

CVIP Survey Response Analysis

Submitted jointly by

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Introduction

Chiloquin Visions in Progress (CVIP) circulated a survey to Chiloquin residents in 2022 to gather input on public perceptions of impacts, preparedness, response and recovery from wildfires. In 2023 CVIP contracted with two local wildland fire experts to review and examine the survey results. The contractors were tasked with identifying top trends, concerns, needs and data gaps. They were asked to research solutions/actions that address the same. Discussion of the pros and cons of proposed actions, finding funding sources and programs that could be models for future work were also requested by CVIP.

The following is the product addressing the CVIP Scope of Work. Topics were ranked #1, #2 and #3 by the contractors. All topic categories are important. The topic areas were defined from multiple survey topics for focused discussion.

Preparedness, #1 priority

Concerns

Personal Preparedness: About 83% agree or strongly agree that “I am worried about the impact on me or my family when the next wildfire comes.”

Community Preparedness: 90% of respondents felt their household was somewhat to very prepared for a future wildfire. Conversely, 39% thought their community was not very to not at all prepared.

Personal and property preparedness information received the highest % of response for “need to know more”.

Almost 89% agree or strongly agree with this statement, “I am worried about vulnerability of critical infrastructure such as utilities in my community if a wildfire occurs.”

84% agreed that their efforts to prepare for the next wildfire would keep their family/property/animals safe. 85% knew what to do.

80% of respondents rated current, accurate information during an incident as the most significant.

Needs

What do people think of when they say they are prepared for wildfire? Is that just a good escape route and food/water cache, or their Home Ignition Zone (HIZ) treated, or the fire hazard on the entire landscape surrounding them treated and maintained? Do they know specifically what they need to do? Community members want to know what wildfire preparedness looks like and have a strong desire for current and accurate information during an incident.

Everyone must understand that quickly using their planned Escape Route (ER) to access a Safety Zone (SZ) is Priority #1 for life safety, the closest Safety Zone may be in your backyard. They need to have a different plan for different risks, ER may be different depending on approach vector of fire, SZ may be same or not.

Reinforce and continue to educate communities on specific treatments that are most effective at protecting homes and critical steps they can take to be personally prepared. (See education opportunities section, another opportunity for community relationships by gathering residents with responders).

The Klamath County Situation Analyst (KCSA) program has a property survey and rating process to display current fire hazard. It was designed to allow updates with their fire district for changes to their hazard rating.

Data gaps

The survey was not designed to identify all the concerns of community members, so we are not clear what the specific concerns are, but there is much we can learn from other communities that have survived wildfire events. After Action Reviews (AAR's) and follow-up surveys at the community level (similar to the Chiloquin Community Wildfire Survey) should continue to occur after these events to ensure community concerns and challenges are heard. This data gap is an outreach opportunity for Chiloquin Community Partners, to work with their local communities to understand the specific needs related to personal and community preparedness.

Public education is needed on what to expect during a wildfire. Can we depend on our infrastructure? Will the power lines still have power? Are the roads passable? Will my water system still work? (Priority #2 topic – Critical Infrastructure Protection)

Video on what a road looks like during a firestorm, how dark it becomes and how hard it is to see the edge of the roads would help community members understand how bad it can get. One tree down or vehicle accident ahead of you and you may be trapped. A vehicle is NOT a safety zone and driving through wildfires is extremely dangerous. The best SZ may be at your home or near it.

A data gap is identified around clearly identifying individual and property preparedness within the communities. A Common Operating Picture (COP) like

KCSA would provide first responders with up-to-date information on specific properties and community members.

Proposed Actions

Personal Preparedness

About 83% of survey respondents agree or strongly agree that *“I am worried about the impact on me or my family when the next wildfire comes.”* This concern is valid given the extreme and erratic fire behavior observed during recent wildfires in the Chiloquin area. Personal preparedness steps for wildfire include recognition of the situation, planning, and preparation.

Individual Preparedness Plan (IPP)

Does the individual know what their preparedness plan is? Every person and family should clearly discuss and develop a plan to prepare for and respond to emergencies. A family should develop their IPP together so that all family members know the plan and understand what each other will do. Gathering points, critical contacts and other critical information is shared. Families should conduct practice drills and update the plan regularly. Many different templates are available for documentation of plans to ensure all important topics are covered.

<https://www.redcross.org/get-help/how-to-prepare-for-emergencies/make-a-plan.html>

Pros:

Each individual and family has a preparedness plan and knows what they are going to do in the event of a wildfire. Following pre-planned procedures can help to ensure the safety and accountability of family members.

Cons:

Families must take the time to build the preparedness plans, and then they should be updated every year. If plans are not current, or left on a shelf, they are not very useful.

