



FIREWISE USA[®]
RESIDENTS REDUCING WILDFIRE RISKS

**FIREWISE USA[®] RECOGNITION PROGRAM
COMMUNITY WILDFIRE RISK ASSESSMENT**

**Prepared for Salmon Creek
Humboldt County, California**

Prepared by
The Salmon Creek Firewise Committee, Salmon Creek Fire Chief,
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Introduction

The national Firewise USA[®] recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition resistance of their homes and community and to reduce wildfire risks at the local level. Any community that meets a set of voluntary criteria on an annual basis and retains an “In Good Standing Status” may identify itself as being a Firewise[®] Site. The Firewise USA[®] program is administered by NFPA and is co-sponsored by the USDA Forest Service and the National Association of State Foresters. While the NFPA administers this program, individuals and communities participate on a voluntary basis. The following community assessment is intended to be used by the Salmon Creek Firewise Committee as a resource for creating a three-year wildfire safety action plan. The plan developed from the information in this assessment will be implemented in a collaborative manner and updated and modified every three years.

Funding for this assessment was provided by a grant from the California Fire Safe Council (CFSC) as part of the 2019 Grants Clearinghouse Fire Prevention Program. This State Fire Assistance grant is made possible by federal financial assistance provided to the CFSC from the United States Department of Agriculture (USDA) Forest Service.

Salmon Creek Firewise Wildfire Risk Assessment Overview

The Salmon Creek Volunteer Fire Department and Community developed the Firewise Committee with the objective of helping Salmon Creek become more prepared for wildfire. On March 11th, 2022, members of the Salmon Creek Firewise Committee, the Salmon Creek Volunteer Fire Department, and the Firewise Coordinator met to conduct a Community Fire Risk Assessment Tour organized by the committee. The tour took place throughout the Salmon Creek Firewise area.

Assessment Participants

John Miller, Salmon Creek Firewise Committee, Resident Leader

Carleen Cochran, Salmon Creek Firewise Committee

Dan Gribi, Salmon Creek Volunteer Fire Department, Chief

Liam McPhee, Salmon Creek Volunteer Fire Department, Firefighter

Tanner Speas, Humboldt County Firewise Coordinator

During the Community Wildfire Risk Assessment, emphasis was placed on the Home Ignition Zone. The assessment team studied the challenges posed by fuel types, housing sites and materials, and other considerations that relate to mitigation of a large-scale wildfire event. The assessment participants identified common strengths enjoyed by the residents of Salmon Creek, as well as identified conditions that could be modified to increase the area’s level of wildfire readiness. The assessment team visited multiple residences within the community to conduct on-site investigations. In addition, the team studied the entire area to gain an overall sense of wildfire mitigation challenges and identify practical solutions.

Salmon Creek Firewise Community Wildfire Risk Assessment

Objectives of the Assessment Tour

1. Gather information from a general site inspection of the Salmon Creek Firewise Area that would be used to create a Community Fire Risk Assessment.
2. Identify projects that could potentially be included in the assessment recommendations, or the three-year action plan.
3. Note and photo document work that was already accomplished towards Firewise goals.
4. Note and photo document areas of specific concern.
5. Note and photo document fire suppression water resources (tanks, standpipes, etc.)
6. Develop the prioritization order of future fuel reduction and home fire hardening goals.
7. Assist the Salmon Creek Volunteer Fire Department and CAL FIRE in getting more familiar with the area.

Inform the community about the Humboldt County Community Wildfire Protection Plan (CWPP), particularly the [Avenue of the Giants Planning Unit Action Plan](#); Firewise goals and objectives; and how they can get involved.

Focused Observations

- General landscaping characteristics
- Common home construction types (i.e., materials used for roofs, siding, decks, etc.)
- Vulnerability of homes to embers, surface fires, and crown fires.
- Condition of the structures themselves.
- Immediate hazards within home ignition zones.
- Concerns presented by common/open space areas or adjacent public and private wildlands.
- Other hazards or characteristics required as part of the Firewise Program application.

Humboldt County Community Wildfire Protection Plan (CWPP) Goals

This Community Wildfire Risk Assessment was developed with the intention to integrate with the Humboldt County CWPP. The assessment detailed here represents a finer-scale effort, complementary to the countywide [Risk Assessment](#) included as Part 2 of the CWPP. During this assessment process, participants also maintained awareness of opportunities to support the following Humboldt County CWPP goals:

1. Wildfire ignition prevention: reduce human-caused wildfire ignitions.
2. Wildfire preparedness: increase community resilience and adaptation to wildfire.
3. Disaster preparedness: increase residents' ability to effectively prepare for and survive Wildfire.
4. Fire protection: support fire-protection services for people, property, communities, and Natural resources.
5. Restoration of beneficial fire: restore beneficial fire at the landscape scale.
6. Integrated planning: maximize integration of planning efforts to improve community and Ecosystem resilience to wildfire.

Furthermore, the CWPP recommends the establishment of Firewise Communities among the Priority Actions of the [Avenue of the Giants Planning Unit Action Plan](#).

