 Tapenade N-C8 Spruce Peak 27A-5 Garland Green 28A-5 Stuffed Olive 26A-5</p> <p><u>Kelly-Moore</u> Barnwood KMA72 Jungle Cover KM4812-5 Grand Avenue KM4603-5 Nottingham Forest HLS4278-5</p>	<p><u>Behr (Newer)</u> Alpine Trail N420-7 Cavalry Brown N220-7 Chocolate Therapy N150-7 Coffee Beans N150-6 Havana Coffee N210-7 Moose Trail N190-7 North Woods N410-7 Rustic Tobacco N230-7 Swiss Brown N210-6 Black Bamboo N380-7</p> <p><u>Behr (Older)</u> Tugboat S-C-141 Bear Rug S-G-790 Frontier Shadow 740D-7 Sandwashed Driftwood 770D-6 Shadow Ridge 730D-7 South Kingston 700D-7 Wanderer 770D-7 Wild Rice 780D-7 Winter Oak 720D-7</p>	<p><u>Behr (Oldest)</u> 319 Cordovan Brown 335 Padre Brown 358 Coffee 359 Oxford Brown 397 Chocolate 532 Wood Chip</p> <p><u>Sherwin Williams</u> Basil SW6194 Dark Clove SW9183 Forestwood SW7730 Foxhall Green SW9184 Greenbrier SW3050 Hill Country SW3532 Lodge Brown SW3007 Rookwood Dk Brown SW2808 Rookwood Dk Green SW2816 Rosemary SW 6187 Shade Grown SW6188 Tobacco SW3039 Turkish Coffee SW6076 Van Dyke Brown SW7041 Well Bred Brown SW7027</p>
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Ideal paint colors will cause buildings to almost “disappear” when viewed from a distance.

These are generally darker and muted shades of brown and green.

Although the listed paint colors have been approved, they don't necessarily blend in well with every environment. The Forest Service strongly encourages you to consider the particular surroundings of your lot when selecting paint colors.

Stain Color Examples

“Natural” or clear sealers are typically not approved for new bare wood because the result is a light, high contrast color that “pops out” in a forest setting.

Stain colors that have a red, yellow or orange tint are to be avoided. Most colors with the words “redwood” and “cedar” are not approved because they tend to have a red, yellow or orange tint.

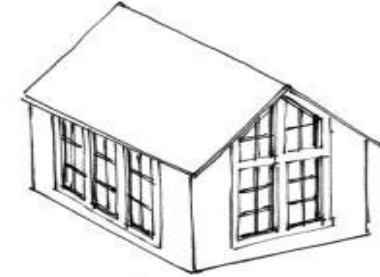
<p><u>Benjamin Moore</u> Oxford Brown Cordovan Brown Fresh Brew Dakota Shadow Mahogany Spanish Moss Teak River Rock</p>	<p><u>Behr</u> Oxford Brown Cordovan Brown Chocolate Coffee Padre Brown Tugboat Valise Wood Chip</p>	<p><u>Olympic</u> Oxford Brown Chocolate Cocoa Coffee New Bark Ginger Brown Autumn Brown Walnut</p>	<p><u>Olympic Elite</u> Chestnut Brown Olivewood Wenge Dark Bark</p>
<p><u>Sherwin Williams</u> Charwood Chestnut Brown Hill Country Brown Lodge Brown Spicewood Hickory</p>	<p><u>Cabot</u> Oak Brown Cordovan Brown Wooded Bog Burnt Hickory Bark Thicket Rocky Tundra</p>	<p><u>Armstrong-Clark</u> Rustic Brown</p>	<p><u>Penofin</u> Sable Chestnut</p>

