



Eugene City Council

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www.eugene-or.gov

EUGENE CITY COUNCIL AGENDA

May 24, 2021

5:30 p.m. CITY COUNCIL WORK SESSION

Due to Governor Brown's Stay Home, Save Lives Executive Order to combat the spread of Covid-19, this meeting will be held remotely using virtual meeting technology.

Information about online or other options for access and participation will be available at <https://www.eugene-or.gov/3360/Webcasts-and-Meeting-Materials>

**Meeting of May 24, 2021;
Her Honor Mayor Lucy Vinis Presiding**

Councilors

Jennifer Yeh, President

Mike Clark

Randy Groves

Emily Semple

Claire Syrett, Vice President

Greg Evans

Matt Keating

Alan Zelenka

5:30 p.m. CITY COUNCIL WORK SESSION

- 1. WORK SESSION: Middle Housing Code Amendments (Implementation of HB 2001)**
- 2. WORK SESSION: Wildfire Preparedness**

For the hearing impaired, an interpreter can be provided with 48 hours' notice prior to the meeting. Spanish-language interpretation will also be provided with 48 hours' notice. To arrange for these services, contact the receptionist at 541-682-5010. City Council meetings are telecast live on Metro Television, Comcast channel 21, and rebroadcast later in the week.

El consejo de la Ciudad de Eugene agradece su interés en estos asuntos de la agenda. El lugar de la reunión tiene acceso para sillas de ruedas. Se puede proveer a un intérprete para las personas con discapacidad auditiva si avisa con 48 horas de anticipación. También se puede proveer interpretación para español si avisa con 48 horas de anticipación. Para reservar estos servicios llame al 541-682-5010. Las reuniones del consejo de la ciudad se transmiten en vivo por Metro Television, Canal 21 de Comcast y son retransmitidas durante la semana.

For more information, contact the Council Coordinator at 541-682-5010
or visit us online at www.eugene-or.gov.

EUGENE CITY COUNCIL AGENDA ITEM SUMMARY



Work Session: Middle Housing Code Amendments (Implementation of HB 2001)

Meeting Date: May 24, 2021
Department: Planning and Development
www.eugene-or.gov

Agenda Item Number: 1
Staff Contact: Terri Harding
Contact Telephone Number: 541-682-5635

ISSUE STATEMENT

The City Council will hear a project update on the Middle Housing Code Amendments, including an overview of completed public involvement, a summary of the recommended approach to implementing HB 2001 for middle housing, and next steps in the adoption process. No action is needed at this work session.

BACKGROUND

Like many other communities in Oregon and across the nation, the City of Eugene is experiencing a housing crisis and is identified as a severely rent-burdened community. Housing prices continue to rise at a rapid rate, and low wages plus pandemic-induced unemployment are creating a dynamic that leaves people struggling to find housing that meets their basic needs. In recognition of this statewide issue, the Oregon legislature passed House Bill (HB) 2001 in 2019, with the goal of increasing housing choice and supply. Implementation of HB 2001 is an important component in the City's ongoing work related to housing and homelessness.

HB 2001 requires Eugene and other cities with a population of more than 25,000 to allow duplexes on all residentially zoned lots or parcels where detached single-family dwellings are allowed and to allow triplexes, fourplexes, cottage clusters and townhouses in areas zoned for residential use. HB 2001 allows cities to regulate siting and design of the various middle housing types as long as the regulations related to siting and design for middle housing do not discourage the development of these housing types through unreasonable costs or delay. The rules adopted by the state in December 2020 also allow the City to go beyond the state's minimum requirements to encourage middle housing.

A summary of the requirements of HB 2001 is provided on the [Middle Housing Code Amendments website](https://www.eugene-or.gov/4244/Middle-Housing) (<https://www.eugene-or.gov/4244/Middle-Housing>). The City must adopt the required land use code and plan amendments to implement HB 2001 by June 30, 2022 or the City will be required to implement the State's adopted model code for middle housing.

The City Council discussed the project approach, public involvement plan, and state requirements at its [July 22, 2020](#) and [January 25, 2021](#) meetings.

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Public Outreach

The project's [Public Involvement Plan](https://www.eugene-or.gov/DocumentCenter/View/56623/Middle-Housing-Public-Involvement-Plan-?bidId=) (PI Plan) (<https://www.eugene-or.gov/DocumentCenter/View/56623/Middle-Housing-Public-Involvement-Plan-?bidId=>) outlines the outreach process from concept development through adoption of land use code and policy amendments. The PI Plan includes opportunities for the community to engage in the planning process and information on how individuals and organizations can effectively participate and is consistent with the City's Public Participation Guidelines and Statewide Planning Goal 1. The Planning Commission approved the PI Plan in August 2020 and has been regularly meeting to advise staff on the project approach.

October 2020-January 2021 Outreach

The public involvement approach for the middle housing project was focused on equity and inclusion. Given the COVID-19 pandemic, staff emphasized online outreach methods that engage a broad spectrum of the community. The first phase of outreach in the fall of 2020 focused on opportunities to learn about the state law and inform the creation of values and principles.

Traditional engagement efforts face challenges in reaching certain parts of the community, including lower income people, renters, and Black, Indigenous, and people of color. In support of inclusive public engagement, City staff collaborated with the Oregon non-profit Healthy Democracy to set up a new kind of deliberative process for Eugene. The creation of an intensive review panel designed to reflect the broad needs and interests of the community allowed us to really reach out and hear from all corners of Eugene.

In addition, staff convened an Equity RoundTable to specifically bring an equity lens to the project from representatives of local groups doing equity-based work. Staff also worked with a Boards and Commissions RoundTable, and a Local Partners RoundTable, as well as providing information and feedback opportunities to the general public.

February 2021 – May 2021 Outreach

The purpose of the February 2021 outreach was to begin gathering community-wide input on how to approach implementation of the house bill. The main opportunity for input centered on levels of implementation: we asked community members whether the City should Allow, Encourage, and/or Incentivize middle housing through the land use code requirements. Throughout the project, the goal of the public engagement has been to be meaningful, accountable, inclusive, transparent, realistic, and outcome oriented.

The outreach focused on gathering community-wide input on code concepts to guide the code-writing portion of the project. As part of the February outreach efforts, we received 741 surveys (730 in English and 11 in Spanish), held 15 meetings and events, created two new profiles on social media, and heard from renters and homeowners, community members in every ward and of every age category, and folks who had never been involved with City processes before.

A comprehensive report on the February outreach is available on our website and attached as Attachment A. In addition, two final reports from Healthy Democracy are included as Attachment B. The Healthy Democracy process included a thorough information gathering phase, small and large group discussion, deliberation and voting on recommendations related to the middle

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housing code amendments. It also included reflections on the process and general public engagement recommendations for the City's consideration into the future.

The April and May outreach meetings included the final three Healthy Democracy Panel meetings, a fifth Equity RoundTable meeting, and a combined Boards and Commissions and Local Partners RoundTable meeting discussing how well the draft code meets the values and principles, as well as how well it encourages affordability. In addition, two Developer Focus Group meetings were held with market rate and affordable housing developers to gather feedback on the code recommendations and affordability strategies. Results from these conversations are being incorporated into the code recommendations and a report from those meetings is attached as Attachment C.

Overall, people we heard from through our community engagement efforts were overwhelmingly supportive of going beyond the minimum standards required by the state and implementing a combination of the Encourage and Incentivize middle housing options.

Code Writing Approach

At the [December 9, 2020](https://lcd.granicus.com/MediaPlayer.php?view_id=1&clip_id=76) (https://lcd.granicus.com/MediaPlayer.php?view_id=1&clip_id=76) Land Conservation and Development Commission (LCDC) meeting, LCDC voted to adopt administrative rules, including a model code and minimum standards for compliance with House Bill 2001. These rules took effect on December 31, 2020. The administrative rules ([Oregon Administrative Rules Chapter 660, Division 46](#)) establish, at minimum, code standards cities need to implement to comply with the requirements of the bill.

The rules generally require that middle housing is allowed in as many places as possible, with areas excluded for a limited set of reasons, such as infrastructure constraints or natural hazard areas. While Eugene is required to meet the minimum standards across the community and allow housing types broadly in residentially zoned areas that allow for single family homes, we are also required to "consider ways to increase the affordability of middle housing by considering ordinances and policies." The City can also go beyond the requirements of the rules and encourage or incentivize additional middle housing in the community.

Draft code recommendations for all middle housing types are included in the memo in Attachment D. As described therein, the project team recommends landing somewhere in between the Encourage and Incentivize approaches, recognizing there may be some variation among specific standards. This general approach best reflects the public input gathered, including input relating to the triple bottom line of sustainability - social equity, environmental health, and economic prosperity.

The project team has met with the Planning Commission seven times, once or twice monthly, since December 2020. The Commission has provided review and feedback on interim code products, heard from Equity and Healthy Democracy meeting participants and project consultants, and advised the team on how to approach the code writing phase. At its May 17 meeting, the Commission discussed refined project team recommendations, and took straw polls on different parts of the code approach. At the Council work session, the project team will walk through the

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code recommendations and share the most recent feedback received from the Planning Commission.

Affordability Strategies

The land use economics firm ECONorthwest analyzed some of the draft code recommendations to assess their impact on housing affordability (Attachment E). The analysis considers the impacts of varying development regulations, including lot size and parking requirements, on small rental units. The purpose is to determine how the City's code choices can increase the affordability of middle housing development. The conclusions state that "the Encourage and Incentivize code provisions related to reducing minimum lot size and minimum parking requirements for middle housing positively impact the feasibility and affordability of smaller rental units. These units would be affordable to households between 71% and 94% of AMI, generally earning less than \$60,000 per year."

Council will have the opportunity to discuss the affordability memo and provide feedback to staff. In addition, affordability strategies that have been surfaced through the middle housing outreach process but go beyond the scope of the code amendments may find a home through an ongoing project such as the Housing Implementation Pipeline. Staff is coordinating across projects to bring affordability strategies forward for Council consideration in the future.

Next Steps

Final grant funded code and policy drafts are due from the City's consultant Angelo Planning Group in June 2021. The project team is bringing code recommendations to the Planning Commission for direction in May and June. Following their direction, staff will prepare an adoption package including land use code and plan amendments, and schedule public hearings before the Planning Commission and City Council. The deadline for adoption of a Eugene-specific code is June 30, 2022.

The [Middle Housing project webpage](#) features Fact Sheets, Frequently Asked Questions, and links to more information. We also maintain an [Engage Eugene](#) page, monthly EUG Planning newsletter, and social media presence on the [EUG Planning Facebook page](#) and [Instagram](#).

ATTACHMENTS

- A. February Public Outreach Summary
- B. Healthy Democracy Reports
- C. Developer Focus Group Report
- D. Summary of Draft Code Amendments (Angelo Planning Group)
- E. Affordability Strategies Memo (ECONorthwest)

FOR MORE INFORMATION

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Staff E-Mail: THarding@eugene-or.gov

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February 2021 Middle Housing Public Engagement Summary

Introduction

In 2019, the Oregon Legislature passed House Bill 2001, a law that requires large cities in Oregon, including Eugene, to allow “Middle Housing” in residential areas. Eugene’s fall and winter 2020 outreach focused on spreading awareness of the house bill and its requirements while beginning preliminary outreach with groups such as the Healthy Democracy Panel, Equity RoundTable, Local Partners RoundTable, and Boards and Commissions RoundTable. Ultimately, it culminated in the development of project [Values and Principles](#). The outreach in February 2021 launched community-wide input on code concepts to guide the technical, code-writing portion of the project.

Overall, we received 741 survey (730 in English and 11 in Spanish), held 15 meetings and events, created two new profiles on social media, and heard from renters and homeowners, community members in every ward and of every age, and folks who had never been involved with City processes before.



The major components about the house bill that shaped the public engagement strategy were the history of single-family zoning, the COVID-19 pandemic, the state-mandated timeline for implementation, and the state’s adopted minimum standards and model code that guide implementation of the house bill.

History of Single-Family Zoning

Residential zoning has a complex history that resulted in exclusion of low-income, black, indigenous, and people of color from certain neighborhoods throughout our nation. In Oregon this history was especially harmful with direct exclusion of non-white people from the state from 1844 until 1926*. Although those exclusions are illegal today, their negative impacts are still affecting our community through the legacy of exclusionary zoning. Housing policy and code changes are an opportunity to mitigate those.

As summarized by Oregon Land Conservation and Development (LCDC) Commissioner Anyeley Hallova during a [rulemaking meeting](#) on the House Bill, “before racial segregation through zoning, some neighborhoods had more diverse housing types with mixed incomes that are part of our beloved neighborhood fabric. As intentional as racially segregating housing policy was, we need to be as equally intentional about providing equitable housing outcomes for all.”

Across the country, we have a difficult history of exclusion to grapple with, and our intent with this project is to acknowledge that history, and move forward with a focus on inclusion for all, including renters, low income people, people with disabilities, young people, seniors, and Black, Indigenous, and People of Color.

The [project webpage](#), [Frequently Asked Questions](#), [History of Residential Zoning Fact Sheet](#), and additional material communicate the racist and exclusive history of single-family zoning.

COVID-19 Pandemic

Public Engagement for the Middle Housing Project kicked-off in the midst of the COVID-19 Pandemic and the February outreach happened nearly a year into the pandemic. Health guidelines still prohibit large, in-person gatherings. This meant that our engagement continued to include mostly virtual opportunities to engage, including virtual Planning Commission and City Council Meetings. Efforts such as online forums, use of social media, mobile-friendly webpage design, and new creative tactics were used. Overall, the Middle Housing Project saw high participation throughout the month of February and established a presence on several new platforms.

State-Mandated Timeline for Implementation

The timeline is fast: [House Bill 2001](#) was adopted in 2019, Oregon Administrative Rules were adopted in December 2020, and Eugene’s land use code amendments need to be finalized by June 2022. It also has a unique aspect in that if we don’t adopt code amendments in time, the state adopted model code will automatically apply. This project has moved quickly to meet this mandated deadline while gathering necessary input from community members with a focus on equity and inclusion.

State Adopted Minimum Standards and Model Code

We usually see projects that are initiated by the City Council at the local level—this one is coming from the state and is directed by [Oregon Administrative Rules](#) that establish parameters for how we comply with the house bill. This has led to an unusual project implementation and the need for clear, transparent communication with the community to explain the bill, its requirements, and the City’s approach.

February Outreach Goals

The purpose of the February outreach was to expand upon Phase 1 of the outreach and begin gathering community-wide input while continuing to share information about the requirements of the house bill. The main opportunity for input was regarding levels of implementation: Allow, Encourage, and Incentivize middle housing through code requirements. The goals for public engagement were to be meaningful, accountable, inclusive, transparent, realistic, and outcome-oriented.

Virtual Project Homebase



Webpage

The [project webpage](#) acts as the main host for project information. It contains information about the project background, [fact sheets](#), [FAQ](#), information about zoning and housing types, links to upcoming meetings, and more.

English Engage Eugene

The [project Engage Eugene](#) page acts as the main host for project engagement. It does not contain as much information as the project webpage and is meant to complement the project webpage. It contains high-level project information, a “quick poll,” an interactive “[guest book](#),” a “[newsfeed](#)” for project updates, a [Q&A](#) monitored by staff, and, of course, the Middle Housing Survey.

Overall, the English Engage Eugene received 4,000 views and engaged 773 community members.

Spanish Engage Eugene

Along with the English Middle Housing Engage Eugene page, a [Spanish Middle Housing Engage Eugene](#) page was created. It contains high-level project information, links to [translated fact sheets](#), a “quick poll,” and, of course, the Spanish Middle Housing Survey.

Overall, the Spanish Engage Eugene received 103 viewers and engaged 10 community members.

Spreading the Word



Social Media

One of the newer tools we employed was usage of Eugene Planning-specific social media channels. In 2020, existing Planning social media accounts such as Facebook were rebranded to “EUG Planning.” New accounts were also created using the same username including Instagram and Reddit. Each of the different platforms reaches a different audience and staff aimed to reach new community members, including younger community members and renters.

Instagram

The Middle Housing team used the [EUGPlanning Instagram](#) to post about upcoming meetings, share information about Healthy Democracy, event promotion, survey promotion, and more. The Instagram page was started in late 2020 and now reaches 585 followers. During the month of February there were eight posts related to the project that received over 370 engagements. The posts included survey promotion and clips from Facebook Live events.

Facebook

[The EUG Planning Facebook](#) page has 668 followers and was used to promote the survey, share information about Planning Commission meetings, and to host a series of five Facebook Live videos. A post that promoted the Middle Housing Survey received 31 likes, 12 comments, and 39 shares. There were two EUG Planning Newsletter posts with relevant Middle Housing information, one post in Spanish, and one post sharing a City Club event that hosted City Staff. During the month of February the Facebook page reached 12,820 Facebook users and post engagements increased by over 5,000% compared to past months.

We also held a series of five Facebook Live Community Conversations with local experts, including City Staff to discuss the connection between land use and larger topics. The idea was to attract folks who care about things like transit routes, equity, sustainability, and affordability, but don't yet know that, by caring about those things, they also care about land use. Each of the events were 30 minutes long, featured time for live, Facebook audience questions, and ended by promoting the survey. The events were as follows:

Where the Code Meets the Road: Land Use and Transportation Planning

The first of these events focused on the connections between [land use and transportation](#). We were joined by a panel of three local experts, Reed Dunbar, AICP and Senior Transportation Planner for Eugene, Andrew Martin, Development Planner at Lane Transit District, and Shane Rhodes, Transportation Options Coordinator for Eugene. This event received 434 views.

Land Use & Equity: What are the Connections?