Salmon Creek Firewise Community Wildfire Risk Assessment

After the collection of the Salmon Creek site observations and data, this assessment was drafted and collaboratively reviewed by the Salmon Creek Firewise Committee, the Humboldt Firewise Coordinator, Salmon Creek Fire Department, CAL FIRE, and Humboldt County Fire Safe Council (HCFSC) representatives. The final review was offered to the Salmon Creek residents through the Firewise Committee.

The Defined Salmon Creek Firewise USA® Site

The Community of Salmon Creek, California

Salmon Creek is the name of a rural community located in Humboldt County, California. It is located approximately 5 miles west of Miranda (zip code: 95553). There is no US Census Bureau information available due to the remote location of the inhabitants. The Salmon Creek area is located west of the South Fork of the Eel River and east of the Mattole River. It is named after the Salmon Creek (there are multiple streams named Salmon Creek in California), a 12-mile stream and tributary to the Eel River. The area's central coordinates are: 40° 13.540' N, 123 ° 55.470' W. The elevation ranges from 500' to 2,400'. The community is organized through the Salmon Creek Community School, and the Salmon Creek Volunteer Fire Department. It is estimated that there are approximately 600 residents in the greater Salmon Creek area. The Salmon Creek Area is surrounded by large parcels of privately owned land and a large expanse of BLM and State Park land, which is comprised of similar topography and vegetation. It is mostly unoccupied, and access is very limited. The private parcels that are occupied are used for ranch lands, rural homesteads, and/or agriculture. Plans to treat these areas would be the responsibility of the landowners.

The Firewise Community Boundary

The Salmon Creek Firewise Committee is comprised of resident volunteers and Salmon Creek Volunteer Fire Department members. Through a collaborative decision-making process, the committee delineated the Salmon Creek Firewise Boundary. This boundary matches the jurisdictional boundary that is being proposed through a fire protection district formation process. The Salmon Creek Firewise Boundary is intended to define the area that is included in this Wildfire Risk Assessment and the subsequent Three-Year Action Plan. It was decided upon strategically because of the geographic qualities that unify this community. The Salmon Creek Firewise Boundary encompasses 20,220 acres and approximately 320 dwellings. There are 336 parcels of privately owned land, ranging from .26 acres to 636.8 acres in size. The average lot size is 60 acres. This data was calculated using GIS mapping.

Salmon Creek Firewise GIS Mapping

A GIS map of the Salmon Creek Firewise area was created to delineate the Firewise Boundary, to facilitate the assessment process, and to collect pertinent geographic information. This map is available (on ArcGIS online) to the Firewise Committee, the fire response personnel, and to the residents. It could continue to be used for future planning and documentation. It is also available as a georeferenced PDF for Avenza map viewing and data collection.

Map Links: [AGOL Firewise Mapping Group](#) [Salmon Creek Firewise Avenza Map](#)

The Salmon Creek Environment

The environment of the Salmon Creek area is defined by the Salmon Creek watershed as a tributary to the South Fork of the Eel River, characterized by rolling grasslands and steep forested hills. US Highway 101 runs along the river and is the main access to the area. The residential area starts at the Salmon Creek valley and proceeds mostly on the south side of the creek valley, climbing up steep hills along Thomas Road. While there are some residences on the north side of the Salmon Creek valley, it is primarily unoccupied ranch land.

The vegetation is a mix of forest, brush, and grassland. The dominant tree species are Douglas fir, tan oak, live oak, madrone, and bay laurel. Brush species include *Ceanothus*, manzanita and whitethorn acacia. Scotch broom (*Cytisus scoparius*) and French broom (*Genista monspessulana*) are invasive bushes that are both very prevalent and highly flammable. There are large expanses of wild grassland meadow and oak woodland.

The Salmon Creek area experiences a drastic range of weather conditions over the annual season. Wet, cold, and stormy winter months are followed by hot and dry summers. This leads to significant vegetation growth that then dries out due to low seasonal moisture. The prevailing winds come from the north, and most rain and storm events are driven by winds from the south. The hilly terrain creates unique air current patterns that affect the Salmon Creek area.



An example of the mixed vegetation and terrain that make up the environment of Salmon Creek.

Description of Local Wildland Fire Characteristics

Fire intensity and spread rate depend on the fuel type and vegetation condition (live/dead), the weather conditions prior to and during ignition, and the topography.

- Fine fuels like dry grasses ignite more easily and spread faster with higher intensities than coarser fuels such as dead wood. For a given fuel, the more there is and the more continuous it is, the faster the fire spreads and the higher the intensities. Fine fuels take a shorter time to burn out than coarser fuels.
- The weather conditions affect the moisture content of the dead and live vegetative fuels. Dead fine fuel moisture content is highly dependent on the relative humidity and the degree of sun exposure. The lower the relative humidity and the greater the sun exposure, the lower will be the fuel moisture content. Lower fuel moistures produce higher spread rates and fire intensities.
- Wind speed significantly influences the rate of fire spread and fire intensity. The higher the wind speed, the greater the spread rate and intensity.
- Topography influences fire behavior principally by the steepness of the slope. However, the configuration of the terrain such as narrow draws, saddles and so forth can influence fire spread and intensity. In general, the steeper the slope, the higher the uphill fire spread and intensity.