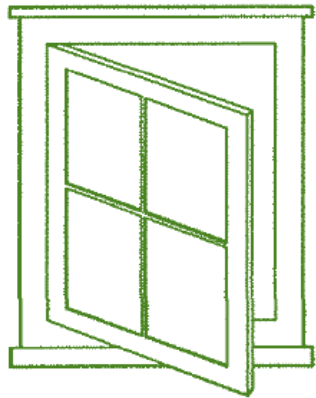
Windows & Doors



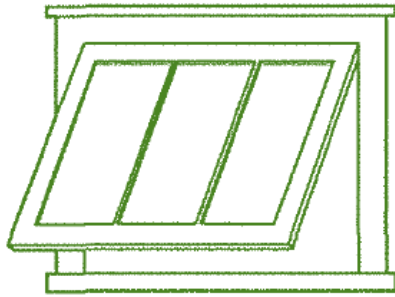
WINDOWS

- Avoid extensive horizontal bands of windows to limit glare.
- Follow historical precedent and scale to preserve a rustic appearance.
- Consider installing fire rated windows with insulated double glazing and tempered glass, and steel window frames for a fire-resistant option.
- Removable screens can be attached to the outside of windows so that they can be opened without admitting bugs.
- Removable or operable shutters can cover windows in the winter to prevent breakage.
- Adding flat steel framed skylights with fire rated glass provides additional natural lighting.

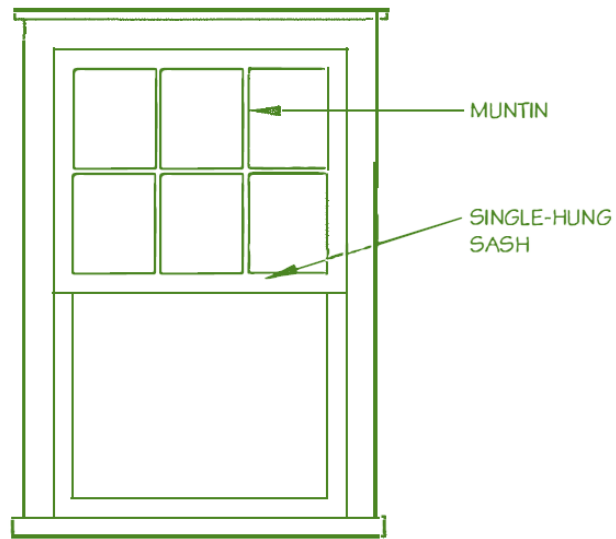




CASEMENT WINDOW



AWNING WINDOW



SIX-OVER-ONE
WINDOW

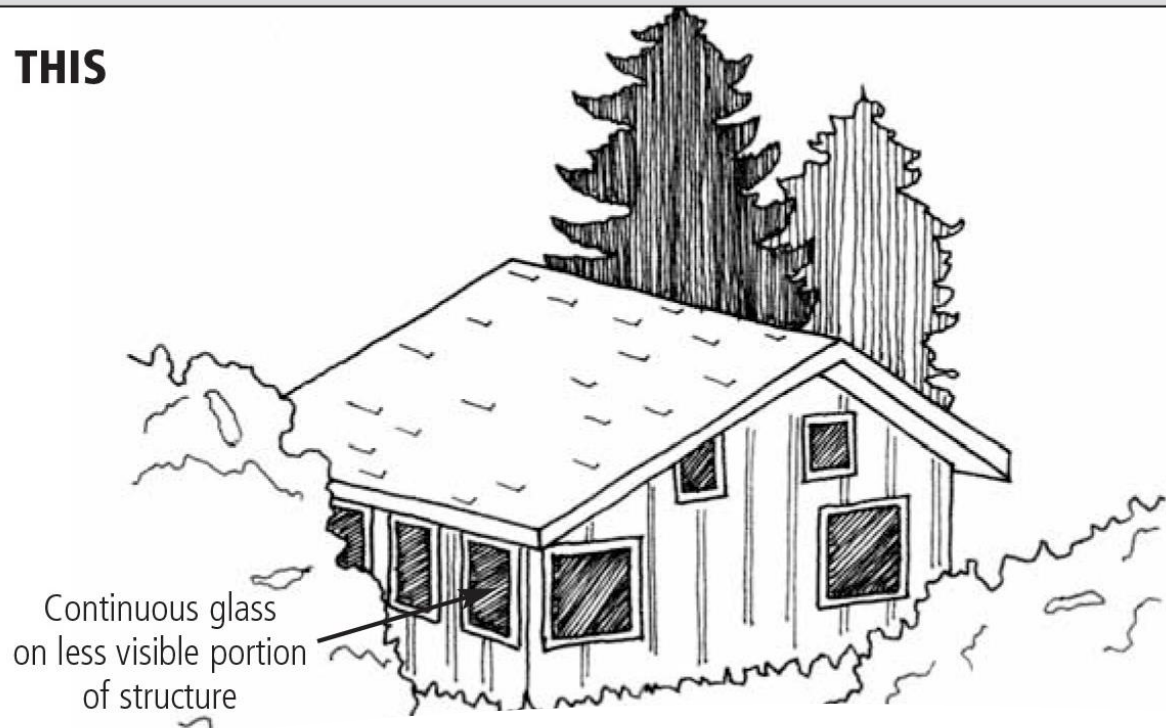
The original windows in many historic recreation residences are true divided lite windows, which means that the window is composed of several small panes of glass (lites), separated by muntins.