The second of our Facebook Live events focused on the connections between [land use and equity](#). We were joined by a panel of two local experts, University of Oregon Law Professor Dr. Sarah Adams-Schoen and City of Eugene Human Rights and Equity Analyst Fabio Andrade. This event was our most watched and received 2,800 views.

Land Use & Climate

The third of our Facebook Live events focused on the connections between [land use and sustainability](#). We were joined by a panel of three local experts: local private-sector planner and City of Eugene Sustainability Commissioner Kelsey Zlevor, Environmental and Climate Justice Coordinator at the Eugene-Springfield NAACP Aimee Okotie-Oyekan, and City of Eugene Sustainability Manager Chelsea Clinton. This event received 325 views.

What do you Meme? Communicating Land Use to a New Generation

The fourth of our Facebook Live events focused on the connections between [land use and Gen-Z](#). We were joined by a panel of three University of Oregon students who participated in the Real World Eugene undergraduate class that was paired with the Middle Housing Project. The students focused on young adult engagement in developing the project's Values and Principles and developed

recommendations for best practices to communicate planning projects to a younger generation. This event received 68 views.

Land Use & Housing Economics: what drives the cost of house?

The last of our Facebook Live events focused on the connections between [land use and housing costs](#). We were joined by a panel of two local experts: Kaarin Knudson, whose involvement with land use includes teaching at the University of Oregon, principal & partner for LARCO / KNUDSON, and acting as a founding director/member of the steering committee for Better Housing Together. Our second guest speaker was Dylan Lamar, who currently serves as an Architect and Energy Consultant for Cultivate. He is also a member of numerous housing-related groups such as the Passive Housing Designers and Consultants. This event received 72 views.

Reddit

We went outside our comfort zone and visited Reddit: a forum-based website. Staff did [an AMA](#): called “ask me anything” similar a Q&A, to answer questions about Eugene Planning and promote the Middle Housing Survey. It was hosted on the Eugene subreddit, which is like a discussion board, and has over 30,000 local members. Community members posed questions about the project, development in Eugene, and planning for growth. It received over 100 comments, correlated with 90 new surveys completed, and established a relationship that can be continued for future outreach and projects.

Email Communications

EUG Planning Newsletter

[The EUG Planning Newsletter](#) is sent monthly and reaches 19,000 subscribers. Two newsletter articles promoted the Middle Housing Project and included project updates, survey promotion, upcoming meetings, Facebook Live event promotion, and more.

Email Outreach

Additional outreach included two emails to the Neighborhood Bulletin, two emails to the [Middle Housing Interested Parties List](#), two to RoundTable participants, Neighborhood Associations, and other targeted outreach done by project consultants Cogito.

Student Outreach

City of Eugene Middle Housing Planning Interns conducted nine class visits to promote the survey. They also created a [GIS storymap](#) for a Gen Z audience to use technical data paired with strategic communication to reach a part of the community we don’t usually hear from. The storymap has received 552 views.

Outreach Events



Healthy Democracy

The City of Eugene is partnering with Portland-based nonpartisan, nonprofit, [Healthy Democracy](#), to assemble a [Planning Review Panel](#) that is composed of 29 randomly selected Eugene community members. In February, the Panel focused on providing input on the levels of implementation. Overall, they have had 12 meetings and will meet again three additional times in April. The full Healthy Democracy report can be reviewed on the [Healthy Democracy webpage](#).

Healthy Democracy Recommendation

Parking: Encourage

Lot Coverage: Incentivize

Design Standards: Incentivize

Overall: Encourage/Incentivize

Equity RoundTable

The Equity RoundTable is comprised of representatives from organizations representing underserved communities and serves to provide an equity lens to the project. The RoundTable is staffed by Alai Community Consulting. Overall, they have had six meetings and will meet again one additional time in April. Attachment 2 includes the full meeting summaries.

Equity RoundTable Recommendation

Parking: Encourage

Lot Coverage: Incentivize

Design Standards: Incentivize

Overall: Encourage/Incentivize

Local Partners and Board and Commissions RoundTables

In Fall of 2020, we met with the Boards and Commissions and Local Partners RoundTables to receive input that informed the creation of the Values and Principles for the project. At the February meetings the RoundTables served as a Triple Bottom Line Sounding Board to discuss the social, environmental, and economic tradeoffs around choices for middle housing code standards.

The RoundTable participants were asked the question: Which implementation option (allow, encourage, incentivize) best promotes social equity, environmental health, and economic prosperity? And do your answers differ across the topics of parking, lot coverage, and design standards? Attachments 3 and 4 include the full meeting summaries.

Parking: Encourage

Lot Coverage: Incentivize

Design Standards: Incentivize

Overall: Encourage/Incentivize

Middle Housing Survey



The Middle Housing Survey was open on the English version of the Engage Eugene page from February 5 to March 8 2021 and received 730 responses. A Spanish Engage Eugene page and survey were published from February 19 to March 19, 2021 and received 11 responses. In total, we received 741 survey responses. Although the survey is not statistically valid, it provides a snapshot of community perspectives.

The questions in the survey were based on levels of implementing House Bill 2001. The state adopted minimum standards in the Oregon Administrative Rules (OAR) that serve as a baseline for complying with the bill. The questions asked community members whether we should do the minimum required to comply with the OARs, referred to as the “Allow” option, or go beyond the minimum required, referred to as the “Encourage” and “Incentivize” options. There were three main areas of focus: parking requirements, lot size, and design standards. Community members were also asked to prioritize Values and Principles and share additional input.

Who We Heard From

The Middle Housing Survey reached community members in all wards, homeowners, people who rent their homes, and people of all ages. Representation by City Ward is listed below:

Ward 1	24%
Ward 2	12%
Ward 3	14%
Ward 4	6%
Ward 5	6%
Ward 6	8%
Ward 7	20%
Ward 8	7%
Outside of City Limits	7%

Middle Housing Recommendation

Parking: Encourage/Incentivize

Lot Coverage: Encourage/Incentivize

Design Standards: Encourage/Incentivize

Overall: Incentivize

Full Middle Housing Survey information can be found in Attachment 1.

Meeting In a Box

Staff also wanted to create materials that folks could use in groups, which resulted in the creation of Meeting in a Box: printable materials that enable community groups such as neighborhood associations to host their own meetings, conduct middle housing walking tours, and provide feedback to staff. They include a [Discussion Guide](#), Several [Neighborhood Walking Tours](#), and [Feedback Forms](#).

Conclusion

Overall, community engagement was overwhelmingly supportive of going beyond the minimum standards required by the state and implement a hybrid of the Encourage and Incentivize options.

Now that we've heard from the community, the project team is in the process of developing draft code language. One of the recurring themes we've heard throughout our outreach is to explore ways to encourage middle housing affordability. Our next round of engagement in April with the Healthy Democracy Panel, Equity RoundTable, Boards and Commissions RoundTable, and Local Partners RoundTable will focus on affordability strategies within the Land Use Code amendments.

Attachments

1. Middle Housing Survey Summary
2. Equity RoundTable Summary
3. Local Partners RoundTable Summary
4. Boards and Commissions RoundTable Summary



MIDDLE HOUSING CODE AMENDMENTS

Expanding housing options for Eugene

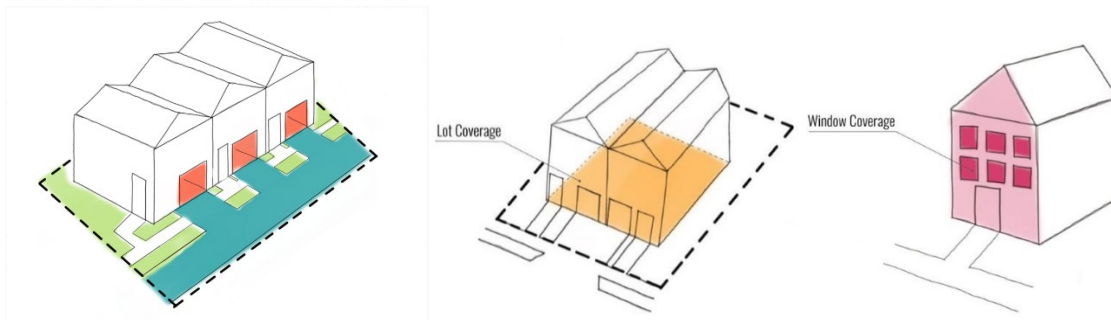
Middle Housing Survey Summary

February 2021

Structure of Survey

The Middle Housing Survey was open on Engage Eugene from February 5th to March 8th 2021 and received **730 responses**. A Spanish Engage Eugene page and survey were published from February 19th to March 19th and received **11 responses**. In total, we received **741 survey responses**. Although the survey is not statistically valid, it provides a snapshot of community perspectives.

The questions in the survey were based on levels of implementing House Bill 2001. The state adopted minimum standards in the Oregon Administrative Rules (OAR) that serve as a baseline for complying with the bill. The questions asked community members whether we should do the minimum required to comply with the OARs, referred to as the “Allow” option, or go beyond the minimum required, referred to as the “Encourage” and “Incentivize” options. There were 3 main areas of focus: parking requirements, lot size, and design standards. Community members were also asked to prioritize Guiding Values and Principles and share additional input.



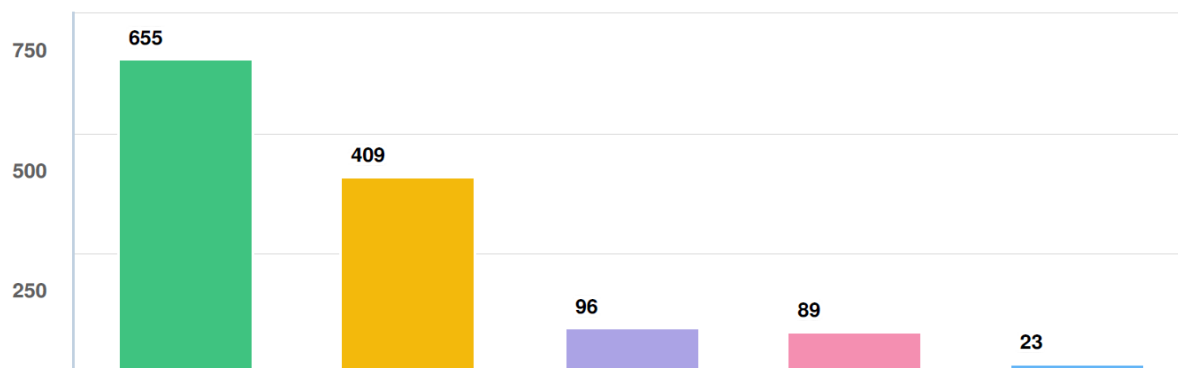
All levels of implementation questions were required, however all short answer questions were optional. The survey also asked optional demographic questions. This helped staff understand who the survey was and was not reaching.

Who Took the survey

The Middle Housing Survey reached community members in all wards, homeowners, people that rent their homes, and people of all ages. Ward 1 has the most representation with **24%**, Ward 2 has **12%**, Ward 3 has **14%**, Ward 4 has **6%**, Ward 5 has **6%**, Ward 6 has **8%**, Ward 7 has **20%**, Ward 8 has **7%**, and outside of city limits has **7%**.

Residency Status

Overall, **90%** of survey respondents live in Eugene, **56%** work in Eugene, **13%** own a business in Eugene, and **12%** attend school or university in Eugene. *This question was optional.*

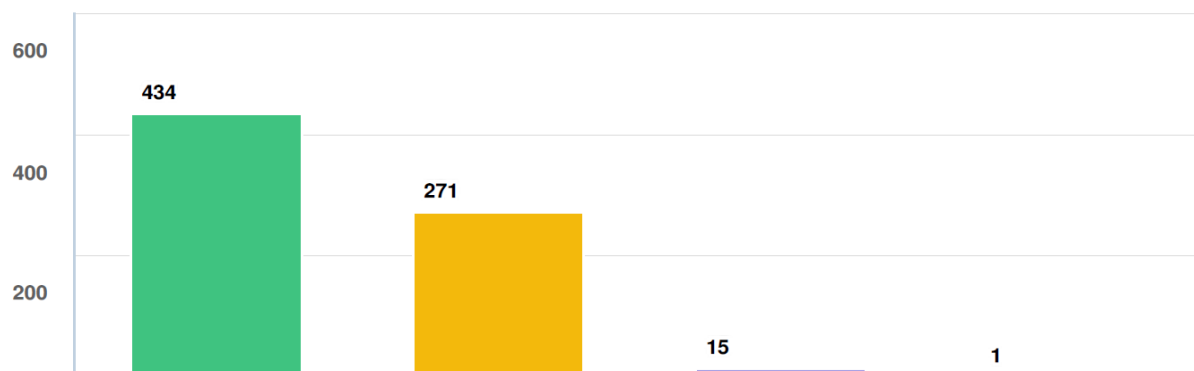


Question options

- I live in Eugene
- I work in Eugene
- I own a business in Eugene
- I attend school/university in Eugene
- None of the above

Homeowners and Renters

Overall, **60%** of survey respondents own the residence in which they live, **38%** rent the residence in which they live, **2%** do not own or rent, and are sheltered, and **.1%** do not own or rent and are unsheltered. With Census data showing that more than half of Eugene Community members rent their homes, the renter perspective is underrepresented in this survey. Additionally, **58%** of renters were under the age of 35 and **88%** of homeowners were over the age of 35. *This question was optional.*

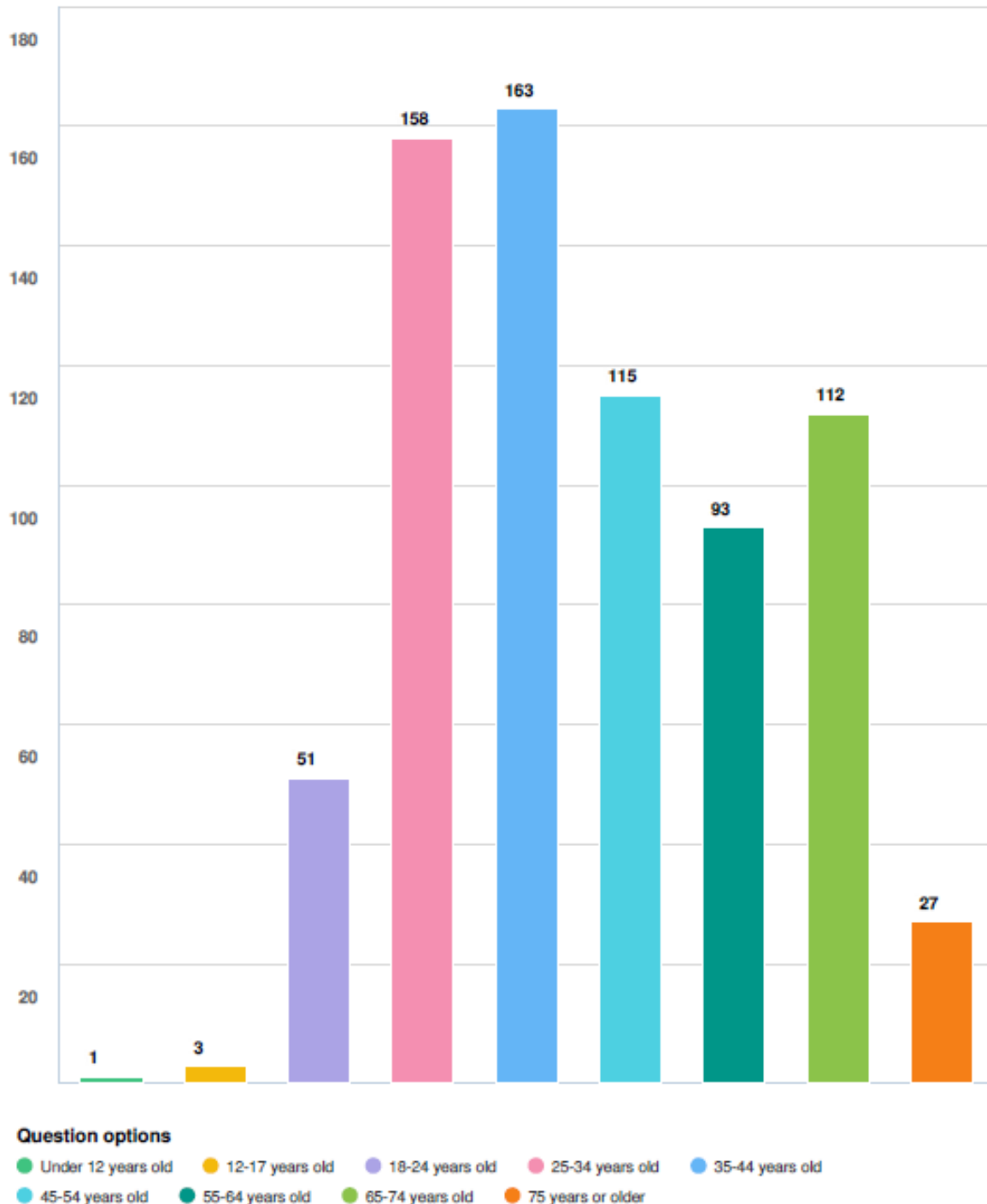


Question options

- I own the residence in which I live
- I rent the residence in which I live
- I do not own or rent, but am sheltered
- I do not own or rent, and am unsheltered