Salmon Creek is in a wildland-urban interface (WUI) environment. The WUI is a zone of transition between wilderness and land developed by human activity. This is an area where a built environment meets or intermingles with a natural environment. Human settlements in the WUI are at a greater risk of catastrophic wildfire in large part due to the higher volume of combustible vegetation. This dynamic also increases the complexity of fire suppression and evacuation efforts.

The Salmon Creek area was threatened by the Canoe Fire in 2003 that burned over 11,000 acres. It started in the neighboring Humboldt Redwoods State Park and encroached onto private land in the northern area of the Salmon Creek community. It was eventually contained without damaging the residential area. This was the largest fire in the Avenue of the Giants Planning Unit between 1997-2017.

Firefighting and Emergency Response Resources

The Salmon Creek Volunteer Fire Department is the local emergency response agency. It is well established in the community and is comprised of residents who are trained as firefighters and medical responders. The Salmon Creek area is not currently an official Fire Protection District but is in the process of becoming one. This process is expected to be completed by 2023.

Salmon Creek is in the California State Responsibility Area (SRA). In the SRA, CAL FIRE is tasked with wildfire protection and emergency response. The Weott CAL FIRE station is located approximately 15 miles north of Salmon Creek with a response time of approximately 30 minutes. The Garberville CAL FIRE station is located approximately 20 miles south of Salmon Creek with a response time of approximately 38 minutes.

Salmon Creek Home Ignition Zone Observations

The Firewise USA® program places importance on addressing the “Home Ignition Zone.” The Home Ignition Zone (per NFPA) consists of a dwelling and the first 100 feet or more around the home, depending on slope and vegetation. Proactive mitigation in this area will have the greatest impact on reducing the potential for ignition from wildfire embers or other ignition sources. Conversely, a well-maintained Home Ignition Zone can prevent fires in and around the home from spreading into surrounding wildlands. It is delineated into three categories: the Immediate Zone, the Intermediate Zone, and the Extended Zone. These are also referred to as Zone 0, Zone 1, and Zone 2. The Home Ignition Zone is an important part of this assessment in that it is where the prioritization starts for direct actions that the resident can take to prepare for wildfire.

Immediate Zone (Zone 0)

The Immediate Zone or Zone 0 is the home and the area 0’-5’ from the furthest attached exterior point of the home. The recommendation is that this should be a non-combustible area, meaning that all combustible materials are absent from this area. Science tells us this is the most important zone to take immediate action on as it is the most vulnerable to embers. It is generally recommended that residents begin with this zone then move into the surrounding landscaping within the Immediate Zone.

It was observed that greater than 75% of the dwellings in the Salmon Creek Firewise area have non-combustible Class A roofs made of either metal, tile, or asphalt shingles. Approximately 25%-50% of the homes have non-combustible siding that is either concrete board, stucco, or metal. The remainder of the homes are mostly sided with wood, either as a shiplap, board and batten, or T1-11 exterior plywood siding. An estimated 50%-74% have multi-paned windows. Of the homes with gutters, about half of them have metal gutters and half have plastic gutters. Greater than 50% of the homes observed seemed to have cleaned and maintained the debris from the gutters and roof. Very few of the homes observed (less than 25%) have non-combustible soffits with screened vents, and over 75% of the homes have wooden attachments (decks, arbors, etc.). Also, only about 25%-50% have non-combustible skirting around the base of the dwelling. Of the homes observed, only about 25% had sufficiently created a combustion free area in the Immediate Zone.

The following are the NFPA general recommendations to treat this zone:

- Clean roofs and gutters of dead leaves, debris and pine needles that could catch embers.
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.
- Reduce embers that could pass through vents in the eaves by installing 1/8-inch metal mesh screening.
- Clean debris from exterior attic vents and install 1/8-inch metal mesh screening to reduce embers.
- Repair or replace damaged or loose window screens and any broken windows Screen or box-in areas below patios and decks with wire mesh to prevent debris and combustible materials from accumulating.

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- Move any flammable material away from wall exteriors - mulch, flammable plants, leaves and needles, firewood piles - anything that can burn. Remove anything stored underneath decks or porches.

Intermediate Zone (Zone 1)

The Intermediate Zone or Zone 1 is the area 5'-30' from the furthest exterior point of the home. This zone is treated with landscaping and hardscaping. By employing careful landscaping, the resident can create breaks that can help influence and decrease fire behavior.

In Salmon Creek, it was observed that 50%-74% of residents had some level of vegetation treatment in the Intermediate Zone. There was evidence that fuel reduction education had influenced homeowners to clear brush and ladder fuel in this zone and the Extended Zone (Zone 2). The hazards that exist in this area are primarily from highly flammable landscape plants (like bamboo, lavender, rosemary etc.), wooden auxiliary structures such as tool sheds, or the lack of cleaning out dead plant matter. Another concern is the occurrence of large wildland trees that are 30' away, but due to the geography and large limbs, they still pose a threat in the case of a crown fire. These trees often pose technical difficulties and are often expensive to remove.