In most cases, at least half of each window slides open either horizontally or vertically or swings open on hinges.

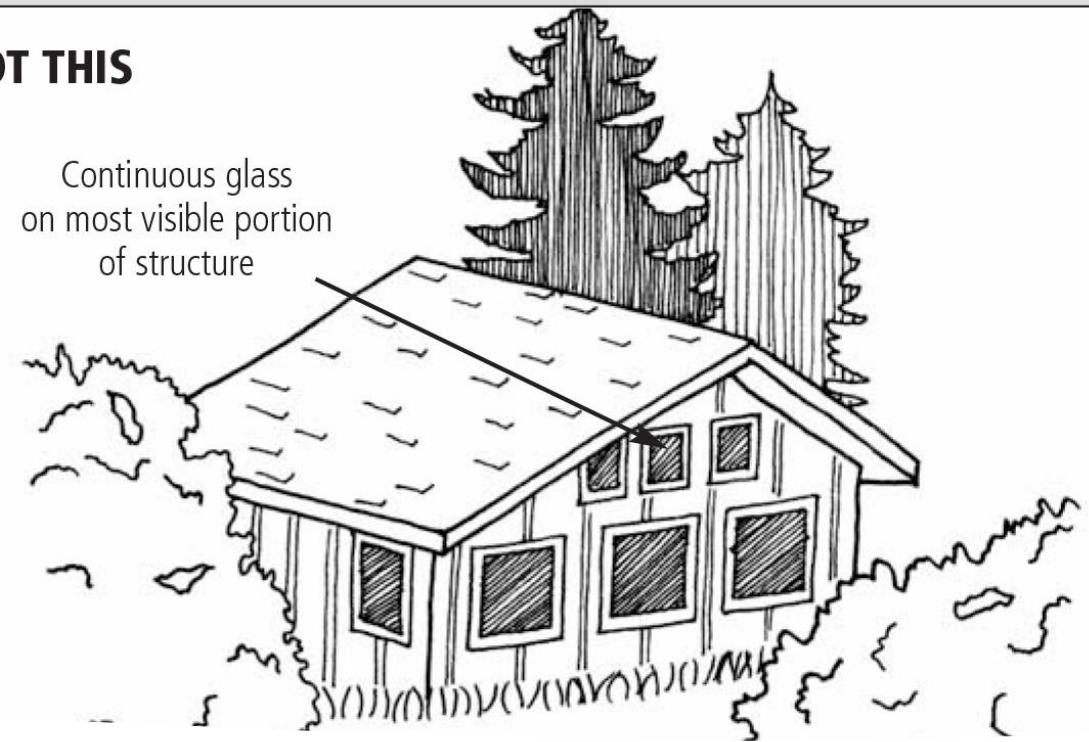
Vertically opening windows usually were single hung (only half of the window moves), but some were double hung (each of the two halves of the window open).

Casement windows swing open on side hinges and awning windows swing open on top hinges.