Ready Kit and Go Plan- (what to take, what to do upon leaving)

A Ready Kit and Go Plan can help families/individuals during almost any type of disaster event, including wildfires. The ready kit can ensure basic survival supplies such as food, water, medicines, and batteries would be available for everyone impacted by an incident. Unnecessary travel and exposure of individuals on road systems could also be minimized. All families and individuals should assemble a Ready Kit and develop a Go Plan before a disaster occurs. Has this been completed by individuals and families in the Chiloquin area?

Explore ways to share the lifesaving importance of a simple ready kit, and how these small steps help the community be more prepared.

<https://www.ready.gov/kit>

Pros:

Every community member has ready kit that will help them through almost any type of emergency. Individuals are not out on the road looking for necessities and adding to the congestion and confusion.

Cons:

Ready kits could be assembled by community members but not used or maintained. Cost of the items, the time to assemble them, and storage of the kits.

Common Operating Picture - COP

Do responders know who is prepared to self-evacuate and who will need assistance? Elderly, disabled, and people needing additional assistance during an evacuation must be identified prior to an incident so responders are aware, and assistance provided if possible.

Common operating platforms allow all responding personnel access to critical real time information about their incident and surroundings so they can make more informed decisions on incidents. Data shared on these platforms are available in real time and create the COP for all responders. The KCSA program is an excellent common operating platform currently in use by multiple agencies in the Klamath Basin and should also serve as the platform for the COP used by the responding resources in Chiloquin and surrounding communities.

Are fuel treatment areas and fuel breaks recorded and known to responders on a COP? Hazard mitigation treatments, pre-established control lines, water sources, safety zones, escape routes, gate combinations, and multiple other preparedness items should all be tracked and recorded within a COP that is quickly accessible to all responding resources. KCSA and similar GIS based programs can also be used to record and visually track hazard mitigation treatments and fuel breaks near communities, ensuring maintenance treatments occur in a timely manner and treatments remain effective. Volunteers from the community could help contact property owners and collect important responder information, with the WUI Coordinator helping to organize the groups, gather the information and ensure it is updated in the COP.

Pros:

Digital information about structures and parcels has been in use by Klamath County firefighting agencies over the last 17 years with great success. A COP (KCSA) has allowed real time preparedness data and

other critical first responder data to be quickly displayed and shared between resources. First responder awareness and effectiveness are significantly increased when the KCSA system is updated with current data and used by responding resources.

Cons:

Cost of the program, the annual maintenance to ensure data is current and updated, the time and workload to input and maintain the data. Field gathering of survey data on properties and structures is a workload that takes volunteers or other staff to update annually.

Home Ignition Zone (HIZ) and adjacent lands

The concept of the home ignition zone was developed by retired USDA Forest Service fire scientist Jack Cohen in the late 1990s, following his research into how homes ignite due to the effects of radiant heat. The HIZ is divided into three zones, immediate (0-5'), intermediate (5-30') and extended zone (30-100').

<https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-wildfire>

Preparing homes and property for wildfire is a critical part of personal and community preparedness, with the HIZ and adjacent lands being the highest priority for hazard mitigation treatments. Homes and adjacent wildlands should be surveyed on a regular basis, with mitigation needs being identified, implemented, and maintained. This home and property assessment could be completed by the individual homeowner or a person with expertise and training. All data could then be loaded into KCSA for responder awareness. KCSA includes homeowner assessment.

HIZ treatments should be implemented and maintained with a long-term goal of building a safe and fire resilient landscape around homes and other improvements.

Large land managers, such as the US Forest Service and private timber companies, can be good partners if the fire hazard is on land they manage adjacent to homes and communities.

Pros:

Treatments in the HIZ are key to saving your home during a wildfire event. Treating the area within 0 to 200 feet of a home will usually provide the largest benefit to home survival.

Cons:

Treatments may not be aesthetically pleasing to some homeowners. Removing trees and other vegetation from around your home can be very difficult and hard work. Cost and ability of the homeowner to do treatments

themselves is another challenge. The number of homes to treat is significant, and some absentee owner properties may never be treated.

Funding for Treatments:

Numerous grants and other funding opportunities are currently available to assist with the cost of these treatments. A WUI coordinator position could pursue future funding opportunities as they become available.

Absentee Property Owners

Within Chiloquin and surrounding communities, there are thousands of acres of land that are privately owned by people or companies that do not live or work near their property. These lands owned by absentee landowners are often some of the highest fire hazard properties in the communities and pose the greatest fire risk to their neighbors. These properties should all be identified, tracked, and mapped in a COP such as KCSA for first responder awareness.

If the landowner is responsive, they should be asked to treat their fire hazard. If the landowner is unable to afford the treatments or physically unable to treat the fuels themselves, funding may be available to assist with this work. The local fire District should seek permission and funding to treat fire hazard on these properties if no other options exist. Options for legal recourse should be assessed if the landowner refuses to allow treatment. The hazard to their neighbors and the entire community could be significant and a possible liability.