The following are the NFPA general recommendations to treat this zone:

- Clear vegetation from under large stationary propane tanks.
- Create fuel breaks with driveways, walkways/paths, patios, and decks.
- Keep lawns and native grasses mowed to a height of four inches.
- Remove ladder fuels (vegetation under trees) so a surface fire cannot reach the crowns. Prune trees up to six to ten feet from the ground; for shorter trees do not exceed 1/3 of the overall tree height.
- Space trees to have a minimum of eighteen feet between crowns with the distance increasing with the percentage of slope.
- Tree placement should be planned to ensure the mature canopy is no closer than ten feet to the edge of the structure.
- Tree and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape.

Extended Zone (Zone 2)

The Extended zone extends from 30'-100' feet out from buildings, structures, decks, etc. or to the property line, whichever is closer. Through careful landscaping and fuel reduction, the intensity of wildfire can be reduced. The goal here is not to eliminate fire but to interrupt fire's path and keep flames smaller and on the ground.

Approximately 25%-50% of the homes had treated vegetation in the Extended Zone (30-100 feet). This work requires continuous maintenance due to brush regrowth and the fact that tanoak, a primary tree species in the area, aggressively sprouts back into a dense flammable bush after being cut. After fuel reduction work, if the area is opened to sun exposure, it will re-grow as heavy brush, grass, vetch, and young tree sprouts. Therefore, it is often better to choose a shaded fuel break

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method, which creates the lowest continual maintenance requirement. The area that connects the extended zone and the private driveway is important for egress but is often overlooked.

It should also be noted that the 100' zone often offers limited protection due to the size and quantity of the surrounding forest fuel loads. This is especially true when there are steep slopes close to the dwelling, as is often the case.

The following are the NFPA general recommendations to treat this zone:

- Dispose of heavy accumulations of ground litter/debris.
- Remove dead plant and tree material.
- Remove small conifers growing between mature trees.
- Remove vegetation adjacent to storage sheds or other outbuildings within this area.
- Trees 30 to 60 feet from the home should have at least 12 feet between canopy tops.*
- Trees 60 to 100 feet from the home should have at least 6 feet between the canopy tops.*

**The distances listed for crown spacing are suggested based on NFPA 1144. However, the crown spacing needed to reduce/prevent crown fire potential could be significantly greater due to slope, the species of trees involved and other site-specific conditions. Check with your local forestry professional to get advice on what is appropriate for your property.*



Examples of fuel reduction work in the Extended Zone (Zone 2).

Successful Firewise Modifications

When adequately prepared, a house can withstand a wildfire without the intervention of the fire service. Further, a house and its surrounding community can be both Firewise and compatible with the area's ecosystem. The Firewise Communities/USA program is designed to enable communities to achieve an elevated level of protection against WUI fire loss even as a sustainable ecosystem balance is maintained. A homeowner/community must focus attention on the home ignition zone and eliminate the fire's potential relationship with the house. This can be accomplished by disconnecting the house from high and/or low-intensity fire that could occur around it.



Here are two examples of sheet metal skirting that provide non-combustible protection for the buildings.

Fire Hardened Homes

This is an example of an exceptionally fire hardened home. Notice the stucco exterior, metal roof, and all metal deck. The soffits are stucco and have fine screen venting as well. There are no flammable materials in the 0’-5’ area around the house and there is no opening underneath the structure. It is of little surprise that this is the home of a Salmon Creek Volunteer Firefighter. With the knowledge of the wildfire possibilities, residents are likely to be motivated to harden their homes.



The home pictured below was built with a composite ICCF (Insulated Composite Concrete Form) system that is highly non-combustible and is covered in a stucco exterior. The soffits are covered in stucco with fine screen venting as well. This is also the home of a Salmon Creek Fire Department member.



Salmon Creek Community Observations

Ingress and Egress

While conducting the assessment tour, both residents and fire response personnel noted that evacuation routes and ingress and egress in general are of major concern. In the upper region of the Salmon Creek area there is a road loop that is created by Upper and Lower Samuel Ranch Loop Road. The assessment tour followed this route because it is the access to the farther reaches of the community. This loop connects at Thomas Road at the Salmon Creek School. Along these two main roads are smaller access roads and private driveways.

Currently, the only alternative evacuation route would be from Upper Samuel Ranch Loop Road to Perry Meadow Road, from there to East Fork Road, and then to either Crooked Prairie, China Creek, or Elk Ridge Road. Salmon Creek Fire personnel and residents both expressed interest in opening two other possible routes, one that would connect to Road D that would eventually connect to Sealy Creek, and one that could connect Upper Thomas to Doody Ridge Road and eventually Dutyville Road to Ettersburg Road. If this could be done with volunteer efforts, it would substantially improve the evacuation options in the Salmon Creek Area.