THIS



NOT THIS

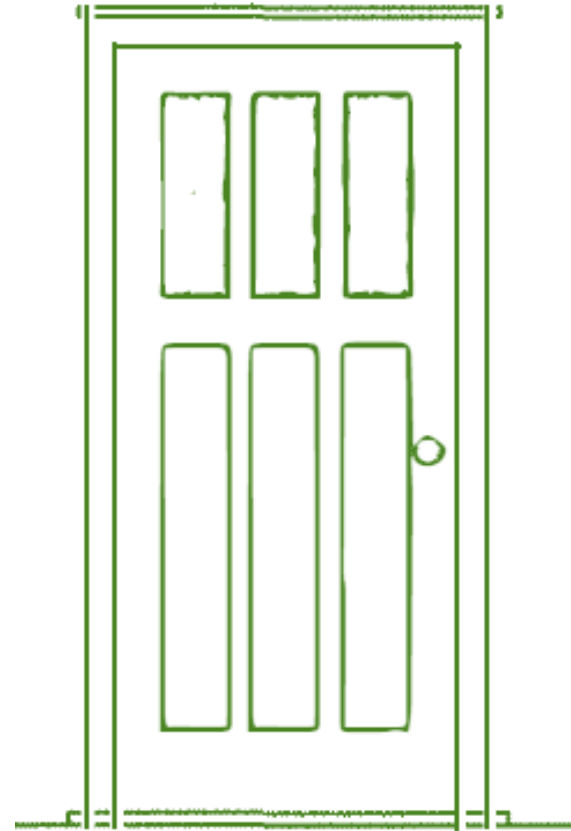


Continuous glass creates large, high glare surfaces, which stand out in a forest setting.

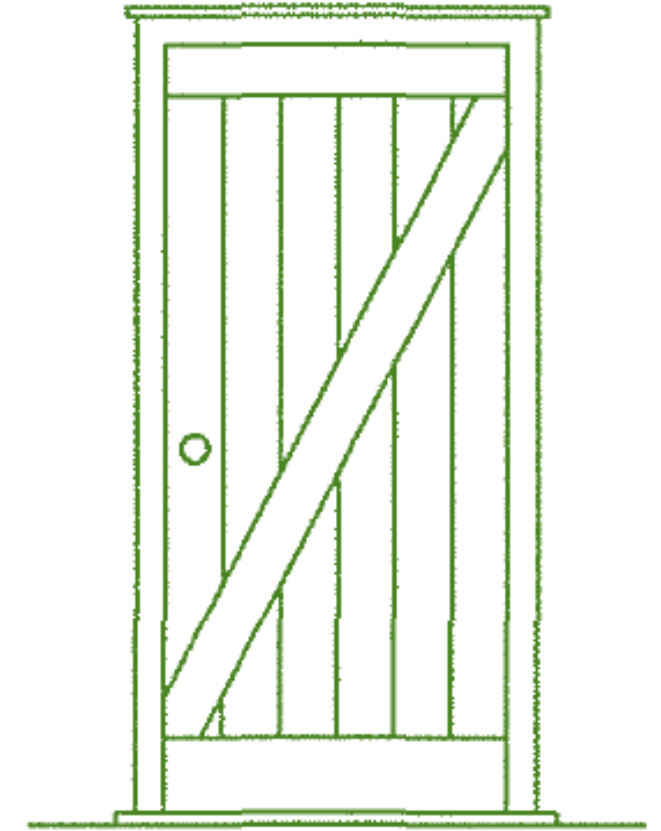
- Excessive glare can be avoided in the following ways:
- Space windows out
 - Reduce the number of windows on the most visible parts of the cabin, where reflectivity may be seen from greater distances
 - Use topographic or vegetative screening (consider how you may be able to angle your cabin on your lot to take advantage of slopes or hillsides that can visually conceal windows)

Doors

- Historic recreation residence doors usually were constructed from several pieces of wood—a frame of vertical stiles and horizontal rails holding raised or flat panels in place, referred to as "rail and stile" or "frame and panel". One or more windowpanes were sometimes used instead of panels in the upper part of the door.
- "Ledge and brace" or "plank and batten" doors were made from several vertical boards tied together by horizontal boards at the top and bottom and sometimes included a diagonal bracing board to keep the door square.
- Metal doors with a painted or baked-enamel finish in colors matching the color guidelines may be approved on a case-by-case basis.



RAIL AND STILE DOOR
WITH WINDOWS



PLANK AND BATTEN DOOR

Trim Paint Color Examples

Trim colors are lighter shades to be used only for the trim around windows and doors.