Hazardous Properties

Hazardous properties are another concern identified in the communities. Old vehicles, tires, batteries, plastic, household garbage and other unknown types of material are found on vacant and occupied properties and public lands surrounding the communities. The concern is for firefighter and public safety, especially if these hazardous materials were to become involved in a wildfire that is burning near or within the community. Local codes should be enforced if possible, and assistance for junk removal should be pursued. These hazardous properties should be pre-identified before a wildfire occurs and clearly marked in the COP for first responders.

Cleanup of key areas within a community can be an opportunity for building teamwork and volunteerism. The old Chiloquin Dump Area clean-up proposal is an idea that could be used within the Chiloquin community. The old dump area across from the current Chiloquin Dump is USFS administered land, adjacent to private lands, critical infrastructure, and the community of Chiloquin. The area needs garbage picked up and hauled away, trees and brush need to be thinned and hand piled, and piles will need to be burned. The area could then be ready for a first-entry understory burn, which would begin the maintenance cycle. This project area and others near communities can showcase high priority hazard reduction treatments, help to beautify the forest areas next to town, and serve as

an inspiration for community members and property owners to continue treatments on their properties.

Community Preparedness

CWPP and WUI Boundary

The community of Chiloquin and the surrounding area was included in the Chiloquin Community Wildfire Protection Plan (CWPP). This CWPP and associated the Klamath County CWPP are excellent sources of information for many of the topics covered in the community survey. Many of the proposed actions in these original CWPP's were never fully implemented and are still valid today. A review and update of this document and the associated CWPP boundary should be completed soon.

A Wildland Urban Interface (WUI) boundary was developed as part of the original 2005 CWPP. (Pg 21-22 in the CWPP linked below).

https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/4013/Chiloquin_Wildfire_Protection_Plan.pdf?sequence=1

In March of 2005, Chiloquin Rural Fire Protection District signed Resolution 05-015 which adopted the proposed WUI boundary. This WUI boundary surrounding Chiloquin has not been updated since 2005 and should be revised and expanded due to the demonstrated fire behavior of recent wildfires like Bootleg and 242 which spread with extreme intensity and impact to multiple communities. Moving the boundary out in almost every direction would be appropriate for multiple reasons and should be pursued as soon as possible.

Many funding sources for hazard reduction treatments are targeted for areas identified as WUI, so having these lands categorized correctly would help ensure the community and local landowners have full access to appropriate hazard reduction funding. An addendum needs to be prepared and brought before the Klamath County Commissioners for adoption to get those properties included.

The expanded boundary and updated CWPP should consider all outlying communities and dispersed private properties, with specific updates and preparedness steps for every community, area, or subdivision. Recent fire scars and fuels treatments should also be incorporated into the preparedness planning for the updated CWPP, along with any lessons learned from recent wildfire events.

Sirens and Visual displays

If a wildfire starts near your home, how will you and your family be notified? Do you wait until you hear the sirens and see the air tankers flying overhead? Sirens and visual displays have been used by numerous communities across the US to notify all the people in a large area about an impending disaster. For Chiloquin and surrounding communities, a siren and visual display placed at each fire station could be used to notify those residents within hearing and sight distance.

With a back-up battery or generator, the Siren or sky beacon could be used for many types of disaster situations.

Pros:

A loud siren and visual display can be a lifesaver for people living in remote areas or off grid. Communication systems can always fail, but simple sirens or lights should work if there is back-up power.

Cons:

Some people may consider a Siren as 'noise pollution', especially if it is used too often or tested too frequently. Cost of the sirens, backup power systems and maintenance over time. Some community members may be too far away from any fire station or siren to hear or see the warning.

Communications w/ back-up systems

A critical step in preparedness is to ensure a reliable source of communication is identified, tested, and maintained. If powerlines, phone lines, and cell towers are not functioning, what is your alternative? Do you have a battery powered AM radio? How will you and your family be notified of a local wildfire? How will you get updates on evacuations? Some area residents have satellite communications with battery back-up or generator systems that could serve as a local communication and information hub for a neighborhood. These hubs should be made public if the individual is willing to help during an emergency. Emergency back-up power should be in place for the critical communication systems a community relies on during an emergency, ensure emergency tests are performed on a regular basis. If there are clear limitations or known "dead" areas for communications, ensure community members and responders are aware of these areas.

Evacuation Routes

Wildfire evacuees from wildfires have been injured or killed during the evacuation stage of a wildfire event. Evacuation routes can be blocked by traffic, down trees and powerlines, dense smoke, and even flames. People who live in a community know which roads are their primary access and egress routes. Some communities and neighborhoods have only one way in and out, or the road systems are not sufficient to handle everyone evacuating at once. Have the primary escape routes been clearly identified and evaluated for safe ingress/egress? Do we have areas in our communities where a single ingress/egress road is at risk of being blocked by wildfire (9-Mile area)? Would those people be better off if they stayed put or sheltered in a big field nearby?

The Chiloquin area and surrounding communities have many natural and man-made open areas such as meadows, farm fields or scab rock flats which can be utilized as a Safety Zone for people, limiting evacuees to only those individuals that MUST leave their property. Evacuation planning should consider prevailing

wind directions and expected fire spread and intensities, knowing that fire spread could come from almost any direction with variable intensities.