In the long-term planning for fire safety, the vegetation along these two main roads should be aggressively treated. The condition of the fuel loads along this loop will have major influence on the safety of the fire response personnel coming to suppress fire, as well as the safety of the residents in an emergency evacuation situation. Long-term goals could include connecting the residents' personal Extended Zone and driveway fuel reduction work to the primary evacuation routes.

Address Signage

Salmon Creek Fire personnel agreed that there was an almost complete lack of consistent address signage. This makes it more difficult to find the scene of an emergency call, and that increases the response time. This could be the difference between a successful initial attack where the fire is suppressed while it is still small, and a fire that grows into a large potentially catastrophic complex. It also has the potential to slow the speed of the response to medical emergencies, which constitute the majority of incidents that the fire department responds to.

Fire Suppression Water Resources

One objective of the Community Wildfire Risk Assessment tour was to gain knowledge of the available water resources for fire suppression in the Salmon Creek area. Since the Salmon Creek area has no municipal water system, there are no integrated fire suppression water resources. There are no fire hydrants or pre-pressurized fire suppression systems in the Salmon Creek area. Therefore, the water resources available are privately owned and of a residential scale. Many landowners do have ponds that are available for drafting, and these are likely to be the main source of water refilling operations.

The privately owned water systems are comprised of multiple HDPE water storage tanks ranging in size between 3,000 and 5,000 gallons that were fed by wells or springs. About half of the residents visited had fire standpipes available. Residents expressed interest in being prepared to offer firefighting water resources. They had questions about how to create effective fire standpipes

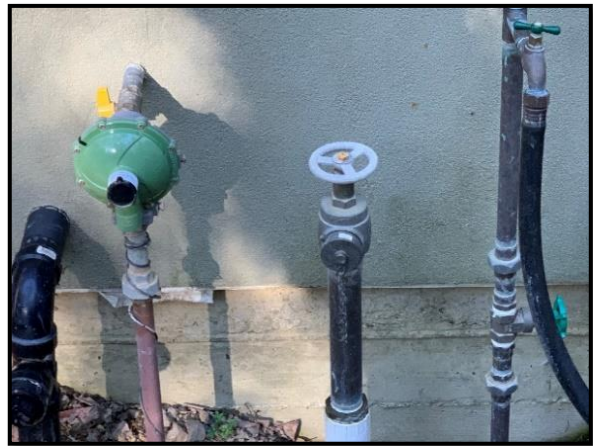
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and where to place them. An educational outreach program aimed at informing residents on how to install proper fire standpipes and how to use home fire suppression systems to suppress small fire ignitions could be effective.

The Salmon Creek Fire Chief acknowledged that water resources are among the Department's highest priorities to identify and develop in the Salmon Creek area. This is a very achievable goal and is consistent with SRA Fire Safe Regulations.

Examples of Private Fire Suppression Standpipes

As seen here, there are multiple ways to make water available to fire response personnel. The two key features are: at least 1 pipe and valve ending in a brass 1 ½" National Hose (NH), also known as Nation Standard Thread (NST) fitting.



Salmon Creek Community Wildfire Risk Summary

The wildfire risk in Salmon Creek is typical of an inland Humboldt County rural community spread out amongst a mix of grassland meadow and steep, heavily forested hills. The specific hazards to Salmon Creek residents include limited ingress and egress options, with only one public access route. This one route serves a large group of residents who have a long way to travel to be clear of a threat in the Salmon Creek area. Another hazard is the difficulty of fast initial attack from fire suppression personnel. This is due to the large area and distance that fire suppression personnel are likely to have to travel to gain access to fires. As is evident from historic fires (the Canoe Fire, for instance), lightning strikes pose a substantial threat in the dry season. Due to the chaotic nature of lightning, it could start multiple fires in hard-to-reach areas.

Salmon Creek has considerable risk of wildfire damages to human habitation and, loss of human life. The wildfire risk is increased due to the wildland-urban interface. The local weather conditions add to the wildfire risk, especially in the late spring, summer, and fall. This is the “fire season” due to the low humidity and heat that enable the conditions to be inclined towards ignition and fast spread. As the grass dies and dries out (observable by the transition from green to brown), it ignites easily, and the fire can move extremely fast. The larger vegetation continues to dry as well, as the ground water becomes less available, and the dead material loses moisture stored over winter.

Overall, the dwellings in the Salmon Creek area are of average condition, with some needing substantial maintenance. As homes are improved and remodeled over time, there will be considerable opportunity for fire hardening, especially regarding skirting and soffits. The landscaping in the home ignition zones looks to have been affected by prior fuel reduction education but could be refined and developed, utilizing the more in-depth analysis offered by the Humboldt County Fire Safe Council’s [Home Risk Assessment](#). The condition of the overall wildland that the residential areas are interfaced with needs considerable fuel reduction to reduce the chance of catastrophic crown fires.



The view from Upper Samuels Ranch Loop Road towards the west. Notice the smoke from a prescribed burn taking place miles away.

Photographic Observations

The following photos were collected on the Community Wildfire Risk Assessment Tour on March 11th, 2022.