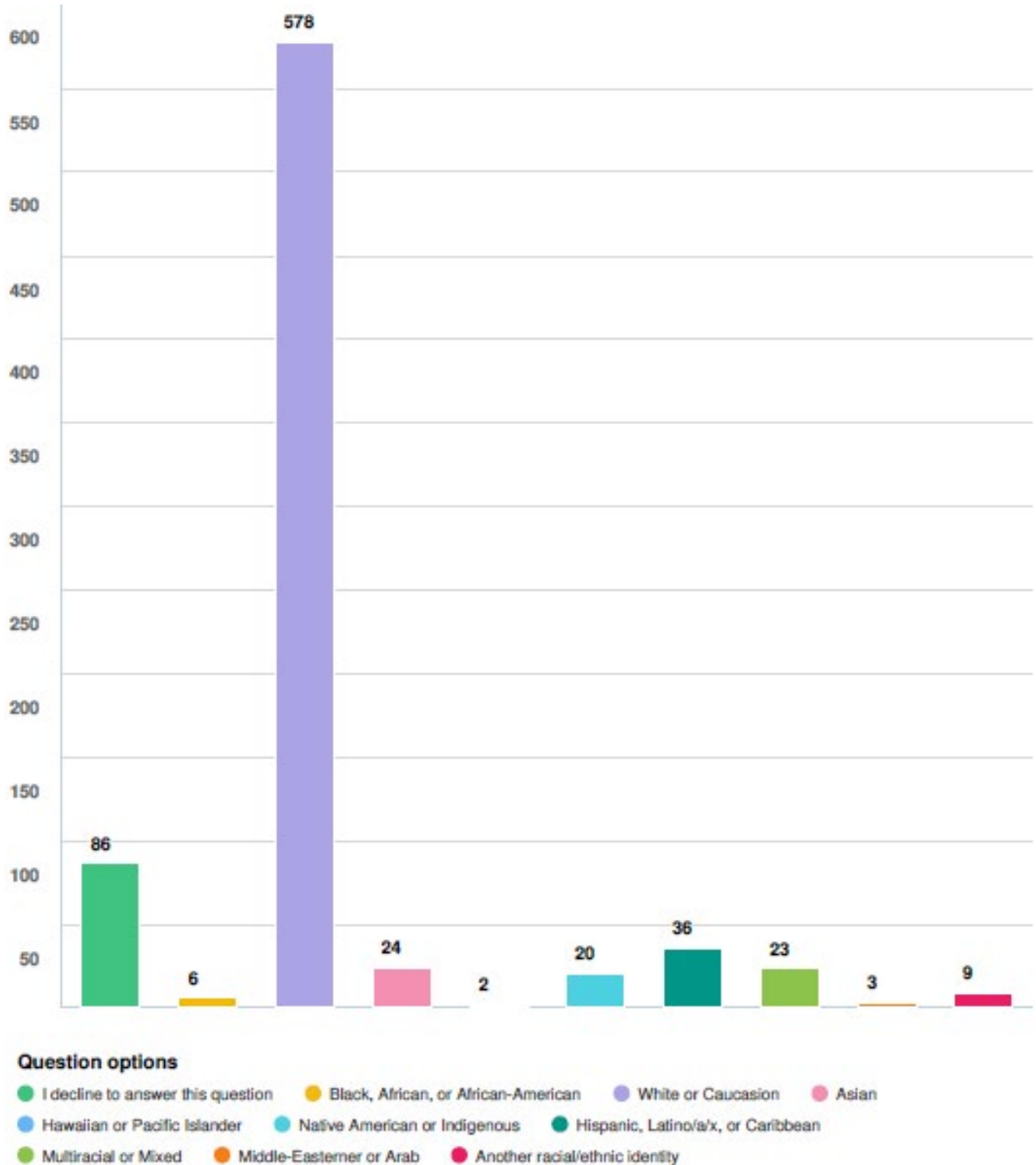
Age

Overall, **.6%** of survey respondents are under 17, **7%** are between 18-24, **22%** are between 25-34, **23%** are between 35-44, **16%** are between 45-54, **13%** are between 55-64, **15%** are between 65-74, and **4%** are over 75. **30%** of survey respondents are under the age of 35 and **70%** of survey respondents are over the age of 35. Notably, 1 survey respondent is under 12 and 3 are between 12-17. *This question was optional.*



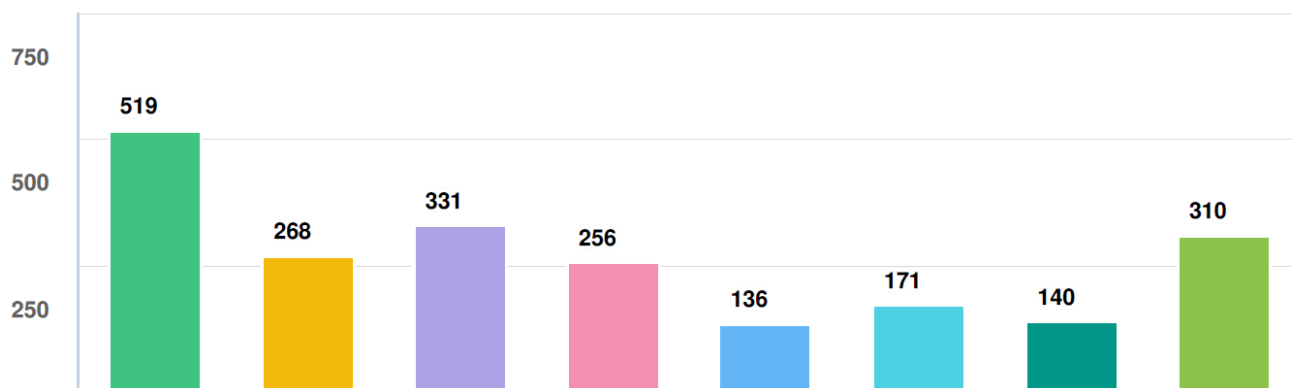
Race and Ethnicity

Overall, **17%** of survey respondents identify as Black, Indigenous, and other People of Color (BIPOC) and **83%** identify as white. With Census data showing that **83%** of Eugene community identifies as white, the survey data generally reflects existing demographics. *This question was optional.*



Guiding Values and Principles

The first phase of outreach produced 8 Guiding Values and Principles. The survey asked respondents to prioritize their top 3 Guiding Values and Principles. **The most prioritized Guiding Value and Principle is “Equity and Access to Housing”,** followed by “Housing Options of All Shapes and Sizes”, and “Vibrant Neighborhoods”.

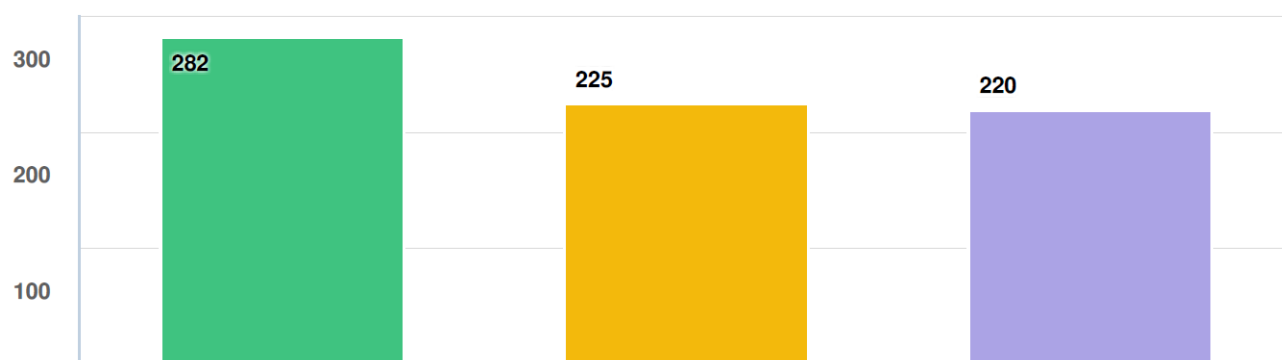


Question options

- Equity and Access to Housing
- Broad Dispersal of Middle Housing
- Housing Options of All Shapes and Sizes
- Compact, Efficient Development
- Sense of Belonging
- Opportunities to Build Wealth
- Interconnectedness of Housing Solutions
- Vibrant Neighborhoods

Parking

Participants were asked “When someone builds middle housing in these “R-1” zoned areas, how much space should be dedicated to parking?”. **39%** of respondents selected “Allow”, **31%** selected “Encourage”, and **30%** selected “Incentivize”. Overall, **61%** of survey respondents indicated preference for the City to require less on-site parking than the minimum standards require.



Question options

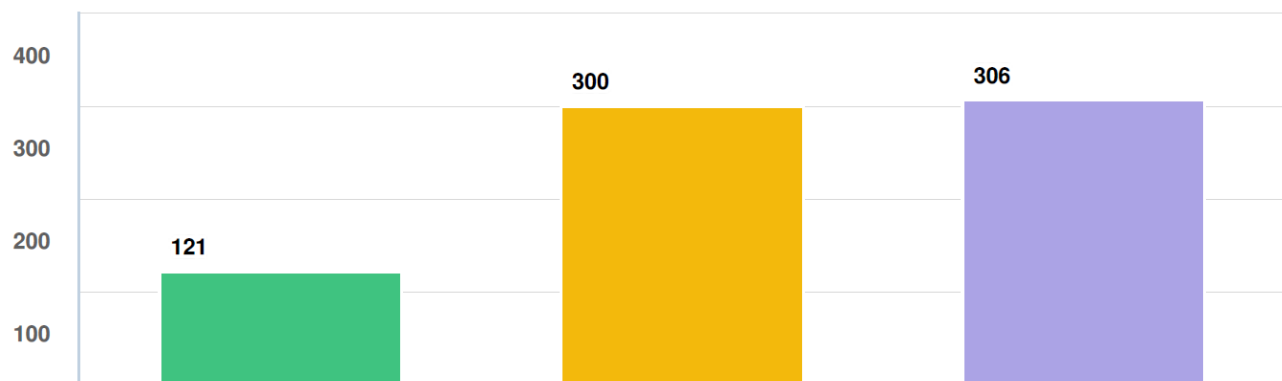
- ALLOW: Require the most parking possible per state law (one space per individual home is the maximum the City can require)
- ENCOURAGE: Require less parking (allow on-street parking, and/or less parking near places where it is easier to get around without a car)
- INCENTIVIZE: Require even less parking (if the developer includes affordable units.)

Additional Parking Comments

- Minimize parking
- If less parking is required, explore permitting solutions
- Safety should be considered
- Coordinate with transit
- Make future thinking policies
- Reduce carbon emissions from cars
- Require bicycle parking
- Consider alley access and parking
- Depends on location
- Space for cars should not be prioritized over space for homes
- Allow for a variety of options
- Consider incentives for electric vehicles
- Concern about heavy use of existing on-street parking
- Consider folks with disabilities

Lot Coverage

Participants were asked “When building new middle housing, how much of the lot should be covered with homes?”. **17%** of respondents selected “Allow”, **41%** selected “Encourage”, and **42%** selected “Incentivize”. Overall, **83%** of survey respondents indicated preference for the City to allow more lot coverage than the minimum standards allow.



Question options

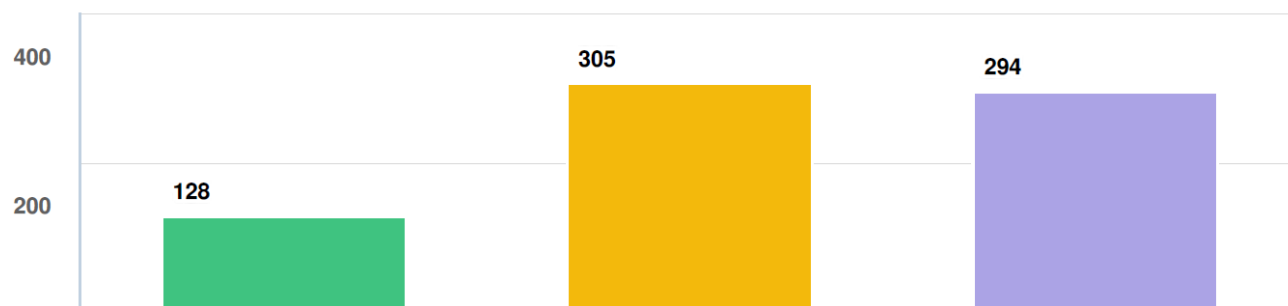
- ALLOW: Allow the largest amount of open area possible
- ENCOURAGE: Allow for lots to develop with a balance between open area and housing
- INCENTIVIZE: Allow most of the lot to have housing if it is near transit or provides affordable units

Additional Lot Coverage comments

- Access to green space is important
- Some folks don't want to maintain yards
- Consider families and children
- Consider stormwater infrastructure
- Smaller yards are a good compromise
- Encourage more communal space
- Consider the tree canopy
- Provide flexibility and choice
- Encourage community gardens
- Space for housing is most important
- Regulate bulk
- Allow taller units as an alternative
- Concern over privacy

Design Standards

Participants were asked “What level of design standards should the City use for middle housing?”. **18%** of respondents selected “Allow”, **42%** selected “Encourage”, and **40%** selected “Incentivize”. Overall, **82%** of survey respondents indicated preference for the City to require fewer design standards for Middle Housing.



Question options

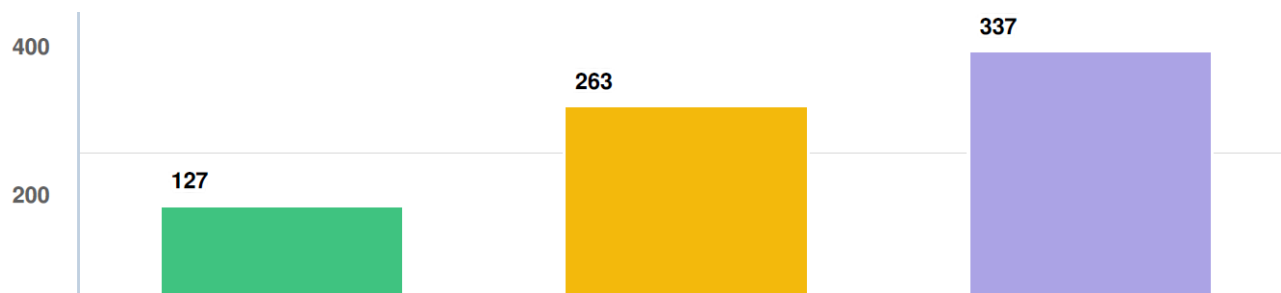
- **ALLOW:** Use the highest level of design standards. Features will more closely match single-family homes, but the standards may limit design flexibility and may add cost to the home.
- **ENCOURAGE:** Develop design standards that are less restrictive than the “allow” option. Encourages middle housing to include basic design features but leaves more options available for design flexibility and reducing costs.
- **INCENTIVIZE:** Use few or no design standards. This permits a range of options that may make middle housing stand out more from single-family homes, but has the benefit of design flexibility that can result in more efficient and lower-cost housing.

Additional Design Standards comments

- Provide high quality housing
- Affordability should be prioritized
- Encourage accessibility
- Reduce design regulation
- Encourage pedestrian-scale design
- Design is subjective
- Provide flexibility
- Promote creativity
- Refrain from restricting style
- Concern over neighborhood character

Overall

Participants were asked “In general, what direction do you feel is best for the Eugene community?”. **17%** of respondents selected “Allow”, **36%** selected “Encourage”, and **46%** selected “Incentivize”. Overall, **82%** of survey respondents indicated preference for the City to go beyond the minimum standards required by the state for implementation.



Question options

- **ALLOW** for more middle housing: Meet the minimum standards required by the State of Oregon. This option has more regulations, less design flexibility, and has less potential to reduce the cost of future housing compared to the other two options.
- **ENCOURAGE** more middle housing: Remove code barriers, increase flexibility. This option has less regulation, more design flexibility, and reduces housing costs more than the “allow” option.
- **INCENTIVIZE** more middle housing: Minimize regulation, apply bonuses and incentives. This option has the least regulation, most flexibility, and has the potential to reduce housing costs the most of the 3 options.

Themes

- Go beyond the minimum standards
- Focus on equity
- Encourage affordability
- Increase housing options
- Enthusiasm for the project
- Continue affordability work past the Middle Housing project
- Consider the relationship between housing and transportation policies
- Promote efficient use of land
- Plan for the future
- Consider climate goals and sustainability
- Encourage flexibility
- Prioritize safety
- Create opportunities for home ownership
- Discourage car-centric development
- Avoid sprawl
- Promote high quality construction
- Act sooner rather than later
- Remove code barriers
- Overcoming the housing crisis is paramount
- Concern over potential impacts on existing neighborhoods
- Consider infrastructure
- Create inclusive neighborhoods
- Encourage walkability and transit

Equity Roundtable Meeting Three Summary

Date: February, 17, 2021

Time: 3:00 - 5:00 pm

Number of participants: 6

Organization and communities participating: Lane Independent Living Alliance, DisOrient Asain American Film Festival, Sapsik'wálá, Huerto de Familia, UO Longhouse, NAACP - Eugene Springfield

Meeting Summary

ACC welcomed participants and shared a Land Acknowledgment. Participants introduced themselves by sharing their name, pronouns, organizations they represent, showing one item near them that says something about them. ACC reviewed the community agreements and the purpose and scope of the roundtable. Next, Terri Hariding shared how this roundtable's input is being used for the project's purpose. Sophie McGinley and Jennifer Knapp presented on Planning 101 on Rules and Model Code. After a five-minute break, ACC presented the Guiding Principles and Values from the City of Eugene's Middle Housing Survey and asked participants to choose the most important principle to them and then choose the second most important principle. Next, participants were split into two breakout rooms with one City Staff and one ACC consultant. In these breakout groups, participants discussed the example codes on "Onsite Parking," "Lot Coverage," and "Design Standards" pulled from the City of Eugene's Middle Housing Survey. After 25 minutes of small group discussion, all participants, City Staff, and ACC joined in group discussion to share what both groups discussed. In closing, City Staff shared the next steps for the upcoming Planning Commission and City Council work sessions and forecasted the next discussion around the Triple Bottom Line framework.