Identifying critical escape routes for every community member is only the first step. Evacuation routes should be evaluated, hazards removed or mitigated, and routes inspected and maintained over time. Identification and documentation of evacuation routes should be available in a COP for all first responders, duties that could be appropriate for a WUI Coordinator position. Community members that understand the purpose of evacuation routes could report any unsafe conditions they identify along these routes. Klamath County Roads and ODOT could be a partner in helping to maintain these routes.

Pros:

Escape routes are normally primary travel routes for the public, so maintaining these road systems is beneficial whether there is a need to evacuate or not.

Roadside treatments help make the roads safer to travel, provide better visibility for wildlife hazards, and help first responders access homes.

Cons:

If escape routes are identified, some community members may decide to evacuate out of the area when their closest safety zone may be right in their back yard.

Identifying and maintaining evacuation routes is a money and time commitment, along with the actual workload and safety concerns of doing the clearing and other treatments.

Volunteerism

The Community Wildfire Survey report identified community involvement in planning and decision making was lacking, with only about 1/3 of respondents agreeing that their community is actively involved in planning and decision processes for its future. Only about 30% of survey respondents currently volunteer for one or more community organizations. Volunteers and community involvement in the planning and implementation of wildfire preparedness projects is needed for these efforts to be supported and continued long term. Community involvement can be improved by increasing awareness and understanding of the wildfire risk in our communities. Local community projects like the Old Chiloquin Dump clean-up idea can help increase volunteerism, especially if there is food and fun involved. Workshops, field trips, and community events can all help to increase community awareness and volunteerism.

Public Safety Responders Preparedness

(Chiloquin F&R, USFS, ODF, KCSO, KC CERT, etc.)

Most survey respondents felt their community has people to lead during wildfire *responses*, but only half of the survey respondents agreed that their community is capable of leading recovery action following a wildfire. The survey doesn't identify who they believe the leaders are, only that the community felt that people will lead during response, but less confident in their ability to lead recovery.

Are local Emergency Management Plans current, reviewed and understood by our first responders? Does the Chiloquin F&R have an adequate number of volunteers? Are there things the community can do to help increase the number of volunteer firefighters? Are there equipment or staffing needs that the local fire departments need?

Is there a COP that allows integration of resources to an expanding incident? As discussed in the COP section above, use of the KCSA as the COP for all responders is beneficial. Structural survey data on individual homes, communities and subdivisions also needs to be updated for the communities around Chiloquin and uploaded into the KCSA COP for all responders.

What recovery actions are the community members looking for help on? Were recovery needs not met during past wildfires? Community partners should strive to understand what recovery actions the community members were needing help with and ensure those concerns are addressed. The Klamath County Community Emergency Response Team (KC CERT) website says they *"function to provide life-saving aid to neighbors and alleviate strain placed on professional emergency services in the immediate aftermath of a disaster. Additionally, CERT members provide emergency preparedness information to neighbors and help to increase the resiliency of the communities in which they live"*. This volunteer group could be a good partner for the Chiloquin communities.

<https://www.klamathcounty.org/782/CERT>

Assisting property and homeowners with preparedness steps and potential funding options is a proactive step local emergency managers can take. First responders from the local agencies being involved in hazard reduction projects in and around the communities are good ways to share expertise, educate the public, and build relationships, while also mitigating community fire hazard. A WUI Coordinator or similar position could schedule meetings with individual land and homeowners to provide information and guidance, coordinate community hazard reduction projects for larger groups, and serve as the central information and scheduling hub for the hazard reduction efforts. These treatments should then be updated in the COP for that area.

Are agency/dept. facilities hardened and prepared by example? The public could visit local agency facilities and see what hazard mitigation work looks like after it's completed, with before and after displays. The US Forest Service has thinned

and burned the land around their compounds at Chiloquin Ranger Station; an information board and maybe a self-guided walk could help the public see and learn from the results of treatments. Collier State Park is another local facility that is in a great location to provide public information about wildfire (242 fire) and hazard reduction steps they can take on their own property.

Pros:

Ultimately, communities are protected from fire, evacuation plans are in place for everyone, critical infrastructure is safe, and landscape is treated around communities to minimize extreme fire behavior.

The landscapes surrounding our communities are healthier and will remain so into the future. Ecological processes are working, and Forests are healthy and resilient.

Critical community infrastructure is hardened and able to properly function during and after a wildfire or other disaster event. Back-up plans are in place and functioning as planned.

Cons:

Huge workload and cost.

Treatments and mitigations may not be sufficient for an extreme fire situation.

Community members could potentially lose interest and treatments are not maintained into the future.