An example of the typical environmental features of the Salmon Creek area.



Examples of fuel loads along Thomas Road and Samuels Ranch Loop Road.

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Photos of Salmon Creek Dwellings
Examples of the various levels of home hardened dwellings.



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Ponds as Potential Fire Suppression Water Resources

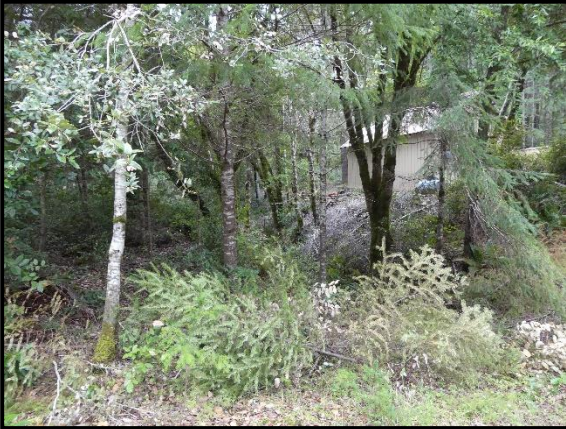
Below are examples of the many ponds in the Salmon Creek area. Notice how some ponds will offer easy access for fire response personnel and some could present dangerous conditions due to vegetative fuels in close proximity.



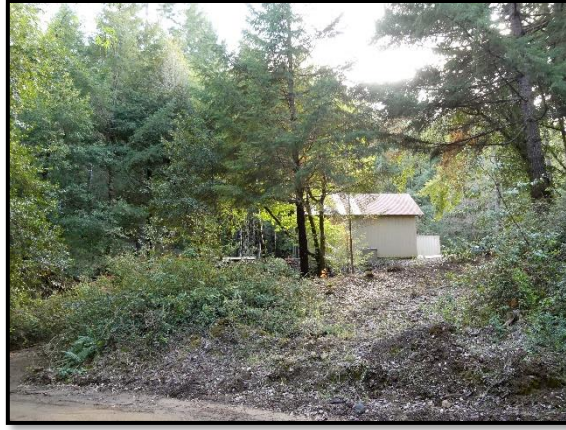
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Salmon Creek Fire Station Fuel Reduction Work

On March 17th, 2022, thirteen community members volunteered six hours each to remove and burn live and dead vegetation around the Salmon Creek Fire Department Station. The station is located along a well traveled local access road and now serves as a demonstration of a successful fuel reduction project.



Before (above) and after (below) the community volunteer fuel reduction work.



Community Wildfire Risk Assessment Recommendations

Through the process of creating this Community Wildfire Risk Assessment, the Firewise Committee has collected the following recommendations to facilitate the prioritization of action items in the three-year plan to be developed.

Home Ignition Zone Recommendations

Prioritize treatment of the Immediate Zone of the Home Ignition Zone. Educational outreach is likely to be the best mechanism for achieving this objective and should clearly communicate to residents that the 0'-5' area around their dwellings should be cleared of all combustible materials. This includes landscaping, mulch, building materials, and other flammable items.



Avoidance of mulch against the structure and replacing with non-combustible rock or other surface is recommended.

Actively encourage residents to enclose their foundations with non-combustible skirting, and to install non-combustible soffits with vent screening.



It was observed in multiple circumstances that buildings had non-flammable roofing and treated vegetation but were built on post and pier foundations with no skirting. This could allow embers to land underneath the building and then to ignite the floor structure. This is especially true if there are combustible materials under the structure. Open eave construction is more liable to ignite from blowing embers. Boxed-in non-combustible soffits are recommended.



Promote fuel reduction and fire-resistant landscaping in the Intermediate Zone.

Here is an example of highly flammable brush in the 5'-30' Intermediate Zone. It is recommended that Salmon Creek residents treat the Intermediate Zone (Zone 1) by clearing all highly flammable brush away from their homes. Landscaping should be specifically designed with fire-resistant species and fuel discontinuity in mind. This is important for fire suppression efforts and for reducing the chance of radiant heat igniting the dwelling.

Connect the Extended Zone treatment to the driveway ingress / egress.

Safe egress in the case of a wildfire event could be impacted by the fuel along a resident's private driveway. This will also affect whether the fire suppression personnel will feel that it is safe enough to defend the residence. Therefore, it is recommended that after the Home Ignition Zone is treated, the fuel along the resident's driveway be addressed. This area can be treated in a similar way as the Extended Zone. Remove flammable brush and small trees to disrupt fuel continuity, and then remove the limbs of larger trees up to at least 6'. This is to reduce what is called "ladder fuel." This treatment should be a minimum width of 8' from each side of the driveway.



Direct fuel reduction efforts to protecting fire-suppression infrastructure.

On multiple occasions, there were fuel loads that pose fire damage risk to important infrastructure, often in the Intermediate Zone. For example, it is recommended that the trees around these water tanks be limbed up to reduce ladder fuel and the chance of wildfire igniting them.

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Promote the importance of water storage and standpipes for fire-suppression. Establish a “Blue Dot” recognition program.