Ace Clark-Kensington Trim

Archipelago Islands 27A-4
Smooth Leather N-W30
Hero Green 26A-4

Ace Valspar Trim

Antique Mystique VR099A
Gator Tail VR103A
Nature Lover VR075B
Rue Bourbon VR093A
Crater VR100A

Kelly-Moore

River Bank KM5786-5
Mendocino Hills KM5764-3
Hammered Pewter HLS4263
Brierwood Green 307

Behr (Newer)Trim

Bonsai Trunk N380-6
Boreal N420-6
Caffeine N210-5
Derby N180-6
Kindling N200-6
Landmark Brown N220-6
Nut Brown N190-6
Patio Stone N360-6
Pine Mountain N420-6
Pinecone Hill N410-6
Whiskey Barrel N230-6
Wright Brown N140-6

Behr (Older)Trim

Coconut Husk 730D-6
Mocha Accent 720D-5
Mountain Elk 740D-6
Toasted Walnut 720D-6
Witch Hazel 780D-6

Sherwin Williams

Cobble Brown SW6082
Cocoon SW6173
Dried Thyme SW6186
Homestead Brown SW7515
Tiki Hut SW7509
Virtual Taupe SW7039

Become Bear Resistant



PREVENTATIVE MEASURES

Consider implementing:

- Outward opening doors that prevent the door from being pushed in by a bear
- Quality round doorknobs that bears struggle to pull
- Sturdier fully threaded hanger bolt screws on doors instead of nails
- Factory colored rolling steel shutters that limit access to potential entrances
- Removable electric fencing on doors, windows and railings
- Heavy-gauge steel mesh over ventilation holes in the cabin underpinning



Electric fencing along windows



Round Doorknobs



Rolling steel shutters

**EXAMPLES OF PREVENATIVE MEASURES THAT HELP
DETER BEARS FROM ENTERING YOUR CABIN**



Recreation Residence Lots

Driveways

- The total area used for driveways and parking areas should be limited to minimize compaction, erosion, sedimentation, vegetation removal.
- Keeping your driveway/parking area as small as possible also reduces the potential for local and off-site pollution by auto fluids and improves visual quality.
- Driveways may not be managed to restrict public access.
- Graveling will be authorized only to control erosion and material should be locally sourced.
- **Asphalt and similar manufactured materials are strictly prohibited.**



OUTDOOR LIVING AREAS

Porches, Deck, Stairs, Railing, etc.

- All improvements are required to be in safe and good condition
- Porches and/or decks cannot be enclosed. They must be left open and have openings that allow for passage of no more than a 4-inch sphere

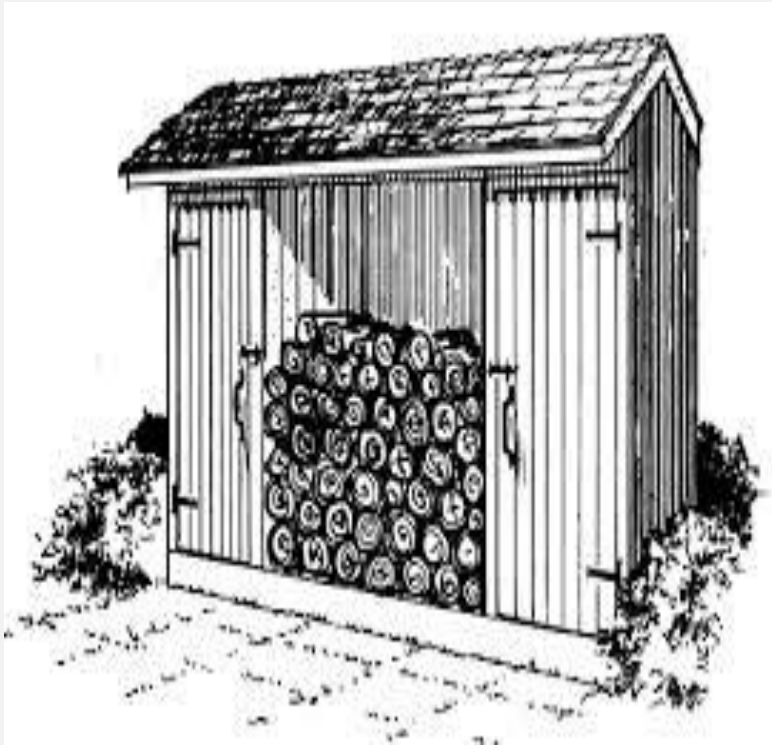
Outdoor Lighting

- Outdoor lighting must be minimal and non-decorative
- Outdoor lighting should be dark sky compliant
 - Fully shielded and emit no light above the horizontal plane, no sag or drop lenses, side light panels, uplight panels, etc.