Summary of Findings

First Most Important Guiding Principle

- Equity and Access to Housing (chosen by two participants)
- Broad Dispersal of Middle Housing
- Opportunities to Build Wealth
- Interconnectedness of Housing Solutions (chosen by two participants)
- Sense of Belonging

Second Most Important Guiding Principle

- Equity and Access to Housing (chosen by two participants)
- Compact Efficient Housing
- Housing Options of All Shapes and Sizes
- Interconnectedness of Housing Solutions
- Opportunities to Build Wealth

Onsite Parking Comments

- If onsite parking or parking garages are not provided, they should provide permits
- Onsite parking is critical
- Currently, there is not enough parking in Eugene
- If the lot is near transit, then offer less parking
- Accessible safe parking is important - participants worry about break-ins
- Participants with children discussed how their kids have to take turns having friends over due to limited parking

Lot Coverage Comments

- Need access to green spaces
- Need safe spaces for children to play - develop proximity to other public green spaces
- Lots should leave a space for green space
- Gardens are important
- Want to be able to see children playing outside their windows - children need to have a safe place to play and run
- Participants discussed the struggle between parking spaces and green spaces
- Error on the side of allowing more density and lessening open area
- Need incentivising for developers to make lots more affordable

Design Standards Comments

- Need more flexibility when it comes to design standards
- Look at different neighborhoods and proximity to schools to coordinate with school capacity
- Safety - don't want housing built differently based on affordability or loan access (thinking about materials, safety, and design standards)
- Design standards can come with good intentions but they are subjective and could prevent really good building
- Participants discussed the positives around cottage clusters
- An advantage of Middle Housing is scale
- Equity issue: only those who can afford design standards are the ones who build them

Equity Roundtable Meeting Four Summary

Date: February 22, 2021

Time: 5:30-7:30 pm

Number of participants: 8

Organization and communities participating: Lane Independent Living Alliance, DisOrient Asain American Film Festival, Huerto de Familia, UO Longhouse, NAACP - Eugene Springfield, Chinese American Benevolent Association, TransPonder

Meeting Summary

ACC welcomed participants and shared a Land Acknowledgment. Participants introduced themselves by sharing their name, pronouns, organizations they represent, where they have lived in Eugene, and their favorite food in Eugene. ACC reviewed the community agreements. Next, ACC shared their reflections on individual and group feedback. Jennifer Knapp and Sophie McGinley presented the background on the work at the local and state level that informed the middle housing project. Terri Harding also provided an update on other roundtables and Healthy Democracy discussions. After a five minute break, ACC presented the Triple Bottom Line framework and reviewed the Social Equity pillar and questions. For the next 25 minutes, participants shared stories from their everyday life that policy makers must keep in mind when creating middle housing policy. Participants then discussed repeated themes. Next, Terri Harding led a discussion about the format of the next meeting and what the participants want to talk about. ACC prompted the participants to share a theme from the meeting they found interesting and important. After sharing, ACC lead closing and goodbyes.

Roundtable Feedback

- Positives: Appreciate the open environment, well organized and thoughtfully designed agendas, good pace, appreciate the expertise of all participants, enjoy the group discussion, understandable content, one-on-one conversations are a good idea
- Opportunities to Improve: Less staff and more participant ratio in break out groups: want to hear a report back from other groups, be mindful of extrovert and introvert participation, the pace is too slow, send the powerpoint ahead of the meetings ahead of time, want to know what other middle housing groups are doing, want to know more about the City of Eugene process

Themes Discussed Related to the Triple Bottom Line's Social Equity Pillar

- It is hard, confusing, and can take a long time to receive a Section 8 housing voucher and it is easy to lose
- Participants discussed not having enough money to live on even with assistance
- Discrimination and evictions due to gender indtification, having a non-tradtional family, legal stuats, and race

- 72 hour eviction notices are common
- Need affordable parking
- Landlords have a lot of power: most assistance goes to landlords, patio restrictions, not having smoking restrictions, and common evictions
- Including people with disabilities and individuals who are non-binary or transgender who are often neglected from conversations

New Themes Discussed

- Gardens and open spaces
- Housing near transportation and grocery stores is important
- Adequate middle housing for families
- Ways for homeowners to help middle housing: building on their property to rent
- Education and resource sharing is needed
- Worries of students and parties in some neighborhoods
- Smaller homes for people to afford with safe outdoor space
- Mixed use space: multiple types of income, family types and housing on one lot

Places Where Participants Have Lived: Friendly neighborhood, South Eugene, Downtown Eugene, University area, West Eugene, City View area, Fairgrounds, Churchill, Sheldon, West 11th and Chamber, Southeast Eugene, Southwest Eugene, Santa Clara area, Ferry Bridge area

Topics that Interest Participants for Future Meetings

- Draft codes and outlines for codes
- How to stay involved in the next steps
- Discussions with experts and stakeholders
- Discussions around affordability
- How to incentivize development: thinking about permit costs

Topics that Participants Found Most Interesting From this Meeting

- Sharing personal experiences and stories
- Ways to be creative with different land use
- Mixed housing styles
- Mixed income housing
- Gender diversity
- Having a variety of stories was very helpful
- Affordable housing
- Excited that this consulting process could be applied and duplicated in other city processes



Middle Housing Code Changes Local Partners RoundTable

Attendees

Kaarin (Better Housing Together), Brittany (Eugene Chamber of Commerce), Mike (Better Eugene-Springfield Transportation), Alexis (1000 Friends of Oregon), Seth (WECAN), Dan (Lane County Homebuilders Association), Carmel (AARP), Jon (Neighborhood Leaders Council)

Purpose

Representatives of City of Eugene Local Partners met March 1st, 2021 to discuss three implementation options and how they connect to our triple bottom line. Participants were asked three questions:

1. *Which implementation option (allow, encourage, incentivize) best promotes social equity?*
2. *Which implementation option (allow, encourage, incentivize) best promotes environmental health?*
3. *Which implementation option (allow, encourage, incentivize) best promotes economic prosperity?*

Meeting Notes: social equity outcomes of encouraging or incentivizing

Worst Outcomes

- HB 2001's minimums don't improve anything in Eugene
- Mature neighborhoods have their character changed
- Standards become more restrictive rather than less restrictive
- Incentives are only focused on low impact portions of the code
- Builders aren't given profitable options
- Less desirable neighborhoods experiencing gentrification
- Open space becomes limited in supply
- Car owners struggle to find units with suitable parking
- Affordable Housing incentives creates barriers for other ranges of affordability
- Demolition and rising construction costs make development unfeasible for developers

Best Outcomes

- Social equity lens is prioritized
- Developers are able to decide about parking on their own, but incentives are there for those that want them
- Parking incentivizes add to our community walkability and character
- Economic and racial segregation are prioritized over concerns like parking
- Things that have larger cost factors are the ones that are more incentivized
- Large varieties of neighborhoods have incentivized middle housing
- Standards aren't a 'rubber stamp' and have a range of flexibility to make them work in a variety of neighborhoods



Meeting Notes: environmental health outcomes of encouraging or incentivizing

Worst Outcomes

- Incentives result in fewer trees and less access to sunlight
- Stormwater systems become stressed
- More people join “bedroom communities” increasing their overall carbon footprint
- Affordable Housing aimed standards make development unreasonable for developers

Best Outcomes

- More people live in the core of the city, reducing the overall impact of growth
- Building height helps offset worst outcome issues
- Incentives are templates that can be applied to changing environmental standards for years to come
- People travel less throughout their average day
- Policies or incentives are built to preserve open space or trees
- New development results in fewer impervious spaces
- Long term environmental impacts of the units are smaller



Meeting Notes: economic prosperity outcomes of encouraging or incentivizing

Worst Outcomes

- Residential and commercial zones remain separated, and neighborhoods aren't walkable
- Our incentives are too small to handle the large migration continuing to come to Oregon
- Housing prices continue to rise at fast rates
- There are limited information resources for single lot owners that want to split their lot
- Incentives don't impact the people that struggle the most with finding housing
- Employees still need to commute long distances to work everyday
- Building a driveway to a second unit on a lot brings in costs of permits and insurance

Best Outcomes

- A wider range of people are allowed to take advantage of the financial benefits of home ownership
- Housing options are present for people of all ages
- Home ownership opportunities promote long term workforce retention in Eugene
- There are neighborhood centers of activity and access
- A wider range of neighborhoods are accessible for people to move into
- Economic prosperity helps people prioritize spending at local businesses
- People are able to save more money for future retirement and less on housing
- The process is simple enough for a homeowner to navigate through it



Key Takeaways

The input from the meeting, above, was synthesized by staff to inform the following takeaways:

- Affordable Housing should be **balanced** so the incentives don't discourage a range of housing types for diverse income levels.
- **Trees and sunlight access** should be considered to prevent degradation of neighborhood environments.
- Single home developers need **guidance** to help them navigate the complex requirements for development.
- Incentives help the **most vulnerable** populations gain access to homes across the spectrum of costs.
- **Flexible incentives** prevent a one-size-fits-all model and help the code adapt to changing situations in the future.
- Housing development is incentivized **alongside commercial development** to improve walkability and neighborhood cohesion.
- Incentives exist and developers can **choose** if they'd like to pursue them or not.
- The highest impact standards are the ones that are **prioritized** in the code.
- Neighborhood Associations **play a part** in the evaluation of design standards and other parts of the code.
- **All neighborhoods** experience the new options to prevent gentrification and provide access to all different income levels throughout the whole of Eugene.



Middle Housing Code Changes Boards & Commissions RoundTable Attendees

Julia (Housing Policy Board), Dan (Historic Preservation Board), Daniel (Planning Commission), Kelsey (Sustainability Commission), Ibrahim (Human Rights Commission), Kristen (Planning Commission)

Purpose

Representatives of City of Eugene Boards and Commissions met February 25, 2021 to discuss three implementation options and how they connect to our Triple Bottom Line. Participants were asked three questions:

1. *Which implementation option (allow, encourage, incentivize) best promotes social equity?*
2. *Which implementation option (allow, encourage, incentivize) best promotes environmental health?*
3. *Which implementation option (allow, encourage, incentivize) best promotes economic prosperity?*

Meeting Notes: social equity outcomes of encouraging or incentivizing

Worst Outcomes

- Persons with disabilities may be presented barriers if parking is reduced
- Disabled or older persons have difficulties with on street parking
- Transportation infrastructure lagging behind housing development
- Limited options for people who commute outside public transit
- Limited parking as a source of many neighborhood conflicts
- Street parking comes with anxieties of tickets, fines, towing, etc.
- Parking permits enforcing exclusionary practices
- Design standard templates becoming biased in who they serve
- Permit parking becoming an anti-homeless regulatory arm

Best Outcomes

- Allows more flexibility of the housing units
- Incentivizing overall makes it cheaper to build and more available to more people
- Parking flexibility could allow for more ADU's or denser structures to be built
- Incentivizing as a tool to address the inherent housing inequities
- Incentivizing design standards would decrease costs
- Encouraging or incentivizing comes from our Guiding Values
- Providing template designs to keep our neighborhood character while lowering costs



Meeting Notes: environmental health outcomes of encouraging or incentivizing

Worst Outcomes

- Encouraging or incentivizing giving fewer people access to green space
- Giving only socioeconomically privileged people access to environmentally friendly options
- People become “packed in” to a dense and unfriendly environment

Best Outcomes

- People who formerly couldn’t afford homes can now gain more environmentally friendly living spaces
- Incentivizing the use of environmentally friendly building materials
- Incentivizing housing that shares walls and is more environmentally efficient
- Environmental incentives make it overall more affordable to live here
- Developers have the tools to be successful
- Green buildings don’t add more cost burden to develop or own



Meeting Notes: economic prosperity outcomes of encouraging or incentivizing

Worst Outcomes

- The transition to us being less dependent on fossil fuels is too far off to expect large shifts to non-automobile transportation
- Units that are affordable are built with cheap materials and aren't built to last
- People's route to prosperity, or their job, is still their car but now they wouldn't have a parking spot
- Standards of durability may make it impossible for families or small developers to afford them
- Multifamily developments with parking spots up the rent as fewer developments have designated parking
- Standards impact families and homeowners different than developers
- Developers who can build more structures prey on homeowners with large enough lots to build more units
- Parking "wars" make a neighborhood less appealing
- Property tax increases force single family homeowners to move out of neighborhoods
- Building a driveway to a second unit on a lot brings in costs of permits and insurance

Best Outcomes

- Allow more families to build wealth through adding a second unit
- Housing is less expensive but still quality design and structure
- Our multifamily standards change to allow for a different variety of outcomes
- Standards allow some flexibility in key areas
- There are more options for first time home buyers through the added variety of housing stock
- Economic prosperity is spread out throughout the community
- More families can remain living together and move into their own house
- There are fewer barriers to wealth building
- People aren't pressured into selling their house just so it can be redeveloped
- The process is simple enough for a homeowner to navigate through it



Key Takeaways

The input from the meeting, above, was synthesized by staff to inform the following key takeaways:

- **Incentivize** lot coverage and design standards to reduce overall costs of building and owning housing.
- Ensure that parking takes into consideration the **qualities and needs** of Eugene communities to address inherent inequities.
- Use incentives to create more **opportunities to build wealth** for families.
- **Expand** neighborhood amenities like parks and transportation options to keep up with new developments.
- Use our encouraging or incentivizing options intentionally to address the **inherent housing inequities** that exist in our community.
- Ensure new developments are affordable but **still quality structures**.
- Provide opportunities for **green space** for people on all portions of the socioeconomic spectrum.
- **Protect** current homeowners from being taken advantage of by large developers or rising property taxes.
- Prioritize getting **all kinds of people** into houses over the smaller concerns.

Eugene Review Panel

Report 2: Review of Middle Housing Concepts

23 February 2021 (updated 1 April with final votes from the Panel)

The following report was created for the City of Eugene by the 29 Panelists of the 2020–21 Eugene Review Panel on Housing.

The primary mandate of this Panel is to advise the City on the implementation of HB 2001. This report represents the second of three reports that fulfill that mission:

- *Report 1, December 2020: Guiding Principles*
- *Report 2, February 2021: Review of Middle Housing Concepts*
- *Report 4, April 2021: Review of Middle Housing Draft Code*

The Panel is also providing general public engagement advice to the City, which is the subject of Report 3.

In this second report, the Panel worked from a City of Eugene Middle Housing Survey, which was also open to the general public via the Engage Eugene platform. The Survey's four questions have been included in this report for reference. The Panel heard a presentation about the code framework the City is using, which divides code proposals into three tiers:

- *Allow (meet the State's minimum standards related to HB 2001)*
- *Encourage (remove barriers and increase flexibility)*
- *Incentivize (minimize regulation and apply bonuses and incentives)*

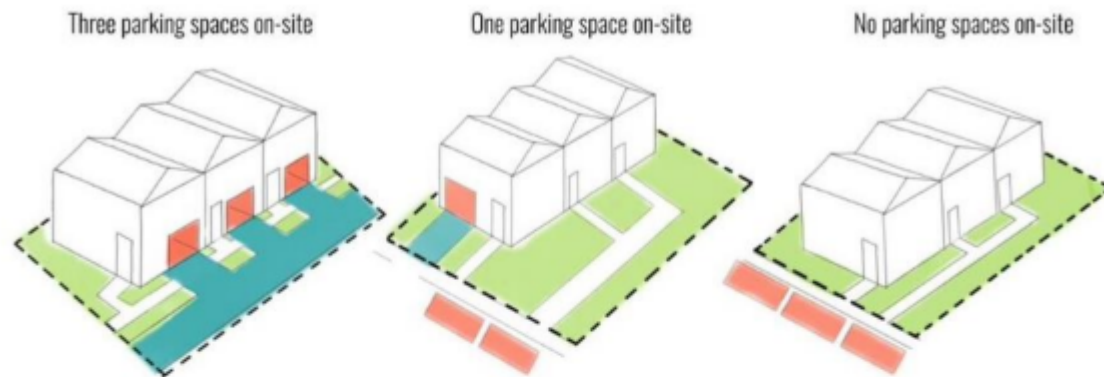
The Panel learned about the State's minimum standards, as well as the State's Model Code. The Panel then used the four questions of the Middle Housing Survey as the basis for rotating small group discussions, during which notes were taken. Each group identified Key Points within these notes that would lead toward a choice of Allow, Encourage, or Incentivize for each question. Where relevant, Panelists noted which of their Guiding Principles related to notes in this report. Finally, the Panel voted on its support for Allowing, Encouraging, or Incentivizing in each case.

All text in this report was authored exclusively by Panelists themselves in their own words, with the sole exception of explanatory text in italics. No final edits were made by either HD or City staff before publication.

This project is a partnership between the City of Eugene (Oregon) and Healthy Democracy. The Review Panel prepared this report as advice to City staff. Panelists were randomly selected from across Eugene (including unincorporated areas within the city's Urban Growth Boundary), to reflect a microcosm of the city in terms of age, gender, race/ethnicity, geographic location of residence, disability status, renter/homeowner status, and educational attainment.

For more information on the Panel, please visit: healthydemocracy.org/eugene.

Question 1: On-Site Parking



“On-site parking” is area allocated to vehicles (e.g., driveways, garages, carports, or other parking areas on the lot). Requiring more parking for vehicles can decrease the amount of space for housing and potentially increase the cost of development. When someone builds middle housing in these “R-1” zoned areas, how much space should be dedicated to parking?

ALLOW: Require the most parking possible per state law (one space per individual home is the maximum the City can require)

ENCOURAGE: Require less parking (allow on-street parking, and/or less parking near places where it is easier to get around without a car)

INCENTIVIZE: Require even less parking (if the developer includes affordable units.)