Although it was observed that many residents did have water resources available for fire response personnel, it is recommended that water storage and standpipes continue to be promoted. A focused educational outreach program would help residents design and implement their home fire suppression water systems. These private systems should then be documented for fire response personnel use. It is also recommended that every resident have and identify with a blue reflective dot, a dedicated water storage tank for fire suppression purposes, and that all water storage is equipped with a fire standpipe for quick access.

Develop the accuracy and completeness of the Salmon Creek address system.

A systematic approach to ensuring that each residence is properly and effectively identified with an address sign will help fire response personnel reduce their response time during an emergency. This could affect the outcome of inevitable uncontrolled fires, whether it is suppressed as a small fire or grows to a larger more destructive fire.

Salmon Creek School Recommendations

The Salmon Creek School, a local asset at risk, was visited during the Wildfire Risk Assessment Tour. The overall fuel loads around the school are low, but there are areas that could benefit from minimal work. The structures are aged wooden buildings with non-combustible roofs. There is likely to be maintenance required in the near future, and this could be an opportunity to incorporate fire hardening features. It is recommended that single pane windows be replaced with fire-rated double-paned windows. Other recommendations include non-combustible skirting on all buildings that are not currently skirted, and non-combustible siding and soffits.

Organize a Salmon Creek School Volunteer Fuel Reduction Event.

The highest priority recommendation for the school is to eliminate all flammable brush from the campus, and especially next to the buildings. Larger trees should be limbed up to reduce ladder fuel and disrupt fire continuity. Since the campus has been well maintained, this is not an enormous job and could be an excellent volunteer opportunity that would produce immediate results. The two photos at bottom right show two locations that are recommended for treatment.



Recommendation Summary

Home Ignition Zone

- Prioritize treatment of the Immediate Zone of the Home Ignition Zone.
- Actively encourage residents to enclose their foundations with non-combustible skirting, and to install non-combustible soffits with vent screening.
- Promote fuel reduction and fire-resistant landscaping in the Intermediate Zone.
- Connect the Extended Zone treatment to driveway ingress / egress.
- Direct fuel reduction efforts to protecting fire-suppression infrastructure.
- Promote the importance of water storage and standpipes for fire suppression. Establish a “Blue Dot” recognition program.

Salmon Creek Community

- Develop the accuracy and completeness of the Salmon Creek address system.
- Organize a Salmon Creek School Volunteer Fuel Reduction Event.
- Thomas Road and Samuels Ranch Loop Road fuel reduction to fire safe evacuation routes and reduce ignition risks.
- Continue organization of the Firewise program.
- Educational outreach events to inspire and organize the resident community.
- Plan for evacuation.

Important Considerations

Salmon Creek residents are reminded to be conscious of keeping high-intensity fire more than 100 feet from their homes. It is important for them to avoid fire contact with their structures. This includes embers and firebrands. Remember that, while the risk of wildfire cannot be eliminated from a property, the potential for negative impacts can be reduced.

Homeowners are reminded that street signs, addresses, road widths and fire hydrants do not keep a house from igniting. Proper attention to their home ignition zone does. The Firewise Communities/USA program seeks to create a sustainable balance that will allow communities to live safely while maintaining environmental harmony in a WUI setting. Homeowners already balance their decisions about fire protection measures against their desire for certain flammable components on their properties. It is important for them to understand the implications of the choices they are making. These choices directly relate to the ignitability of their home ignition zones during a wildfire.

Vegetation management in high-fuel areas is recommended to improve both forest health and ecological sustainability. The reduction of the volume of vegetation will have two benefits. Not only will it mitigate the fire hazard, but it can also be accomplished in a way that will reflect an interest in maintaining a healthy ecosystem during periods of extended drought.

Even with home ignition zones potentially providing fire protection, a wildfire in Salmon Creek will create a significant volume of embers and firebrands. To lower the ignition potential of homes, residents should inspect their roofs and the ground immediately adjacent to their homes for fine fuels and remove them regularly. Fine fuels include leaves and needles, grasses, and other dry vegetation.

Community Partnership

As the saying goes: “it takes a village.” Each resident and property owner who volunteers and invests in Firewise activities is not only helping themselves but is also contributing to the greater good and risk reduction for the whole community. By adopting the Firewise Communities/USA program and continuing the great work the community has already accomplished, residents can create a balance that will allow them to safely co-exist with wildfire while maintaining the natural forest setting that the residents desire. Most people have chosen to live in Salmon Creek in part because of the quality of the environment, climate, wildlife, and aesthetic appeal. It is important for the residents to understand the implications of the choices they are making regarding fire safety. These choices, such as home siting, building materials selection, landscaping, and proper maintenance of the home, directly relate to the ignitability of their home and surrounding environment during a wildfire event.