Chimneys, Pipes etc.

- All exposed metal pipes and supports should be painted the appropriate color to blend with the building or roof

Storage Sheds



- Maximum size is 40 sq. ft.
- Materials and design should resemble the cabin
- Forest Service policy allows for a single storage shed per lot
- If additional storage is needed, cabin owners can utilize available space underneath their cabin if concealed by underpinning
- No hazardous materials, food, or scented products should be left in storage sheds at any time

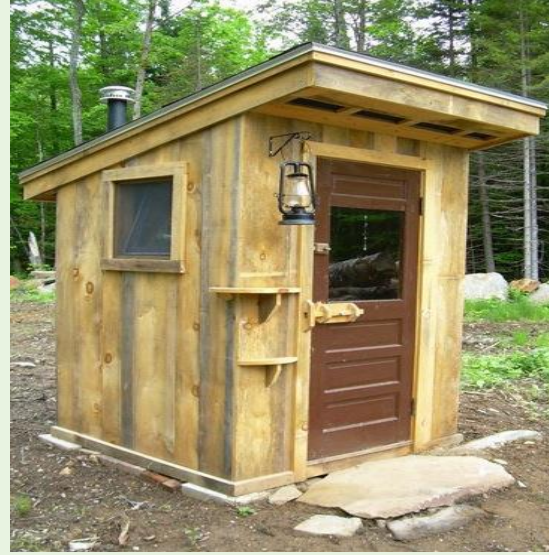
Because National Forests are public lands, the following items are prohibited:

- Fencing or gates restricting access on lots
- Landscaping, paved walkways or trails
- Permanent recreation improvements such as volleyball courts, basketball courts or swimming pools etc.
- Any item attached to a tree such as ziplines, hammocks, swings, string lights etc.
- Yard decorations, signs or water features
- Bird, squirrel or any other animal feeder/device intended to attract wildlife

PROHIBITED OUTBUILDINGS



Additional Sleeping
Quarters



Outhouses



Garages



Water Systems

WATER SYSTEMS

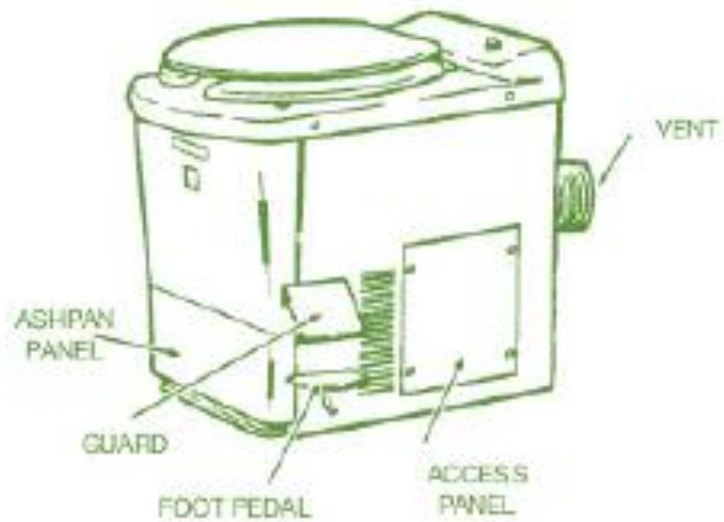
Septic Systems

- Permit fee waivers are available for those impacted by the Caldor Fire
- To reconnect an existing septic system, submit an inspection form to the El Dorado County Building and Planning Department Permit
- Only one permit is needed to abandon a previous septic and install a new one
- Abandoned septic systems must be pumped by a licensed contractor and filled with certified weed-free material (preferably gravel or soil)
- Once completed, schedule an inspection with the El Dorado County Environmental Management Department