Vote Count

Allow: 9

Encourage: 10

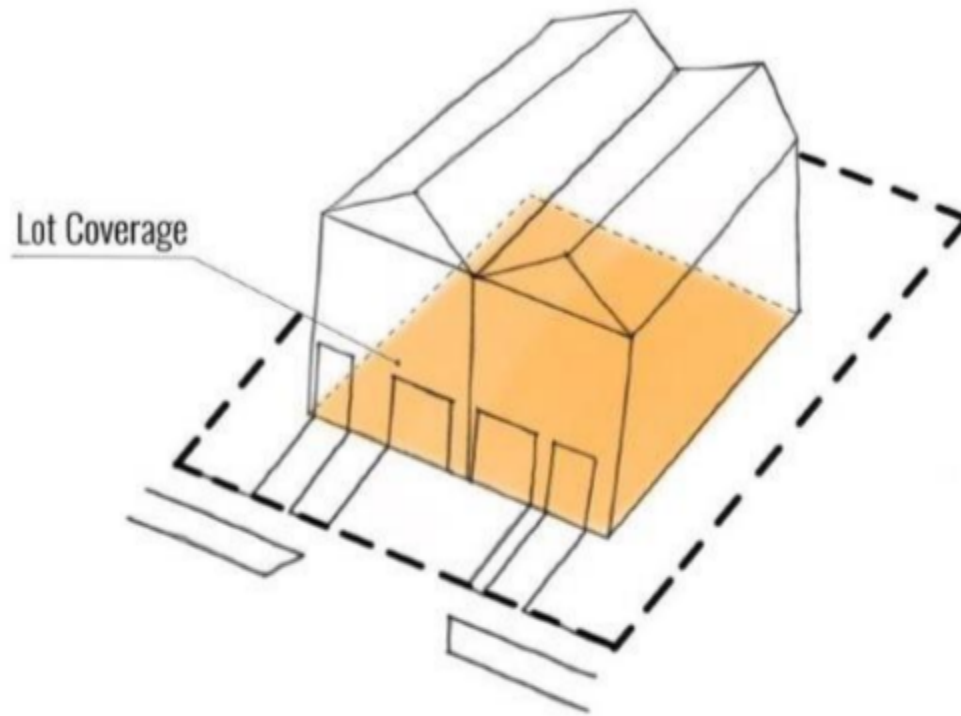
Incentivize: 10

Key to
Panelist
Notes:

- ***Bold, Italic & Underline*** = 3 Groups Supported as a Key Point
- ***Bold & Italic*** = 2 Groups Supported as a Key Point
- **Bold** = 1 Group Supported as a Key Point
- No emphasis = Additional Notes

Allow Notes	Encourage Notes	Incentivize Notes	General Notes
<p>Allow the state to require one spot per unit for accessibility.</p> <ul style="list-style-type: none"> ● Keep in mind accessibility for disabled and elderly. <p>We have lots of cars and the city will grow. Most people drive.</p> <p>Infrastructure in the city does not allow for not having access to a car at this time.</p> <p>Garage is more than parking, some built for a living, storage, gathering spot.</p>	<p>Encourage different options depending on the location in Eugene (accessible v. less developed parts of town).</p> <ul style="list-style-type: none"> ● <i>The future growth of the City should be planned for. (see Principle 26)</i> (this could be a future where people are trying to drive less/move away from cars) <p>Depending on need/accessibility, some might need onsite, while on-street parking or no parking might be needed. (see Principle 11)</p> <p>Build middle housing in a transit corridor and account for people wanting to keep their cars. (See Principle 8)</p> <ul style="list-style-type: none"> ● Most business services are built on transit corridors - it makes sense, because then it is easier to get to those services. 	<p>Parking will limit units created and could be a factor in choosing not to build more affordable housing. (see Principle 3)</p> <p><i>Let's not assume that 100% of middle housing without parking. Parking should not be thought of as either/or. This will be built in the next 15 years. The principles of building for the future go out the window if we prioritize parking. (see Principles 1, 30, 26, 14, 19, 18, 10, 3, 40, 7, 42)</i></p> <ul style="list-style-type: none"> ● Incentivizing does not mean that no parking will be built in middle housing. ● If you do not incentivize, affordable housing will not be built. ● Contradict the above bullet point. We should prioritize parking. 	<p>Middle housing will never be the largest share of the housing being built (it is only about 4% of the market.</p> <p>You are not going to be able to change people's habits without disincentivizing or incentivizing it.</p> <p>The more middle housing that is built will make it available for people who have accessibility needs.</p> <p>It depends on housing type.</p>

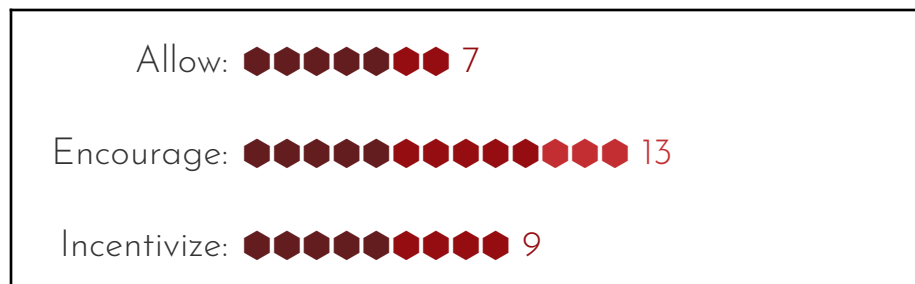
Question 2: Lot Coverage



“Lot coverage” is the percent of a lot covered by homes or other structures. Decreasing how much of a lot can have housing typically results in more open area (such as a yard). Increasing how much of a lot can have housing provides more flexibility and can lower costs. When building new middle housing, how much of the lot should be covered with homes?

- ☐ ALLOW: Allow the largest amount of open area possible
- ☐ ENCOURAGE: Allow for lots to develop with a balance between open area and housing
- ☐ INCENTIVIZE: Allow most of the lot to have housing if it is near transit or provides affordable units

Vote Count



Key to
Panelist
Notes:

- ***Bold, Italic & Underline*** = 3 Groups Supported as a Key Point
- ***Bold & Italic*** = 2 Groups Supported as a Key Point
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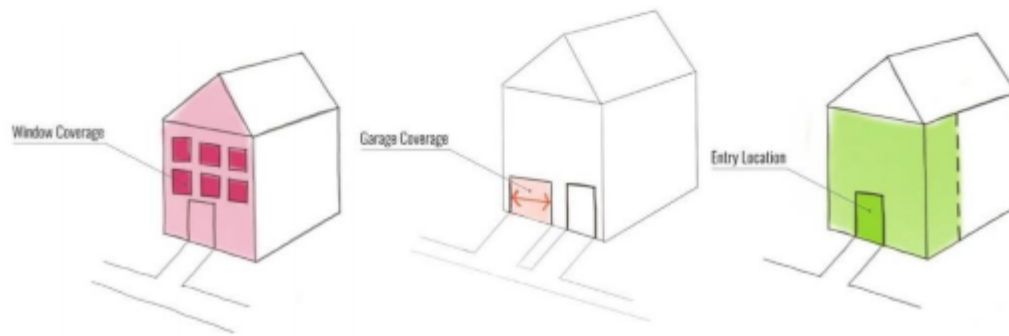
Allow Notes	Encourage Notes	Incentivize Notes	General Notes
<p>Open space and green spaces are important (<i><u>see Principles 21, 19</u></i>)</p> <p>Maintain 50% but also keep in mind site/building may vary.</p> <p><i><u>Maintain green character of Eugene</u></i> (more trees and green space).</p> <ul style="list-style-type: none"> • Community gardens <p>Emphasize city beauty.</p> <p>Low carbon footprint consistent with state movement.</p>	<p>For duplex and triplex. You might need more room for this type (children, open space) (see Principle 14)</p> <ul style="list-style-type: none"> • Open space should include green space. <p>Dedicated amount of green space should be included in the code per community or neighborhood or per capita.</p>	<p>This is a problem with exponential growth. If we start with incentivizing, we can scale down once the goal (achieve a certain amount of middle housing that satisfies demand) is reached.</p> <p>Multiplex would fall here because it may not need as much space (emphasis on affordability). (see Principle 38)</p>	<p>Your house cannot take more than 50% of your lot. What is the rationale?</p> <p>Safety issues with more housing in a lot?</p> <ul style="list-style-type: none"> • Having space among houses increases safety - like in the case of fire for example. Space between houses serves as a fire break. <p>The need for space might be for aesthetic reasons.</p> <p>Homes should have backyards (e.g. planting) 50/50 is a good idea.</p> <p>It might depend on the structure of the house.</p> <p>One size might not fit all. Duplexes might fall differently than multiplexes.</p>

			<ul style="list-style-type: none"> • Multiplex may have a courtyard and green space or shared space. • Dedicated amount of green space should be included in the code per community or neighborhood or per capita. • Develop a standard for green space - baseline
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Question 3: Design Standards

Design standards define the look and feel of buildings. In many cases, the City of Eugene currently applies only very basic design standards such as building setbacks (the distance from the edge of the property to the home) and maximum height to homes in the zone(s) that will soon allow more middle housing types. Some design standards promote walking and pedestrian accessibility (having doors to homes face the street or reducing the width of driveways or garage doors).

The following are examples of potential design standards. What level of standards should the City use for middle housing?



- ☐ **ALLOW:** Use the highest level of design standards (allowed by the state such as the location of doors or entries, the amount of the house covered by windows, and garage widths). Features will more closely match single-family homes, but the standards may limit design flexibility and may add cost to the home.
- ☐ **ENCOURAGE:** Develop design standards that are less restrictive than the “allow” option. Encourages middle housing to include basic design features but leaves more options available for design flexibility and reducing costs.
- ☐ **INCENTIVIZE.** Use very few or no design standards. This permits a wide range of design options for entry locations, garage width, and other factors that may make middle housing stand out more from single-family homes, but has the benefit of greater design flexibility that can result in more efficient, customized, and lower-cost housing.

Vote Count

Allow:		4
Encourage:		6
Incentivize:		19

Key to
Panelist
Notes:

- ***Bold, Italic & Underline*** =
3 Groups Supported as a Key Point
- ***Bold & Italic*** =
2 Groups Supported as a Key Point
- **Bold** =
1 Group Supported as a Key Point
- No emphasis =
Additional Notes

Allow Notes	Encourage Notes	Incentivize Notes	General Notes
	<p>Design flexibility</p> <p>What to keep some standards leading to development diversification (see Principle 28)</p> <p>Promote sustainability and build for the future - stipulations (see Principles 19, 20, 26)</p>	<p><u>Has to be incentivized - making less restrictive how we design middle housing is gonna make it more affordable</u></p> <p>Any design standards should focus on quality of living (see Principles 38, 30)</p> <p>Allows for variety of types of building (see Principle 1, 28, 36)</p> <p>Set few/low design standards. If restrictions are required, they should be basic and logical. (ex. height). (see Principles 1, 2, 39, 26, 14, 19, 18, 3, 5, 40, 7, 20)</p>	<p>There are no design standards for single dwelling houses</p> <ul style="list-style-type: none"> • This is not true, there are design standards for SF (ex setbacks/building height. But not aesthetic standards • Talking about affordability in terms of design - but are we also talking about cost affordability to owners / renters. • Is there any way they can inspect? Response: every building gets inspected. • Concern example: would developers not put enough doors / windows if there are not enough requirements <p>Not in favor of packing people in at the cost of green spaces (see Principles 19, 20, 26)</p> <ul style="list-style-type: none"> • The carbon footprint of building is actually smaller in denser developments

			<ul style="list-style-type: none"> • A larger population, though, will produce more trash, etc. • We are not advocating to build middle housing in green spaces <p><i>Keep Eugene Funky! (see Principle 35)</i></p> <p>Don't want builders to take advantage of the limited existing standards</p>
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Question 4: General Direction

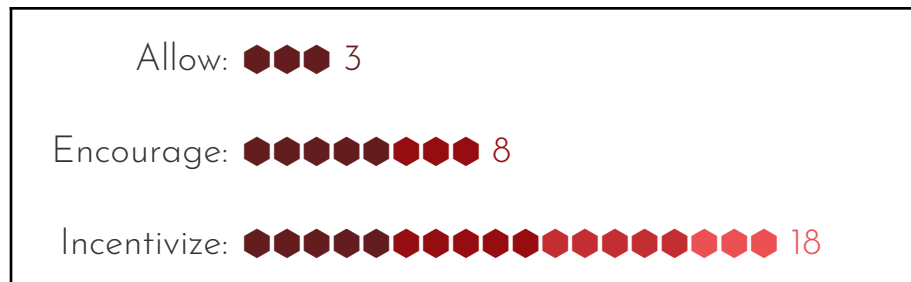
The questions above about parking, lot coverage, and design standards are examples of the many code topics that require change to meet State regulations. In general, what direction do you feel is best for the Eugene community?

ALLOW for more middle housing: Meet the minimum standards required by the State of Oregon. *This option has more regulations, less design flexibility, and has less potential to reduce the cost of future housing compared to the other two options.*

ENCOURAGE more middle housing: Remove code barriers, increase flexibility. *This option has less regulation, more design flexibility, and reduces housing costs more than the “allow” option.*

INCENTIVIZE more middle housing: Minimize regulation, apply bonuses and incentives. *This option has the least regulation, most flexibility, and has the potential to reduce housing costs the most of the 3 options.*

Vote Count



Key to
Panelist
Notes:

- ***Bold, Italic & Underline*** = 3 Groups Supported as a Key Point
- ***Bold & Italic*** = 2 Groups Supported as a Key Point
- **Bold** = 1 Group Supported as a Key Point
- No emphasis = Additional Notes

Allow Notes	Encourage Notes	Incentivize Notes	General Notes
	<p>All others need to be encouraged</p> <p>Reducing barriers (See Principle 6)</p> <p>Regulations are sometimes needed but not always. It's good to have flexibility in the design, more yards or less, more house or less.</p> <p>Affordable housing is important. Middle of the road option allows flexibility.</p> <p>Eugene is a unique city that should have unique housing options.</p>	<p>Green building practices and spaces (see Principles 21, 26)</p> <p><i>Need and demand is high - City needs to do all it can (see Principle 1)</i></p> <p>Minimizing restrictions is important (see Principles 6, 18, 5, 16)</p> <p>Single Unit housing comparatives</p> <p>Minimum standard and quality / habitability (see Principles 30, 38)</p> <p>Homelessness - middle housing helps provide flexibility / affordability (see Principles 22, 2)</p> <p>(All the Principles from Question 1 [1, 30, 26, 14, 19, 18, 10, 3, 40, 7, 42] apply here, plus Principles 6, 39, 35, 5, 31, 20)</p> <p>Incentivizing affordable housing will help with diversity (see Principle 35) and walkable neighborhoods (see Principle 10)</p>	<p>Encourage in all areas and incentivize in areas where middle housing is less established / prevalent</p> <p>Middle housing will not address homelessness (see Principle 22). It will alleviate people who are in low-income housing, but will not address the unhoused populations.</p> <p>Low income housing should be affordable housing.</p> <p>Agree we need to incentivize more middle housing. But lots of cheap housing in Eugene already – thin walls, not very aesthetic. Need to consider children's needs. We need to be careful with regulations.</p> <p>Can we please do something about the unhoused population in Eugene?</p>

Eugene Review Panel

Report 3: Public Engagement Recommendations

23 February 2021 (updated 5 May with final votes from the Panel)

The following Public Engagement Recommendations were created for the City of Eugene by the 29 Panelists of the 2020–21 Eugene Review Panel on Housing.

In addition to the Review Panel's primary mandate – to advise City staff on the implementation of HB 2001 – the Panel was asked a secondary question during its February 2021 sessions:

What should the City consider when designing future public engagement? *Given Panelists' unique position as participants in a novel democratic format, City staff requested they offer lessons drawn from their experience that may apply to public engagement across the City.*

An initial list of public engagement recommendations was developed by members of the Panel's Process Oversight Subcommittee. This Subcommittee reviewed end-of-day evaluations submitted by fellow Panelists throughout the Review and deliberated specifically on the Panel's process. The Process Subcommittee also drafted a survey to better understand their fellow Panelists' experience. The results of this survey are included as an appendix to this report.

These initial ideas were then brought to the full Panel and augmented by substantial additions from other members of the Panel, working in small groups. Members of the full Panel then rated each recommendation on a four-point scale, from Strongly Agree to Disagree.

Additional Notes

This report represents concepts authored exclusively by Panelists themselves; this explanatory text (in italics) is the only content contributed to this report by staff. Due to time constraints, Healthy Democracy staff did assist the Process Subcommittee in summarizing its initial recommendations. This summary was checked by the Subcommittee for accuracy and completeness. All additions made by other Panelists were in their own words, and no final edits were made by either HD or City staff before publication. Due to time constraints, Panelists were able to complete only limited editing of the wording of this document.

Recommendations are ordered by their overall "score," a weighted average of all votes for that recommendation. For this score, "Strongly Agree" received 2 points, "Somewhat Agree" 1 point, "Don't Know / Neutral" 0 points, and "Disagree" -1 points. Sub-recommendations are kept with their parent recommendation, regardless of their score. Ties were broken by a random number generator. Rationales were not rated. Note: Agreement or disagreement with a recommendation does not necessarily indicate agreement or disagreement with any of the Rationales below it. Rationales simply provide additional explanation, in the eyes of one or more supporters of the associated recommendation.

This project is a partnership between the City of Eugene (Oregon) and Healthy Democracy. The Review Panel prepared this report as advice to City staff. Panelists were randomly selected from across Eugene (including unincorporated areas within the city's Urban Growth Boundary), to reflect a microcosm of the city in terms of age, gender, race/ethnicity, geographic location of residence, disability status, renter/homeowner status, and educational attainment.