Partnership, #1 priority

Concerns, Needs and Data Gaps

The community survey asked respondents to rate the most important functions of emergency management, with Response and Emergency Communication identified as the highest priorities. From the survey responses, it's evident the community has multiple priorities that depend on multiple partners working together. Fires do not see property lines and burn freely across all lands. Community preparedness for wildfire is most effective if all partners work together to meet the common goal. Federal, State, County and local agencies are all part of this partnership, but the partnership also includes members of the public, private landowners, Klamath County Fire Defense Board, The Klamath Tribes, and multiple NGOs like The Nature Conservancy, Klamath Lake Forest Health Partnership, and Chiloquin Visions in Progress. Private companies like power, railroads, gas lines, timberland owners, and contractors are also a critical

part of partnerships. The workload for community and individual preparedness is immense and multiple approaches are necessary at the same time.

This report identifies many potential action items, but each of these depends on individuals and/or groups willing to lead and manage these efforts. Different kinds of expertise are needed for the preparedness activities, including first responders, contractors, loggers, fire practitioners, Foresters, power company, road departments, and many others.

The Klamath Tribes recently hired a new fire program manager, with a future goal of hiring a Wildland Fire Module and Wildland Fire Engine. Their role in partnerships is a work-in-progress but is very promising to address the concerns and preparedness needs of The Klamath Tribes. Most of the lands surrounding Chiloquin and surrounding communities are former Klamath Indian Reservation lands that are of critical importance to the Tribes subsistence and heritage.

The Klamath County Fire Defense Board (KCFDB) is a key partnership for our local communities. Representatives from multiple local fire agencies attend monthly coordination meetings to discuss current interagency fire concerns across the County. The Chiloquin Fire Chief is a standing member of the KCFDB, along with the local USFS Fire Management Officers.

Klamath Lake Forest Health Partnership (KLFHP) is another key partnership, this group is focused on the health and resiliency of the forest and landscapes of Klamath and Lake counties. Local representation on the group includes US Forest Service and Oregon Department of Forestry personnel, members of The Klamath Tribes, The Nature Conservancy, OSU extension service and many other interested community members.

Proposed Actions, Pro/Con Evaluation, Funding and Models for Future

Fund and hire a WUI Coordinator

This report identifies numerous potential action items that address identified concerns from the Chiloquin Community Wildfire Survey Report. The success or effectiveness of many action items are dependent on a full-time dedicated individual or small group leading and coordinating these overall efforts. Within the Preparedness Category, a WUI Coordinator is identified as a Need, which can address multiple concerns and data gaps that were identified during this analysis. Funding is available for this position and several local partners have expressed interest in and/or support for the position.

Example position in Nevada:

<https://www.governmentjobs.com/jobs/4129079-0/wildland-urban-interface-wui-coordinator>

The WUI Coordinator position could be at the County or Community level, this decision should include as many community stakeholders as possible. Having one person serve as a County WUI Coordinator is an option, or the position could work specifically for the Chiloquin area communities under Chiloquin F&R or another local entity. Funding options, position duties, chain of command, span of control, workload and working relationships should all be considered when deciding where this position should be located and which organization they should work for.

Pros:

Someone to “Own” this program, provide Leadership, organization, information hub, partnership coordinator, funding coordinator, grant writer, dollars into community, community and individuals are more prepared for the next wildfire event and safety for everyone is increased.

Increasing capacity for local Fire Districts to help handle the associated workload so they can focus on their critical daily responder duties.

Position can serve as a central information hub for local WUI information and programs.

Position could be the coordinator of grant funding available through multiple partnerships for community and homeowner mitigation treatments.

Can serve as partnership coordinator for the multiple on-going efforts around wildfire mitigation in the communities.

Track progress of community and individual homeowner fuel treatments, assist community members with questions and education around wildfire preparedness.

Cons:

Cost of position and associated program costs.

Long term need for the position may be in question, and duties possibly not needed.

Wrong personality is hired, and wildfire preparedness efforts are hampered or delayed.

Position is hired at the wrong level; workload is too broad and service to individual community members is diminished, or workload is too small and individuals time and efforts are not effective.

Our evaluation of the identified Pros/Cons of a WUI Coordinator found this position would be a key investment that would provide multiple community benefits into the future if the right person or persons are hired. Where the

position resides, duties, and the qualifications for the position are key questions that should be addressed with affected community partners before moving forward with this proposed action.

Education Opportunity, #1 priority

Concerns, Needs and Data Gaps

An education data gap was identified on numerous topics, with survey respondents being very interested in taking field trips, attending workshops, and learning more about wildfire and emergency preparedness. Dozens of publications, videos, and other education materials and info are available; has it been used by individuals? Would field trips and workshops be well attended? Could a homeowner version of S-190 (S-90, Fire Behavior for Homeowners) be developed and offered to community members to help fill this educational need?

A WUI Coordinator or similarly qualified person could also assist in educating community members as needed throughout the year.

Proposed Actions

Workshops and Field Trips

Survey respondents were very interested in taking a field trip or attending a workshop to learn more. In the past, KLFHP held several workshops and found that when food was offered the attendance was good. Survey respondents were interested in multiple topics, with Wildfire Preparedness Practices and Hazard Mitigation being the topics the majority of respondents were interested in learning more about.