Incinerator Toilets and Composting Toilets

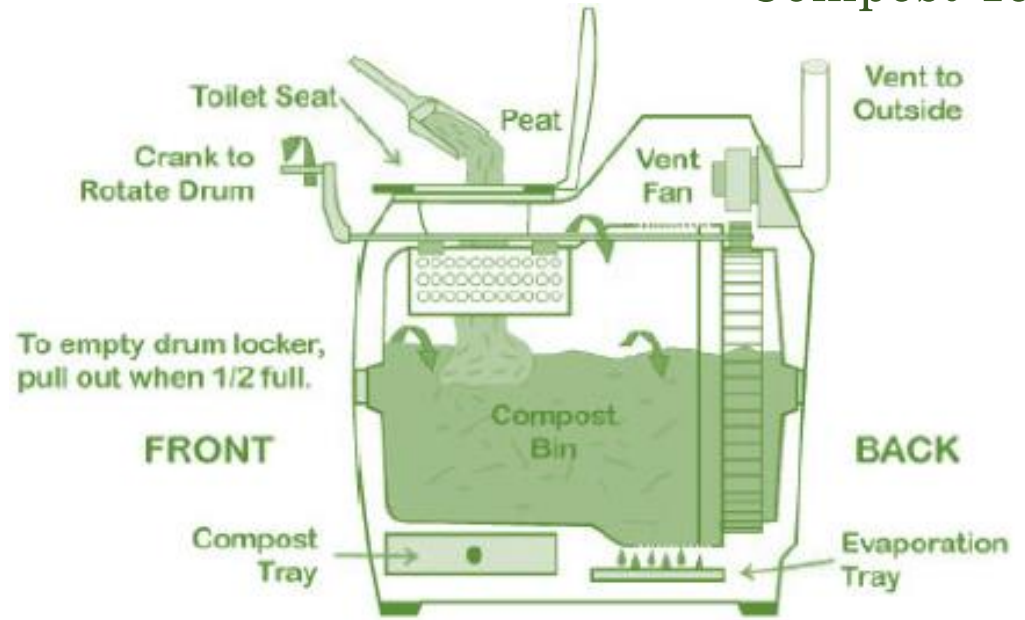
- Require a permit for installation from El Dorado County Building and Planning Department
- Are great alternatives for cabins near lakes, streams and rivers

Examples of Septic System Alternatives



Incinerator Toilet

Compost Toilet



GRAY WATER

Follow the California Plumbing Code setback guidelines outlined in (Chapter 15 Section 1502.4 on page 311 and Table 1502.4 on page 312)

Systems are permitted by El Dorado County Community Development Agency Development Services Division (CDADSD) under a plumbing permit. CDADSD will consult with CDAEMD as necessary. An OWTS is designed for a specified wastewater strength and quantity. Permit holders should be aware that the use of a gray water system may have an impact on an OWTS in use at a site. OWTS owners need to be sure that the Qualified Professional and CDAEMD staff are aware that a gray water system may be constructed, or consider a Supplemental Treatment system, such as a drip dispersal system, allowing OWTS liquid waste to assist in watering vegetation at the site. **CDAEMD does not allow a reduction in the size of an OWTS when a gray water system is proposed at a site.**

Fire Prevention



FIRE PREVENTION

Firewood

- Firewood should be kept at least 30 ft. from your cabin.
- Outdoor fire pits should have a wide girth of space between the pit and surrounding vegetation
- Do not store firewood underneath your cabin, in-between trees, next to propane tanks or on your deck
- Never leave a campfire unattended

Maintenance

- Keep your roof and surrounding lot clear of leaves, needles and other debris
- Keep your chimney clear
- Consider displaying a sign in your cabin window with a contact phone number to call in case of an emergency



Eldorado Examples

EXISTING CABINS ON THE ELDORADO NATIONAL FOREST



Harvey West, a historic cabin constructed in the early 1930's by the Sacramento Box and Lumber Company, was formerly used as an office and recreation facility.



The Sly Guard Cabin, constructed in the early 1940's by the Forest Service, was a living quarters for rangers "on guard" in the Sly Park area.



The Van Vleck bunkhouse is the last remnant of the Van Vleck Ranch site, which operated as a cattle ranch from the 1860's to the 1960's.

The Recreation Residence program exists in order to provide the public with access to comfortable amenities while enjoying the natural beauty of the wilderness.

As cabin owners, you have the unique opportunity to inspire and add to the story of the Eldorado National Forest for generations to come.

We look forward to your seeing proposals!