For more information on the Panel, please visit: healthydemocracy.org/eugene.

Public Engagement Recommendations

Recommendation 1: Statistical sampling is good to get an idea of what a sample of the population thinks. This kind of selection could also be useful for special committees, Boards, and Commissions.



- **Rationale:** Random mailings might be more effective than other recruitment methods because they get a hold of people right where they already are - in their homes.
- **Rationale:** Not everyone listens to the radio, reads the newspaper, knows the right people, or is on the right listserv to hear about openings and apply.
- **Rationale:** In an informal poll, % Panelists on the process oversight task committee said they would not have responded to an email or an ad in the Register Guard to join this Panel.

Recommendation 1a: If direct mailings are too expensive, prioritize underrepresented groups. This may require a creative process to find where those folks live.



Recommendation 2: The City should devote a little more resources and more time to these processes.



- **Rationale:** A process that includes residents of under-represented communities requires more support services that need to be prioritized by the city (Zoom, education, onboarding, stipend, internet access, translation, etc.).
- **Rationale:** By front loading this democratic process you are more likely to save money/time/stress because of a better representative voice.

Recommendation 3: Prior education should not be a requirement for engaging in public processes. It creates a fair environment when everyone starts with the same information.



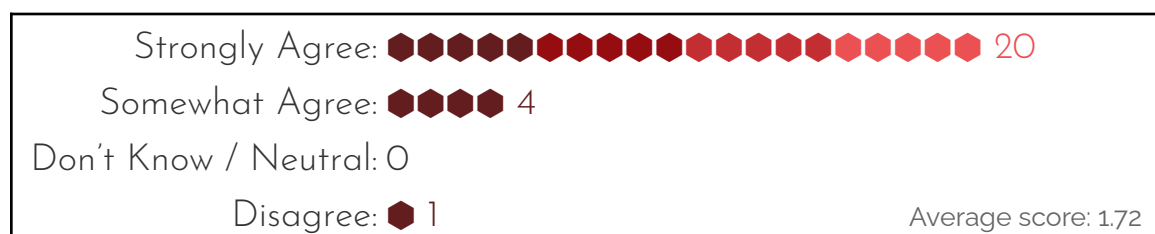
- **Rationale:** Giving everyone the same opportunity/access to information is important.

Recommendation 4: The City should adopt this process.



- **Rationale:** There's a tendency for the loudest voices to rule in town hall meetings organized by the City. This Panel is a part of our Great Democratic Experiment – a jury of our peers.
- **Rationale:** Rules of civility create good and productive results.
- **Rationale:** Panelists feel a certain weight of responsibility to speak up and be part of something productive.
- **Rationale:** By getting a random selection of people, this Panel is much more diverse than who shows up to public meetings.
- **Rationale:** Public officials like to get the real, raw story from everyday people. Usually you just get representatives of interest groups. Here Panelists are speaking from our own experiences.
- **Rationale:** Processes like these are rewarding and educational! Listening to others on this committee has been educational and helpful to better appreciate the diversity of my neighbors.

Recommendation 4a: The City should adopt this process either by the creation of its own moderation group or by the employment of Healthy Democracy and/or similar civic engagement organizations.

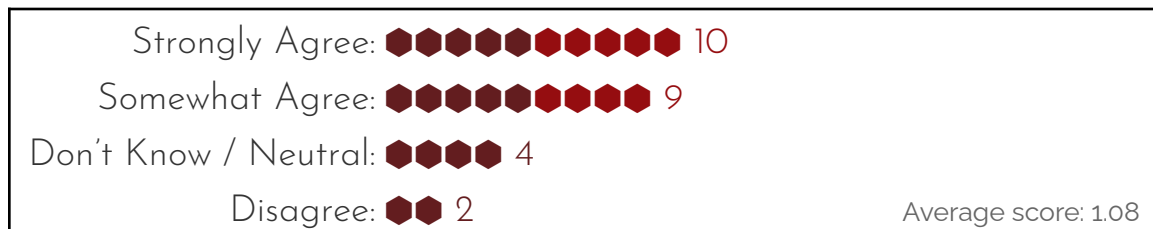


Recommendation 5: Every committee involving residents should provide laptops, access to the internet, and a stipend (like this process did).



- **Rationale:** These are necessary for individuals who would not participate otherwise due to accessibility.
- **Rationale:** A fair and even sample of the population is important. Accessibility is key to representative voice.

Recommendation 5a: Provide childcare during meetings.



- **Rationale:** Wider diversity of participants, especially for young families.

Recommendation 6: Make these processes as apolitical as possible.



- **Rationale:** Being free of political influence has been key to this Panel's productivity.

Recommendation 7: The City should figure out where the need for volunteers is and provide an inventory of different opportunities for members of this Panel to join.



Recommendation 7a: Provide a map of the support systems that would funnel folks in to participate in those opportunities.



- **Rationale:** Some people on this Panel were motivated by the topic, for others it was something else. So the City shouldn't only offer housing opportunities.
- **Rationale:** Volunteers are often expected to do all the legwork to find opportunities.

Recommendation 8: Allow for individual input in addition to collective input; provide space for disagreement and free expression of individual opinions.

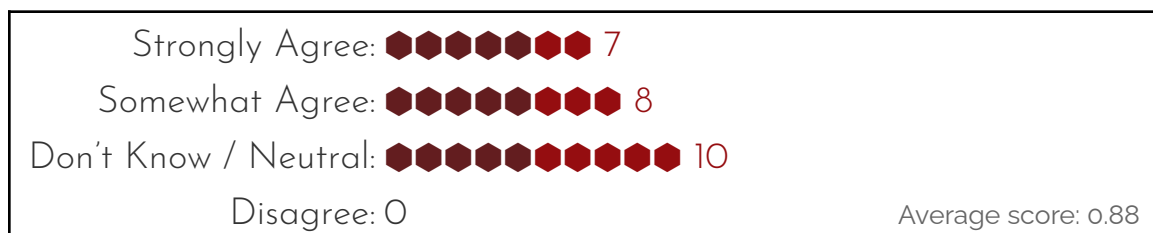


Recommendation 9: Evening meetings are really good. Daytime meetings are really hard for folks who work during the day.



- **Rationale:** Most are working during the day and Saturdays are tough.

Recommendation 9a: Day time meetings may be beneficial, as well. This could allow a different demographic.



Recommendation 10: The City should think about what training they can provide to set folks from this Panel up for success in other engagement opportunities.

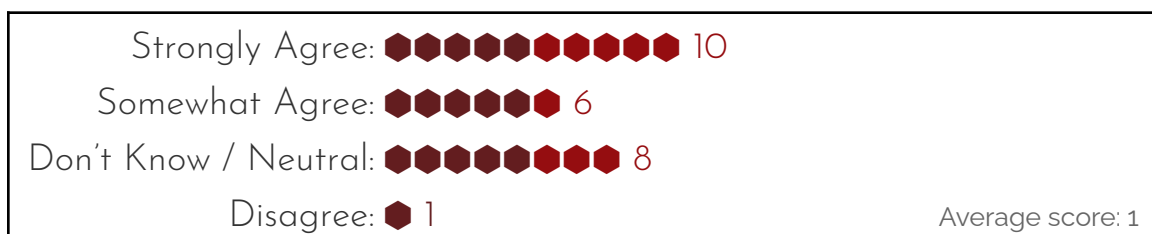


- **Rationale:** Other Boards and Committees are less protected from political influence than this Panel is. People need to be prepared for that.
- **Rationale:** Don't assume the skills and roles from this Panel will translate exactly.
- **Rationale:** This panel got trained/on-boarded together by presenters during the process, but this could be done before the process itself. Committees lose or don't attract people when they don't do on-boarding right away.

Recommendation 11: There should be a mix of us into other processes = a mix of old and new folks.



Recommendation 11a: Aim for 50/50 split.



- **Rationale:** This allows folks with more experience to mentor new folks and for fresh ideas to be infused with those who have experiences going through these processes. This prevents only a few people being the ones who always participate.

Recommendation 12: Before rolling out any process like this, prototype it in advance.



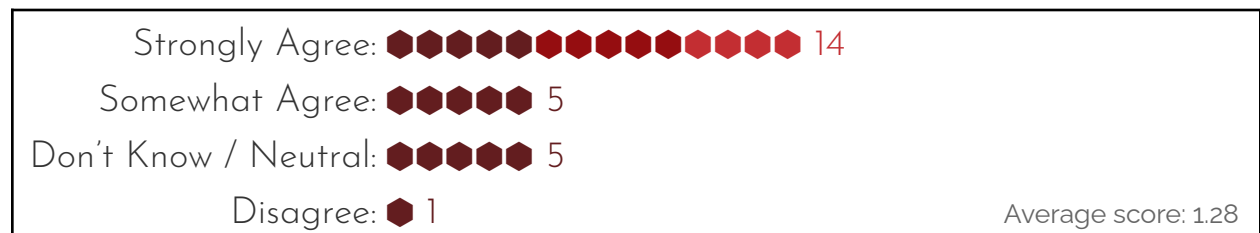
- **Rationale:** If you want wider adoption of this kind of process, you need to know the success rate, things that can go wrong, etc.
- **Rationale:** A template would allow for more seamless adoption and productive outcomes.

Recommendation 13: The City should help keep us involved and funnel us into other opportunities so this isn't just a one-time engagement.

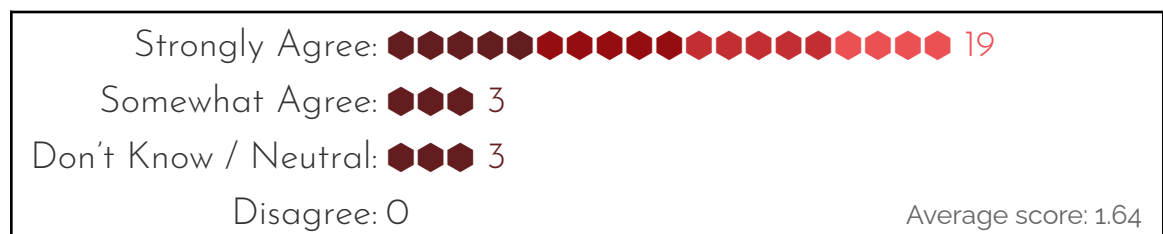


- **Rationale:** The number of new people on this Panel is very high – maybe 90+% who have not participated before – so the city should not let us go.

Recommendation 14: Offer translation and interpretation services.



Recommendation 14a: Offer live captioning service for hearing impaired, and services that are available that do translations.



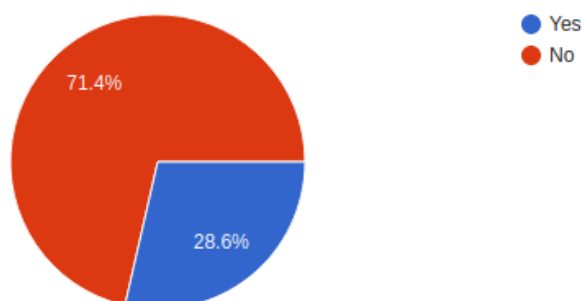
Appendix: Panelist Experience Survey Results

The questions on this survey were authored by Panelist members of the Panel's Process Oversight Subcommittee and unedited by staff. These are the unabridged results of that survey.

Question 1

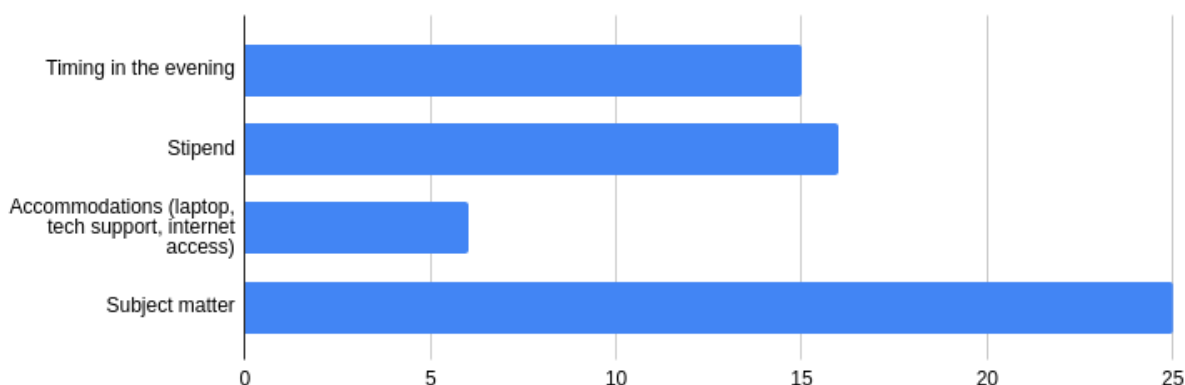
Thinking about the opportunity to serve on this panel, if you had only seen an email or an ad in the Register-Guard calling for volunteers to participate, would you have responded to it?

28 responses



Question 2

Regardless of how you responded to question 1, what motivated you to reply to the initial mailing you received asking for volunteers to serve on this panel? (Choose all that apply)



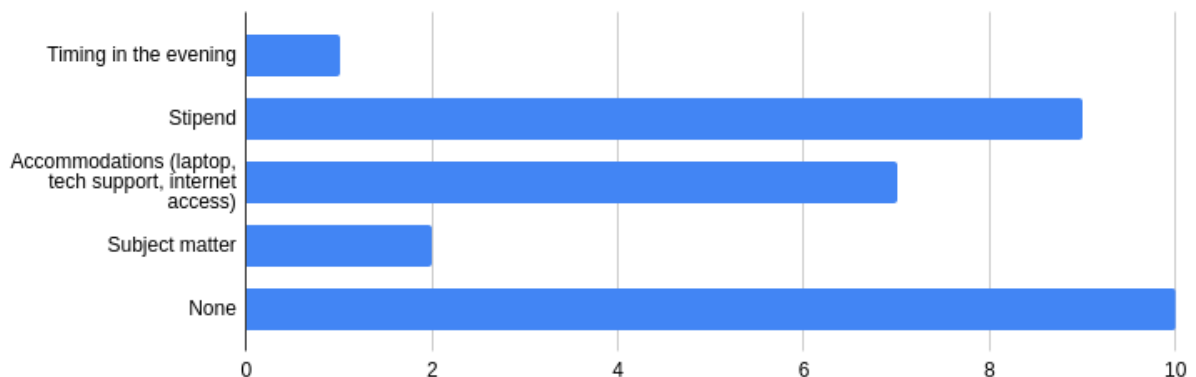
Other free-response answers to this question:

- I care deeply about my community.
- Family suggested applying together
- good opportunity to get involved, and knowing that I would bring needed diversity to the panel
- Community participation
- A general inclination towards civic participation in order to contribute to the grand experiment of American democracy.
- Opportunities/knowledge useful for the future.

- I was under the impression that it was to help solve the problem of the unhoused population here in Eugene
- The opportunity to understand better how cities operate. Housing is such an important and large topic and learning about all the factors that inform the issue.
- Being able to have the opportunity to voice my opinions about the city we live in
- Figured it would be an interesting experience and learning opportunity
- Great staff
- Participating is my way of exercising social responsibility
- I was generally interested in the process and topic. I also wanted to be a part of the group who helped better the City that I love.
- Desire to contribute to the community in some way. I've admired public servants and those who've gone out of their way to better the community, and wanted to go for it!

Question 3

To serve on this panel you are receiving a stipend and the option of some accommodations (laptop, tech support, and internet access). Which of these would have been a deal-breaker for you? (had it not been offered you would not have volunteered to serve)



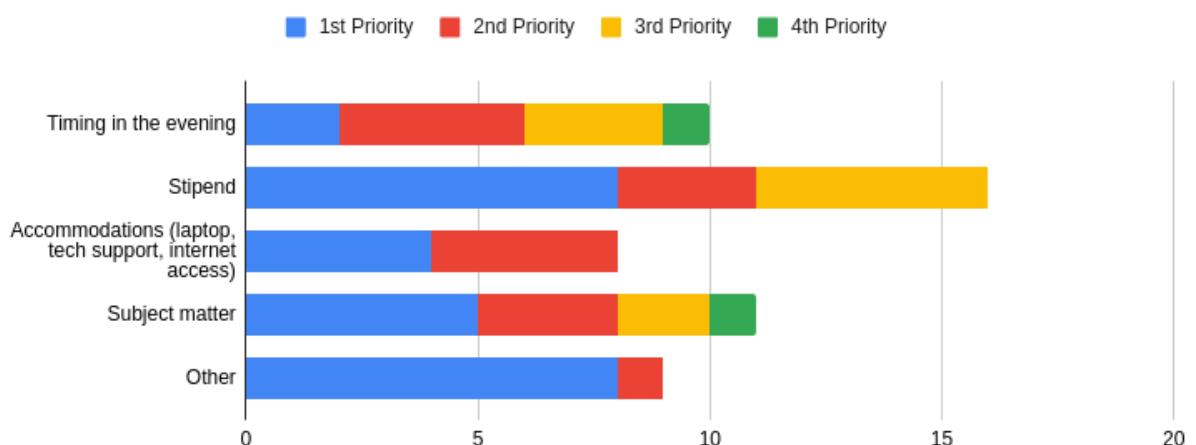
Full text of answers to this question (the above chart is a summary of these):

- subject matter
- Tech support
- i do not have a laptop with out i would not have done the panel
- No
- Stipend. I am a full time college student. Being compensated for my time made this accessible to me.
- At this point in my life, the stipend.
- Neither
- i still would have volunteered.
- none, though the stipend made it feel "fun"
- Nothing. I still would have volunteered.
- It was the accommodations. If it wasn't listed that people could receive tech support I would not have applied
- because it would not have been a fair sample of Eugene's population.
- The stipend! As a student, this is wildly important since a lot of my work right now is internship-based and unpaid. This is a wonderful relief from it all and allows me to take seriously my activism and advocacy work, as well as feel more empowered by it and engaged!
- I would have volunteered without the stipend, but most wouldn't. I believe you should compensate people for their time if you expect the most productive results from this process.
- Out of these accommodations the stipend was the deal-breaker for me because I already had access to the other things.