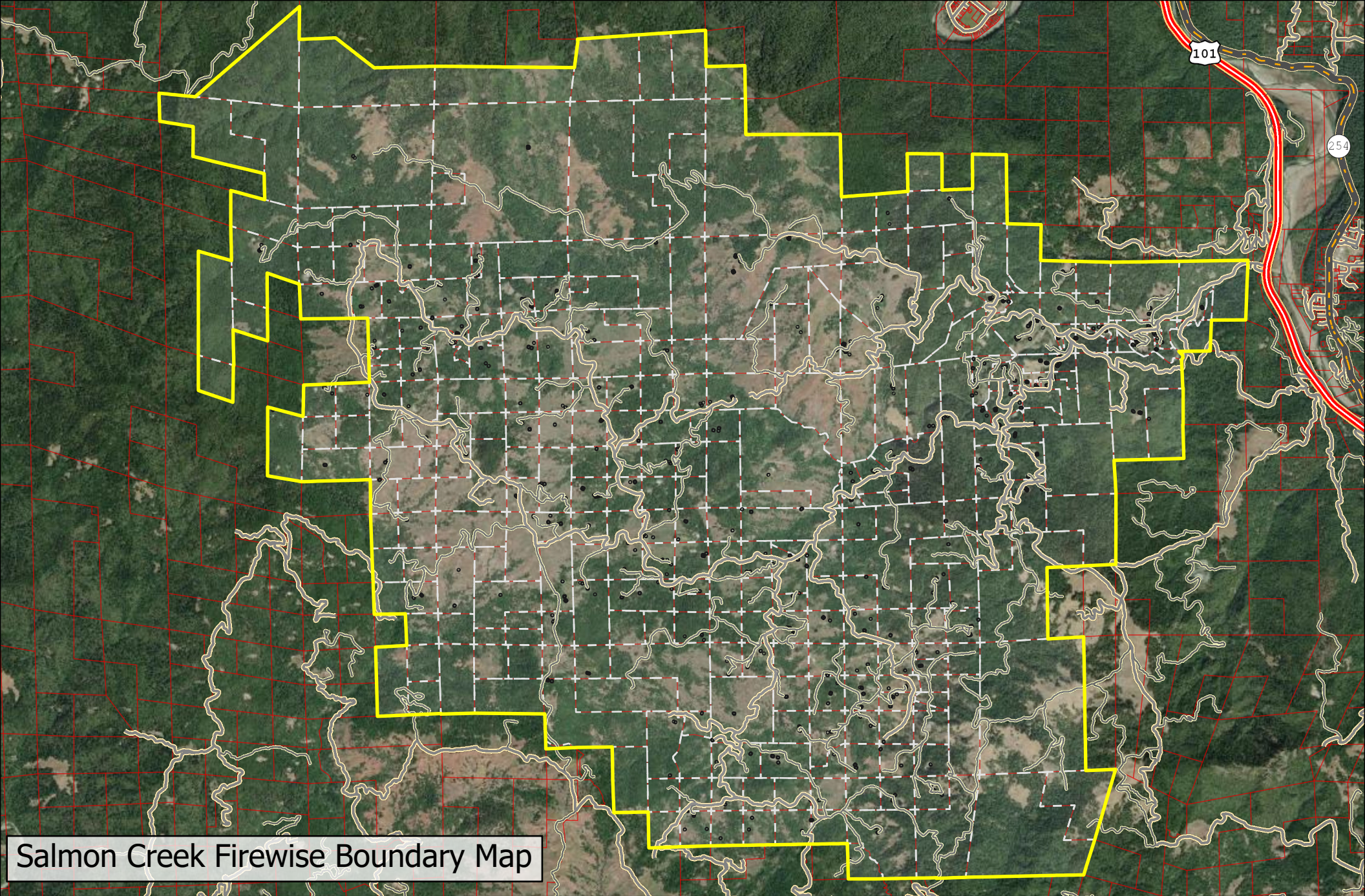
Next Steps

After reviewing the contents of this assessment and its recommendations, the Salmon Creek Firewise Committee in cooperation with the Salmon Creek Fire Department and CAL FIRE will create agreed-upon, area-specific solutions to the Firewise recommendations and create a three-year action plan.

Assuming the assessment area seeks to achieve national Firewise Communities/USA recognition status, it will integrate the following standards into its plan of action:


- Sponsor a local Firewise committee, which maintains the Firewise Community program and status.
- Complete an assessment and create a three-year plan from which it identifies agreed-upon, achievable local solutions.
- Invest a minimum of one volunteer hour or equivalent investment annually per dwelling in its Firewise Communities/USA program.
- Observe a Firewise Communities/USA Day each spring that is dedicated to a local Firewise project.
- Submit an annual report to Firewise Communities/USA. This report documents continuing participation in the program.

The Firewise program uses recognition as an incentive and an inspiration for community planning and action. Let it be recognized that this has already achieved results!



Salmon Creek Firewise Boundary Map

Legend

 SalmonCreekFirewiseBorder	 Highways and Roads	 Minor Arterials	 Minor Collectors	 Private or Unclassified	 SalmonCreekFirewiseAPN
	 Principal Arterials	 Major Collectors	 Local Roads	 SalmonCreekAllBuildings	 apnhum99sp

0 0.5 1 2 3 4 Miles

Humboldt County GIS, Maxar