Workshops and field trips should be planned and focused on topics the community is concerned about. A field trip could travel to local properties to learn from their treatment success and failures with hazard reduction. Another field trip could be a visit to the local Fire Station, Air Tanker Base or even a dispatch center to help the community better understand how these resources from multiple agencies all work together. The information sharing, education opportunity and community team building opportunity in these settings is powerful.

A Chiloquin WUI website should be established for quick and easy access to relevant topics. YouTube has links to a variety of topics, with homeowners showing what worked and didn't work for them. Local reference material could also be available for view/download/print. A calendar of local events could be displayed so that community members and partners can see upcoming events to attend. Contact information for key partners could be made available, along with an appointment request section where landowners can request appointments at their property with local experts on hazard mitigation treatments.

Public wildfire education

Another data gap that was recognized is the lack of basic fire behavior understanding by the community members. Introduction to Wildland Fire Behavior (S-190) is the required course for all first-year wildland firefighters in the US. A shortened version of this course could easily be developed for the WUI homeowner. An “S-90”, Fire Behavior for the WUI Homeowner course taught by local fire experts could cover all the basics in about 1 to 2 hours, leaving the homeowner with a much better understanding of local fire behavior. This course could be made available on the internet to reach more residents and as a reference point.

Multiple websites are available to continue public wildfire education. A central website is needed, with links to numerous websites like Klamath County Fire Adapted Communities, Kingsley Air Tanker Base visitor site, Klamath Fire Prev Coop, CWPP’s, videos, and other downloadable documents.

Public Service Announcements

A popular way to educate the public about an important topic is to use Public Service Announcements (PSA). Many local radio stations and other media outlets provide a certain amount of public information to help educate the public and raise awareness of issues that affect the community. Central Oregon radio stations air numerous PSA announcements every day on wildfire preparedness, health concerns around smoke, developing a Ready Kit and Go plan, and other important topics around wildfire preparedness. For governmental and non-profit organizations, radio air-time can be free for approved PSA’s.

The WUI coordinator or an interagency group could learn from the efforts of Central Oregon, and possibly use some of the same messaging formats. This can be a cost effective and creative way to communicate the important messages around wildfire preparedness to our community members. Numerous resources are available on-line to assist with these efforts. PSA’s can use national content from services like the Ad Council, or they can be tailored to the specific needs of a local audience, these local announcements are much more effective in catching the attention of local community members.

<https://www.adcouncil.org/our-work>

<https://www.ready.gov/wildfire-safety-social-media-toolkit>

Pro/Con Evaluation, Funding and Futuring

Pros:

Awareness and education are the first steps to addressing a problem.

Public interest in wildfires has increased significantly due to the recent devastating incidents, we should take advantage of the desire to learn after the recent wildfires.

A community coming together to solve a shared problem can be powerful, people working together, relationship building, shared expertise, and leverage of resources are all potential benefits.

Local families working together on projects can help to build relationships and help strengthen families. Community members feel like they are part of the solution, know they helped their neighbors, and can feel pride in their accomplishments.

Cons:

There is currently a lot of information available to homeowners around defensible space and hazard mitigations. Building another website for data may be looked at as just another layer of information unless we can provide information that is locally relevant and useful.

The workload is significant, and risk of injury is always present when doing outdoor work, especially when working with power tools or fire.

Time commitment is significant, and many property owners have jobs and families to manage also.

The cost of treatments can be significant and are often temporary and must be maintained.

An analysis of the Pros and Cons of doing field trips/workshops, community projects, and other public education steps would show that this commitment is significant and involves almost everyone in the community. The cost and risk of doing these projects is also significant. The recent Golden and 242 fires helped the community to understand how quickly homes and a lifetime of work can be lost in a wildfire. If we want to continue to live and work in these high fire danger areas, we must take the difficult steps needed to ensure that as a community we can learn to “live with fire”.

Health Impacts, #2 priority

Health impacts, smoke and trauma/stress, were ranked as the highest significance to respondents. Conversely, losses of personal property, livestock or timber/landscaping were ranked of low significance. A majority of the respondents were impacted by wildfires, but a small percentage suffered personal losses.

Smoke

70% experienced moderate to significant health impacts (self/or family members) from smoke.

Trauma – physical and/or emotional stress

64% experienced moderate to significant trauma impacts (self/or family members). Same as smoke topic, a smoke-free evac/trauma care site needs to be in the preparedness package.

Concerns, Needs and Data Gaps

Smoke episodes are a health hazard and recurring event in Chiloquin and surrounding areas.

Smoke-free evacuation centers and/or avoidance locations are needed.

Critical Stress Debriefing available on-site or on-call as needed.

Individual and community smoke mitigation actions are needed.

Although addressed later in Recovery, consider having information available regarding recovery assistance at community smoke refuge area.