- I agreed to help with the unhoused population. The stipend is an added bonus
- I likely would only have volunteered without a stipend if there were fewer December sessions. Such a large time commitment with a high frequency of meetings would have cut into my time available for paid work.
- The stipend is much appreciated. I didn't need assistance with tech accommodations.
- If stipend had not been offered...that would most likely have been a deal-breaker
- The stipend definitely helped as I am saving for a house. Not sure if I would have committed that much of my time and energy just based on my interest in the new experience alone. If I did not have a current job probably I would have, might still do, but a stipend definitely made it an easier yes knowing that I will be sacrificing the free time that I have.
- Not being able to use zoom.
- I did not need the accommodation. Having said that, the timing in the evening would have been the deal breaker. Also, the fact that it was on Zoom (online) meant that I did not have to travel/commute. The time volunteered for was exactly what was spent.
- I still might have volunteered if these services weren't offered, but at the same time I was very skeptical that this opportunity might have been a scam at the start, and without the support providing some legitimacy to the program I might not have joined for that reason.
- I would not have been able to volunteer without the benefit of the loaner laptop.
- I would have volunteered either way (Given I received the information similar to what I got in the mail. If it was an email or a very brief overview I would not have taken the time to read about it) However I'm not sure I would have continued throughout the whole process and applied myself in the same way without the "Kick in the pants" that the stipend gave me.
- If I didn't have internet access, obviously!
- N/A. I would have happily volunteered regardless, and I had everything I needed to be able to participate. I love this stuff, personally.
- When I responded to the letter, I didn't realize that we would receive a stipend, it just looked interesting to me.
- stipend was a bonus, but the subject matter was important to me
- Laptop

Question 4

In what order were these accommodations most important to you?

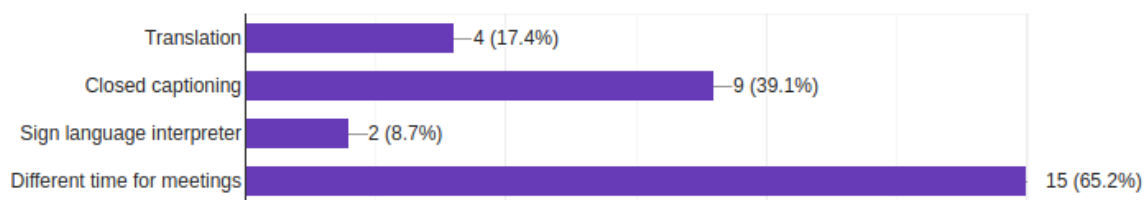


Note: All who chose to explain their answer of "other" referred to the previous question.

Question 5

Now we ask you to think of some of your friends, family members, or co-workers: What other Panelist accommodations do you think they would have needed to have volunteered for the panel? (Choose all that apply)

23 responses



Other free-response answers to this question:

- Spanish language meeting on its own
- I am not certain that some would have responded to the letter
- it may be helpful to a panel that's half day people, with their own moderators simultaneously in order to represent other sections of the population.

Question 6

As you've spoken to friends, family, and co-workers about this panel, is there something that they've said about them wishing they would have joined if only . . .

- sat morning would be hard for most of my friends
- No, I don't discuss my work all too much with friends and family, so I don't know that they were informed enough to create the desire to fill a similar role as me.
- No. I haven't spoken with that many people about it, though.
- they had the time
- they had received the initial mailing, lack of consistent work schedule would make it difficult
- they had the opportunity in their city.
- My parents both would have loved to be here to help but the time didn't really work for them because they are both very busy with work.
- No. They just championed me for participating.
- We moved to Eugene near the start of the virus so I don't really know any locals.
- "if I only had the time..." she is very interested and wants to know more about the subject matter.
- my friends and family didn't really care one way or the other
- If they had heard about it from someone, or notified in newspaper
- Friends and family would join if a panel was held online. Convenience was the key factor.
- To be honest, many of my family and friends think this panel is for show and won't make much of a difference in the long term.
- They had received the invite.
- The people who I spoke with either were not able to volunteer or were not selected, I have heard no comments about "if they did this I would volunteer"
- they knew about it also because they would have liked their voice to be heard.

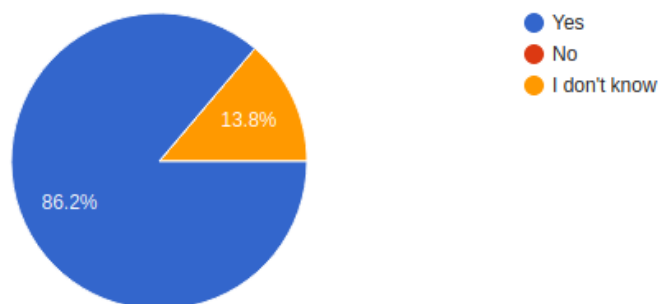
- If only they had gotten notice sooner, checked their mail, had instead gotten an email, phone call, was at a better time for them--which varied, etc. A few connections of mine wished that there was some other way they could have contributed since they hadn't been selected, because they showed interest in all of it.
- None have said that it is very interesting but did not say that they would want to do this. I am in the older age range, I think that would be the reasoning for their response
- they lived in Eugene

No / None / N/A: **10** (including those "no" answers further explained above)

Question 7

Given your experience as a Panelist, if another opportunity presented itself for you to be of service to the City, would you volunteer?

29 responses



Question 7a

Please describe why or why not.

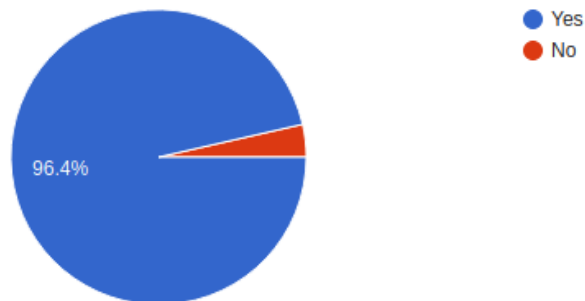
- Y'all need help
- Depends on what I am asked to do.
- i learned so much
- Making my contribution and bring my thoughts are important
- This was meaningful and enjoyable work. I'd like it even more if it was in person!
- I've enjoyed being part of a democratic process beyond voting and dealing with issues on a deep level along with a team.
- I enjoy learning more about the local level of government
- i appreciate the opportunity to put my two cents in and be in the loop about what changes are being made in my city
- This has been very positive, the boarding/learning together has made it very accessible, joint experience as opposed to just me going through it as the new person on the committee.

- Depending on the opportunity, if I felt I had something to contribute.
- I enjoy being able to help the city as a whole.
- I am incredibly passionate about social justice work, especially in my own community! I am always actively looking for ways to get involved and advise / affect / be a part of positive change that works to ensure equity, accessibility, and accountability. It has been such a joy to be a part of this advisory panel - Working on the community / policy level is really interesting and for me and is something I am deeply passionate about, as I believe it is of utmost important that we invite, involve, and make welcome a diverse array of voices and lived experiences to engage in and represent/be represented by this work and the policies that stem from it.
- Duty, progress, participation in democracy, and improving our community.
- I have had a great experience on this panel and I feel like the work I am doing actually matters and will be important for the future, so if there is an opportunity in the future like this I would most definitely take it. The subject of HB 2001 and housing in general was also something I didn't know a lot about so my eyes have really been opened through this process.
- Depending on my time and availability outside of other commitments
- This has been an interesting and educational experience about a pressing issue. It has made me think about other ways to get involved in issues Eugene faces, so yes, I would consider another opportunity like this one.
- The process has been very informative and I appreciate having my voice heard.
- Because the people that makes decisions are going to hear what we think about those decisions, rules or restrictions. I think is a noble principle, being able to be heard.
- Depends on what the subject matter is, how much time I had available, when they are meeting. I am lucky in that the time periods for the zoom sessions worked with my work schedule, but that may not always be the case in which case I would leave it open for someone else.
- Learned how the city of Eugene cares about the city & citizens.
- I answered yes, but with a qualification. It must be a subject matter that I am interested in, and it should be convenient, like online meetings.
- It depends. I would love to be involved with a project I could work on with a small group where I feel like I could have a productive conversation where people listened to each other.
- I love Eugene and her people.
- I feel like my opinion matters and are actually being heard, I don't feel like I'm "lost in the herd". I also have really enjoyed learning more about this topic and expanding my understanding of the city and the people who live here.
- I have always been community-minded and am always willing to volunteer where I may be of use. After participating in this panel discussion (which I surprisingly enjoyed!) it has given me the impetus to want to further participate.
- I would volunteer because I enjoy being a public servant, volunteering, and helping my community in anyway possible.
- I love the fact that we have a voice in our city government
- Being able to hear diverse opinions and being to express my own
- It's great to be of service to the public.

Question 8

Regarding the opportunity to serve on this panel, if the work of the panel was extended for another round of session, would you stay on? (with the stipend and accommodations provided)

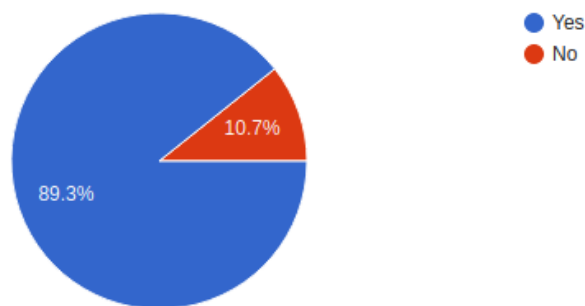
28 responses



Question 9

Is this your first time volunteering for service to the city?

28 responses



Question 9a

If you HAVE volunteered before, please list in what capacity.

- Not in Eugene. I served on the Washington Co. 911 committee, Chaired the Lincoln Co EMS Committee and was a member of the Tillamook Co. EMS Committee.
- I have volunteered a little bit for FFLC (Food for Lane County).

Question 9b

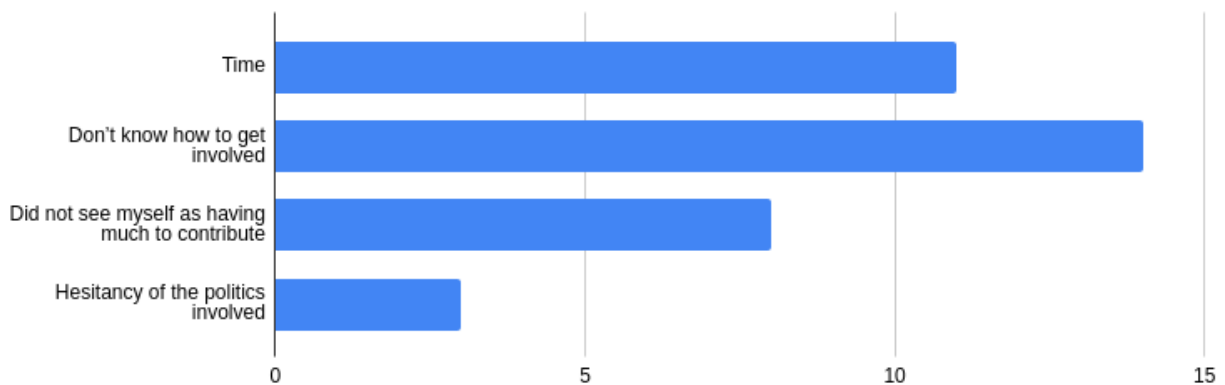
If you HAVE volunteered before, could you describe how your experience on this panel compares to your previous experience:

- The general aim was the same - advise a government body on pertinent issues.
- The biggest difference with the experience on this panel and my past experiences volunteering would definitely be the online aspect, since there wasn't a

pandemic when I volunteered previously. I also did different work than we are doing here, and the work we are doing here is definitely much more immersed with information.

Question 9c

If you HAVE NOT volunteered before, what has prevented you from doing so? (Choose all that apply)



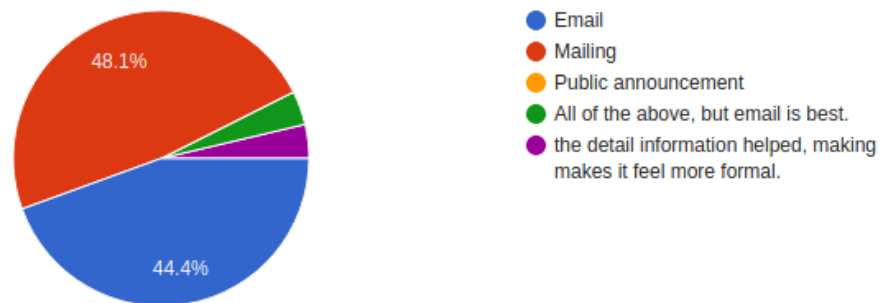
Other free-response answers to this question:

- I'm new to Eugene
- have not had an opportunity
- I volunteer for different non-profits non-affiliated with the city.
- I am young, I am only starting out.
- new to the city and had not yet figured out what topic to to plug into
- School work
- I only moved here a year ago!
- Trying to find where my contribution feels meaningful.
- was never offered an opportunity and never had the drive to seek one out myself. I might now
- Convenience. Subject matter was not of interest.
- I don't feel like i agree with everything the city does and would be concerned my opinions would be completely ignored.
- Actually had something lined up with the Lane County History Museum in Spring 2020 before shutdowns began.

Question 10

In the future, if the city has opportunities for you to serve as a volunteer on a panel, a board, committee, etc, how would you like to be contacted on the opportunity?

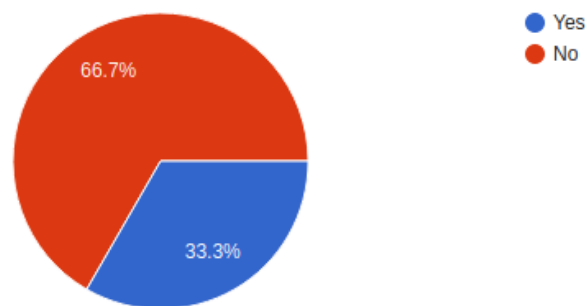
27 responses



Question 11

Finally, thinking about the times of days that best fits your availability for service work: Would you have been able to attend these meetings if they had been during the daytime?

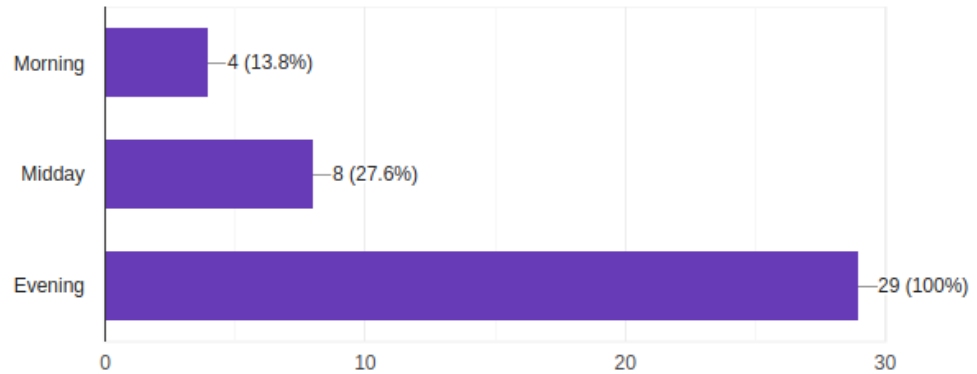
27 responses



Question 12

What times of day works best for you for service to the city? (Chose all that apply)

29 responses





Middle Housing Code Amendments Developer Focus Groups – Summary Report – May 2021

Background

Two focus groups were held on Thursday, April 22, 2021 and Monday, May 10, 2021 via Zoom. Attendees included a mix of market-rate, workforce, and Affordable Housing developers and project leaders with experience delivering affordable and middle-housing types in this community. Better Housing Together facilitated the discussions and prepared this summary.

The groups were convened to offer feedback on identified questions from City staff and the Planning Commission about development feasibility and the Middle Housing Code Amendments. Discussion focused on choices among various actions and efforts to align regulations and incentives with the project's requirements, values, and goals.

The requirements of HB 2001, the City's implementation timeline, current project status, the "Allow/Encourage/Incentivize" options, and the Values & Principles established by the deliberative review panel and public involvement process were summarized at both meetings.

Attendees

Alec Dakers, Rainbow Valley Design and Construction
 Kellie Devore, Habitat for Humanity Lane County
 Emily Reiman, DevNW
 Andrew Heben, SquareOne Villages
 Jan Fillinger, Studio e-Architecture
 Dylan Lamar, Cultivate Development
 Bill Randall, former Planning Commissioner, Arbor South Architecture & Planning
 Dan Hill, Arbor South Architecture & Planning
 Richard Shugar, 2Form Architecture
 Nir Pearlson, Aligned Architecture
 Doug Bulski, Granite Property Management
 Greg Brokaw, Rowell Brokaw
 Frank Visconti, Rowell Brokaw
 Jacob Fox, Homes for Good
 Ela Kubok, Homes for Good
 Phil Farrington, CDC Management
 Paul Tanner, Hayden Homes
 Ryan Jennings, Hayden Homes
 Matt Powell, Gallic Financial
 Jennifer Knapp, City of Eugene
 Terri Harding, City of Eugene
 Kaarin Knudson, Better Housing Together, Facilitator



General Comments

Discussion of housing access, regulatory controls that guide housing development, incentives and additional City efforts that could support more cost-effective housing production.