What grants and cost-share opportunities exist?

The survey data indicates most individuals are impacted by smoke.

Proposed Actions, Pro/Con Evaluation, Funding and Futuring

Individuals / Families:

Air filtration devices for individual living areas can help create less hazardous areas in a home during high smoke episodes.

Community:

Public, tribal or other facilities with filtration HVAC systems could offer individuals relief not available at their residence.

Pros:

Proactive, positive effect on public health impacts.

Community reduced or smoke-free gathering locations offer opportunity for community relationship development.

Cons:

Cost of acquiring devices or modifying existing facilities.

Funding:

Oregon Department of Human Services has offered grants to local governments, Tribal Nations and public education providers for cleaner air shelters,

<https://www.oregon.gov/odhs/emergency-management/Pages/emergency-shelter.aspx> .

Home devices have been available at: <https://covidblog.oregon.gov/free-air-purifiers-for-high-risk-wildfire-zones/>, part of SB 762. (Pursuit of grants could be part of the duties of the proposed WUI Coordinator.)

Models for Future Work:

Locating, evaluating and utilizing information available about minimizing individual and community smoke impacts represents a significant workload. This area of work could be part of the duties of a WUI Coordinator at a local and/or county level. Grant opportunities exist and would be pursued by the WUI Coordinator.

This website contains many links to a variety of Community Strategies for Being Smoke Ready

<https://wildfirerisk.org/reduce-risk/smoke-ready/#:~:text=Communities%20can%20help%20individuals%20avoid,and%20public%20clean%2Dair%20shelters.>

Additional websites with similar information:

<https://deohs.washington.edu/hsm-blog/6-ways-communities-can-prepare-wildfire-season>

<https://www.usfa.fema.gov/blog/minimizing-the-effects-of-wildfire-smoke/>

Life Necessities: Food/Water/Shelter, #2 priority

The resource most highly valued by survey respondents to the question of resources needed during and immediately after a fire (incident) was current, accurate information. This topic is addressed in the Preparedness section. The least significant need to survey respondents was housing for livestock (possibly skewed by smaller portion of the survey respondents with livestock). The most significant needs after information were shelter, food and water. Loss of personal property, livestock/animals and timber/landscaping were addressed elsewhere and not considered Life Necessities.

People

Smoke free (or significantly reduced smoke levels) gathering place has been discussed in the previous topic. This topic section is about providing for displaced individuals that have been evacuated from their residence.

Longer term housing would be needed for those that lost their housing and cannot find a personal solution (family, friends, etc.)

Individuals/Families with smoke-reduced, shelter-in-place homes/structures are identified and support plans developed. Example: a dispersed property able to shelter people (barn, shop, etc.) could be logistically supported with food, water and sanitation.

Livestock and pets

Shelter in place: pastures pre-identified with access plan (shared gate locks, etc.) Open gates if paddock is not survivable for livestock.

Transport: individual or volunteers with trailers, this requires a pre- plan and logistical structure to be effective, don't be part of the problem

Transport destination(s): predetermined sites, rodeo grounds, pastures with owner permission, Fort Klamath, others?

Red Cross, Churches (in partnership?), etc.

Volunteer groups identified, contact info current, capacity understood vs demand potential

Concerns, Needs and Data Gaps

Facilities are identified and supplies acquired prior to the fire/incident.

Need a coordinated pre-plan for the Chiloquin Area based on likely scenarios using past events.

Locations, capacities and supply level needs are data gaps.

Where does the community go if the fire is in town and affecting primary shelters?

Proposed Actions, Pro/Con Evaluation, Funding and Futuring

Establish local rescue shelter for community members to gather at during disaster events. Is there an appropriate facility or several?

Provide clean air, basic supplies (food, water, 1st responder medical attention) and incident information.

Develop a local cache for supplies (food, water, cots, medical, etc.).
Is the Klamoya Casino, lodging facilities and parking lot available?

Pros:

Communities would have a local source(s) for basic needs during a disaster of any type, a central gathering point for information and to check on others.

Cons:

Cost: initial and maintenance.

Management of supplies for shelf-life, etc. is needed. Coordination with adjacent supplies, e.g., Klamath County Emergency Management, fire districts, USFS, Klamath Tribes, etc. is time consuming.

Models for future work:

Review of actions taken by communities experiencing wildfire impacts and losses.

Another task for the WUI Coordinator position to manage.

Critical Infrastructure Protection, #2 priority

88% of the survey respondents were worried about the vulnerability of infrastructure, such as utilities, if a wildfire occurs.

Are there existing plans at Chiloquin Fire & Rescue? Are partner responders informed and able to access information on a COP?

Communication sites may need to be hardened (annual maintenance project?). Are the critical assets identified where loss of use is unacceptable? This inventory is probably done. Is the information assessable to outside responders? Are non-local companies responsible for maintenance of wildfire mitigation work?

Power, water and sewage systems. Generator power in place if grid is subject to a Public Safety Power Shutoff (PSPS).

Sirens (w/ beacon/strobe) and Visual displays (solar, off-grid), need to be stand-alone protected from fire, these items are addressed in Preparedness. This a reminder to consider them for infrastructure protection, hardening or mitigating fire impingement. Another seasonal fuel maintenance project? WUI Coordinator?

Concerns, Needs and Data Gaps

Chiloquin CWPP revision or addendum to specifically identify infrastructure and protection/mitigation needs. Example: wildland fuels mitigation or maintenance of treatments.

Loader to push trees, etc., off of roads. Who to call: ODOT, KC, Wampler, etc. Are phone lists and availability up to date? Another task for WUI Coordinator?

Proposed Actions, Pro/Con Evaluation, Funding and Futuring

Actions are listed in the Needs section, others?

This work falls into annual pre-attack planning and work for responders. If an extensive project is identified that exceeds annual operating budgets that would be a good grant project. (WUI Coordinator)

Recovery, #3 priority

Post-incident recovery was important to 93% of the respondents in the survey. Follow-up actions are often viewed as slow, cumbersome and ineffective by disaster victims. Responders and community partners should coordinate information for the public to maintain a common message from all sources.

After Action Review - AAR

Community

A facilitated after-action review and discussion session can reduce misinformation, rumors and animosity. Facilitation is important for these sessions to keep the participants focused and have a productive session.

Responders

AARs for responders need to be held while the events of the incident are fresh and those involved are still present. Facilitation is important. Support resources such as Oregon State Fire Marshal task forces may be demobilized before an AAR can be assembled, but those assigned to the incident can participate remotely or by written response. Individual department AARs are important to internal improvements, but do not develop or improve cooperator relationships.

Insurance Companies

Companies offering homeowner fire coverage policies have become more engaged with WUI incidents. Using a structure and property survey system, e.g. KCSA, to identify and mitigate hazards can be valuable in negotiating insurance company benefits. This process is best done pre-incident to establish coverage levels and eliminate confusion post-incident.

Material is available at insurance company websites. Some companies, such as State Farm, are offering home defense resources to customers. <https://www.statefarm.com/simple-insights/residence/wildfire-defense-systems> Conversely, insurance companies are becoming more conservative and reluctant to insure WUI properties.

FEMA

Recent decades have experienced incidents of scale and impact beyond public memory. FEMA through the US Fire Administration has become more involved in response.

A WUI specific website, <https://www.usfa.fema.gov/wui/>, offers a variety of information sources and materials for the public and responders.

Contractors

Acquiring contractor services following an incident can be difficult and problematic. Demand for services brings non-local and often unproven providers to a community. An activity for volunteers, responders and community partnership could be developing a contact list of contractors that would offer services following an incident. References could be checked and documented. Group discounts could be discussed or negotiated. Services would include:

Home smoke damage mitigation

Fire overhaul, debris removal, site restoration

Reconstruction (often through personal insurance policies)

Mental Health Services

Proactive consolidation of contact information and verification of contact information currency could be another role of a WUI Coordinator. Primary organizations would include:

Klamath County Public Health

<https://www.klamathcounty.org/378/Public-Health>

Klamath Tribes Health and Family Services

<https://www.klamathtribalhealth.org/>

Concerns, Needs and Data Gaps

Proactive versus reactive recovery information, contacts and plans are recommended.

Existing plans and contact lists need to be updated annually or as contacts change.

Proposed Actions, Pro/Con Evaluation, Funding and Futuring

A partnership-developing project could be inviting community members and responders to work on the specifics of recovery needs following an incident. This would be a low to no cost option to refresh information and make it available via the methods identified in the Preparedness section.

The Oregon.gov grants available following the 2020 242 Fire had 4 submission rounds. The last deadline was January 6, 2023. The last deadline for the 2021 Bootleg Fire second round deadline was February 17, 2023. Additional submission deadlines are not announced as of this writing.

The KLFHP has been active for years in acquiring grants and implementing WUI projects in the Chiloquin area. Membership, by attendance in meetings, would keep the community partners informed on opportunities. This would be another ideal activity for a WUI Coordinator.

Financial assistance grants are a significant benefit and opportunity. The downside is the time commitment for someone to pursue the grants and stay up to date on deadlines, etc. A WUI Coordinator would be beneficial in this workload.

Pursuit of grants, coordinating with other entities (KLFHP, etc.) with funding that can assist Chiloquin residents and tracking of grant expenditures relative to work accomplished could also assigned to the WUI Coordinator.

Summary

The contractors have reviewed the survey responses and evaluated the statistics of the responses. Their findings are presented in this document. Although topics were given priority ranking, the topics were not independent. Individual, community and responder preparation for wildfires is a combined effort. Many of the data gaps were in topic areas of interest or utility to all community partners. A significant action would be the creation of a WUI Coordinator position to assemble, distribute and update the data/information needed by public and responders to better prepare for, respond to and recover from future wildfires or other incidents.