- Important to frame Middle Housing Code as “least restrictive to housing” rather than “least regulation.” Significant regulation exists for all housing types, including middle housing. Land use plays a role but there are also structural/building and energy codes, as well as requirements from lenders.
- Our current residential zoning restricts certain people from having access to land (space and property ownership). Land should not be only accessible to the wealthy. The current code was developed and refined over time to restrict (block) certain people from having access to housing in certain areas. Important that this code addresses that exclusion.
- Drawing from experience with middle housing development using the current code paths (PUD, subdivision, etc.), the fear of infill and multiple households per lot is unfounded. Outcomes are positive and desirable. New housing is high-quality and energy-efficient and many people are seeking smaller housing types. A mix of housing in neighborhoods make them more accessible to different types of households and more interesting places. Many older neighborhoods already have some mix of housing types.
- More housing supply is needed at all incomes, not only Affordable Housing. All housing is valuable and contributes long-term community value in multiple ways.
- Cost of on-site and project infrastructure needs to be addressed and value-engineered. We can only take so much out of the cost of a structure. Projects are spending \$150,000 before getting to the foundations (site development costs for stormwater, parking, underground utilities, utility connections, etc.). Affordable targets for workforce housing (ownership) are \$200-250,000 and current practices are generating \$400,000 outcomes.

Lot Coverage Summary Comments

Specific questions regarding: the impact of 50% lot coverage on feasibility, open space and impervious surface area requirements, and code provisions or incentives that could encourage smaller and more affordable units.

- 50% lot coverage seems like an unnecessary limit.
- Small infill is a challenge. Should use a sliding scale: Smaller lot = increased coverage.
- Allow ample height limit if lot coverage is a concern.
- Don't limit coverage and also squash heights.
- More coverage would be helpful and more flexible to site conditions (trees, topo, etc.).



Special Area Zone Summary Comments

Questions regarding design standards in Special Area Zones and the exemption of middle housing from these standards, as well as a question as to whether this would encourage middle housing rather than allowable, higher-density projects.

- New Middle Housing rules should apply City-wide.
- Consistency and clarity is important in development process.
- All middle housing should be exempt from SAZ-specific design standards.
- Exclusivity and obstructionism in some neighborhoods is a problem.
- “I got here first” should not be driving decisions about community-wide housing needs.
- Some Special Area Zones are intentionally constructed to repel infill housing and this puts them at odds with intention and requirements of the law.

Plexes – Attached and Detached Summary Comments

Discussion of whether there is a financial or feasibility advantage (or disadvantage) to allowing plexes to be either detached or attached. In general, are attached plexes more or less financially viable to build and rent/sell, all other things (e.g., unit size, design, etc.) being equal?

- Value in both attached and detached. Recommendation to keep both options open equally.
- Attached is more affordable to build (shared structure), but currently drive projects into commercial building code.
- Detached are more expensive to build and more complex, but have site flexibility and livability advantages.
- Detached option could be route to keeping an existing structure on site.
- Large, deep blocks/lots lend to infill of detached units behind existing homes.
- Detached units can facilitate certain homeownership paths, which is desirable.
- Can be difficult if condominium structure is required. Cluster subdivision is a good path.
- Detached units could lead to incremental, neighbor-specific development rather than McMansion quads.

Cottage Cluster / Smaller Unit Summary Comments

Discussion of whether reducing the maximum/average size of cottages would impact feasibility; if cottages should be allowed on individual lots (ownership options, not only rental); and if allowing cottages on smaller lots near transit would encourage smaller units and more production.

- General sense that development of smaller units will be addressed via site capacity studies and other regulations.



- No strong objection, but overarching skepticism of this approach. Unnecessary.
- Feasible types tend toward smaller units, so doesn't seem to need code direction.
- Restriction could repel some projects. Controls on sizes should be addressed via incentives or via density/unit bonuses.
- A lot of people would love access to a smaller home.

Townhouse Summary Comments

Discussion of whether townhouses/rowhouses should require street frontage, and if maximum density or minimum lot size should control their development.

- No need for frontage requirements.
- Townhouse development is very lot dependent and doesn't typically need density restrictions.
- Deep blocks/lots have rear-lot potential that shouldn't be discouraged.
- Using max density (rather than lot size minimums) could steer away from small units.
- Don't try to direct or predict type: level the playing field and let other regulations guide.
- Use incentives as leverage and bring affordability along.

Parking

Discussion of requirements, location, format, impact on feasibility, and relationship to financing and street standards. Discussion of attached garages with cottages and influence on feasibility.

- Parking strategies/locations need to be flexible. Parking flexibility will increase options.
- City can incentivize certain outcomes, but it shouldn't restrict how parking is organized.
- If private off-street parking is important to people, it will get built. Don't require it.
- Some lenders require parking with project financing, but banks will make loans in walkable neighborhoods. Lending practices will change with housing.
- Some Affordable Housing funders offer incentives for reduced parking/GHG emissions.
- City parking regulations should remain separate from current lending practices.
- Requiring off-street parking will make many sites infeasible. Sloped sites, sites without alleys, sites with existing homes often are eliminated from candidate pool.
- In older neighborhoods, many houses don't have garages or off-street parking.
- Many townhomes will want parking but amount should be flexible.
- Quads could be 0.5/spaces per unit or less.
- Reduce parking requirements and allow configurations like tandem parking (e.g., one car parked behind the other) to increase flexibility to accommodate on different sites.
- Look at street width and fire code if on-street parking being used to meet requirements.
- Consider new street standards so cottages can be developed as car-free zones.
- Garages are often just used for storage.



Attached Garages and Larger Footprint Cottages Summary Comments

- Be flexible and allow a larger footprint for an attached garage. This will allow designers to respond to the unique characteristics of a site.
- Alley access would allow for good design with attached garages.
- Age-in-place designs need option to have cars accessible and close to units.

Design Standards

Discussion of modest design standards (entry orientation, driveways/access, articulation, etc.) and influence on feasibility and design quality of outcomes.

- With access-related design standards, be careful not to disallow the best outcome while trying to encourage a different one. Portland has seen some unintended consequences with over-directing access standards.
- Allowing entries/doors to open onto a shared open space or clustering units around a space is better and more flexible option. Opening to a shared space supports community and is more flexible. Many successful historic examples of doors not facing the street.
- Better approach would be more flexible: allow front doors, porch elements or gateways to be part of entry. Front doors can orient to a courtyard and open to a porch, but not be required to face the street (example from Bend).
- To have entries facing the street is especially difficult on narrow, deep lots.
- Multi-family standards have many problems; should be entirely rewritten. Some good articulation requirements, but overall far too complicated. For a specific home to look good is more important than meeting generalized design standards.
- Adjustment Review process can be onerous and it adds cost and time to projects. Different standards can conflict with each other and with site conditions.
- Suggest Adjustment Review options built into code. Seek simple solutions and flexibility rather than cumbersome processes that require extra time and money.
- Entries shouldn't have to face busy streets. When street speed is over 40 mph, homes should not be required to have entries facing the street. Housing unit should not bear all of the burden.



Incentives

Discussion of various actions that could support more Affordable Housing, the construction of particular types of housing, and more housing in particular locations.

- Pursue a “Deeper Affordability” option for Affordable Housing, with unit or density bonus beyond what is typically allowed. This type of approach can reduce public subsidy needed by a factor of 10. Look at what Portland has done and build on this locally.
- Target small lot infill and locations with multiple challenges for housing development.
- Some interest at incentivizing restoration of an existing structure when adding units to a site. Do not restrict to this scenario but incentivize it. Connection to preservation of “naturally occurring affordable housing” and energy-efficiency funds for maintenance.
- Elephant in the room is utility connections and requirements. Can be in the \$10s to \$100s of thousands of dollars. City Public Works and EWEB should partner on incentives and MH utility approaches.
- City should look at allowing shared utility connections. Look at developing an agreement with the utilities that would allow a private easement for a single, shared connection for sewer, water and electricity for multiple homes on a site.
- Developing a Middle Housing MUPTE to increasing density or prioritize certain areas would align with sustainability goals and could be bundled with State incentives.
- City needs to make sure advertised incentives are budgeted adequately. The SDC credit near transit and the SDC credit for Affordable Housing have a cap that is reached every year. Projects seeking this support are delayed or turned away.
- A density bonus could be more manageable, would make more sense than an unfunded incentive program. Currently, one large project can consume the entire annual allocation of SDC waiver support.
- SDC waivers are an influential tool to create more housing and housing in specific places.

Other City Actions To Support More Affordable Housing Supply

Discussion of actions outside requirements of Middle Housing Code Amendments project, but related to overarching goals of affordability and



- Systems Development Charges (SDCs) need to be addressed. How they're approached doesn't make sense with other housing goals and these fees can kill projects.
- City should make it clear they are taking a new approach to affordability and availability with this new code. Currently, it's too difficult to get good/clear answers from the City on specific projects; developers need clear answers early. The longer reliable/good information is delayed, the greater the cost to the project and potential price of the housing. The new code presents the opportunity to upgrade this process and help housing projects find their best path through the code and permitting process.
- City should implement a Master Builder program and pre-approved status. Architects carry the project liability already; this could facilitate better, swifter projects.
- City should pursue pro-forma analysis to understand redevelopment feasibility of various sites and also the likelihood of tear-downs. There is a general misunderstanding about how easy or inexpensive it is to demolish an existing structure that has any value. It's difficult to carry that additional cost in a project. Additional pro-forma analysis can also help assess whether the code is working as intended and help to illuminate barriers and understand feasibility/infeasibility.
- To see real progress with opportunities facilitated by middle housing, several issues identified in the Housing Tools & Strategies process need to move forward (infrastructure specifically, but also paths and permitting speed, etc.).

Closing Thoughts

Discussion of things the City should be thinking about with these draft code amendments (see also General Comments on page 2).

- The approach and engagement with this work is refreshing and appreciated.
- Prioritize flexibility. Infill housing is already challenging. Flexibility is a strong incentive.
- Work to address on-site and project-related infrastructure costs. Only so much can come out of the cost of the structure.



MEMORANDUM

Summary of Draft Code Amendments – All Middle Housing Types

Eugene Middle Housing Code Amendments

DATE April 19, 2021
TO Eugene Planning Commission
FROM Kate Rogers and Matt Hastie, APG
CC City of Eugene Middle Housing Project Team
Ben Weber and Emma-Quin Smith, SERA
Becky Hewitt and Tyler Bump, ECONorthwest
Julie Fischer, Cogito

This memorandum summarizes initial draft code amendments as part of the Eugene Middle Housing Code Amendments project. **The memo has been updated to reflect draft recommendations for all middle housing types.** We will be reviewing initial code recommendations at two Planning Commission (PC) work sessions on April 13 and 26. The April 13 meeting focused on the Project Team’s recommendations related to duplexes, cottage clusters, and Special Area Zones, and followed up on the key code issues that were discussed at the March 9 PC work session. The April 26 meeting will focus on recommendations related to triplexes, fourplexes, and townhouses.

Input received at the April 13 and 26 work sessions will be incorporated into a revised draft of the code amendments. The PC will have the opportunity to review that revised code amendments package at the May 17 work session. The team is scheduled to deliver an “adoption-ready” draft set of code and policy recommendations by the end of June. However, the City will continue to seek input on and revise these draft amendments. In the latter half of the year, City staff will manage revisions, prepare an adoption package, and bring the middle housing code amendments through the local adoption process.

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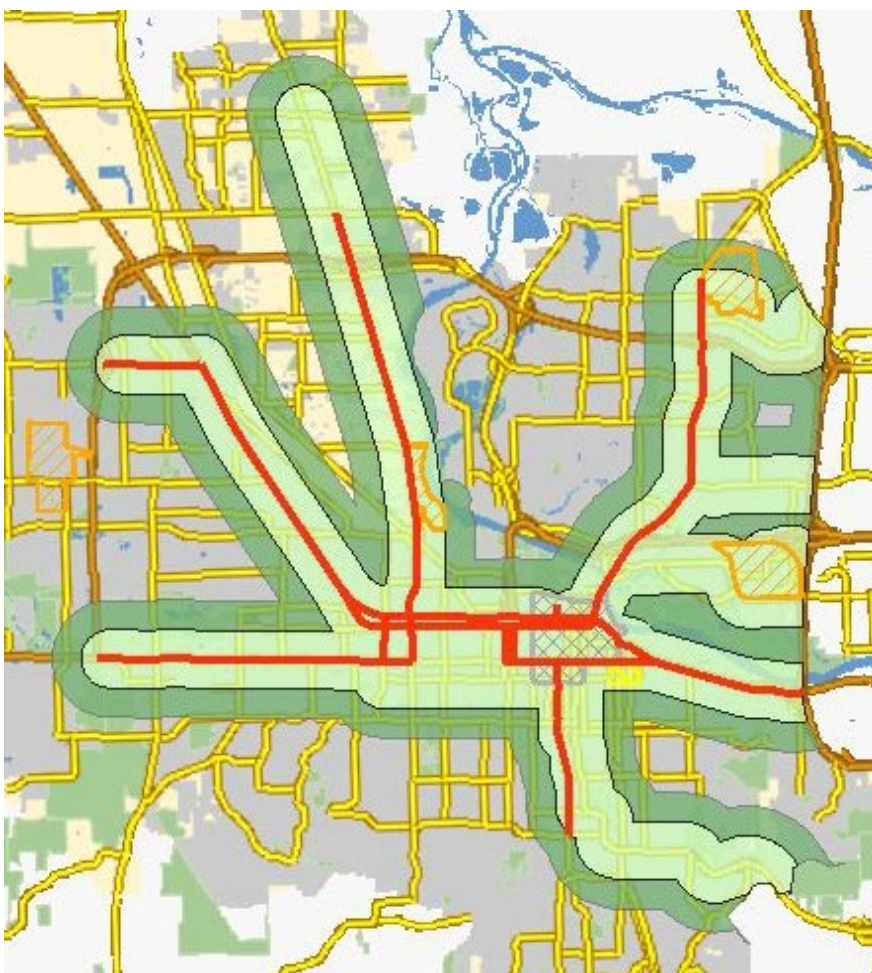
Key Decision Points

At the March 9 work session, the Planning Commission provided input on some key questions that the Project Team was considering in drafting code amendments. Following is a summary of the team's recommended approach in the draft amendments regarding each of these questions.

1. Which approach to code writing should Eugene use overall, recognizing there may be some variation among specific standards? ALLOW, ENCOURAGE, INCENTIVIZE?

Recommendation: There has been overwhelming support for landing between the ENCOURAGE and INCENTIVIZE levels of implementation from the Planning Commission as well as from the online survey, Healthy Democracy, and the Roundtable meetings. The Project Team generally recommends the ENCOURAGE approach, plus INCENTIVIZING middle housing near transit corridors with a few key standards—such as lot size and parking.

The proposed geography for applying the INCENTIVIZE approach is within ¼ mile of frequent transit lines. This methodology would be consistent with the methodology for Transportation SDC incentives (see light green area in the map below).



2. Which approach should the City use for lot sizes and base zone development standards such as lot coverage, height, setbacks, parking, etc.?

Recommendation: As noted above, the Project Team generally recommends the ENCOURAGE approach for most base zone development standards such as minimum lot size, lot coverage, and height. However, for some standards (such as minimum setbacks), the team recommends the ALLOW approach, which would keep existing standards for middle housing that match those standards that apply to existing single-family detached housing in the same zone. In addition, the Team recommends the INCENTIVIZE approach to promote middle housing development near transit corridors by relaxing certain key standards in those areas—lot size, height, and minimum parking. More detail about specific recommended standards is provided below.

3. Which approach should the City use for design standards (outside of Special Area Zones) —apply the Model Code or be less restrictive?

Recommendation: In general, the Project Team recommends applying standards adapted from the Model Code. The Model Code includes a modest set of design standards that are already fairly flexible. Therefore, the team does not recommend relaxing the standards much further. Doing so likely would have very few impacts on where middle housing would be located and very limited impacts on financial feasibility or affordability.

Relative to the existing code, adapting Model Code design standards would add requirements in some places (e.g., articulation standards for rowhouses), but would remove requirements in other places (e.g., removing the alley access requirement for rowhouses, and subjecting triplexes and fourplexes to less restrictive standards compared to the current the Multi-Family standards). However, areas where design standards could be even further relaxed, if desired, are identified below.

4. Should the City permit detached plexes?

Recommendation: Pursuant to the ENCOURAGE approach, the Project Team recommends allowing both attached and detached duplexes, triplexes, and fourplexes. This would promote maximum flexibility while also encouraging preservation of existing single-family detached homes by allowing detached units to be added to a lot.

UPDATE: A questions was raised at the April 13 PC work session about the difference between a detached duplex and a single-family dwelling with a detached accessory dwelling unit (ADU). The main thing that distinguishes an ADU from a duplex is unit size; ADUs are limited to 800 square feet or 10% of the lot area, whichever is smaller, whereas duplex units have no such limit (and none is proposed). Because of ADUs' limited size, they are eligible for certain incentives, including system development charge (SDC) reductions. Eugene is also working on pre-approved plans for ADUs that would facilitate the permitting process and reduce costs. In addition, state law prohibits cities from requiring off-street parking for an ADU. These are all factors that might compel a property owner to permit a second unit on their property as an ADU, rather than a duplex.

5. Should the City allow cottages on individual lots?

Recommendation: Also pursuant to the ENCOURAGE approach, the Project Team recommends allowing both single-lot and individual-lot cottage cluster development. Allowing cottages on individual lots provides opportunities more affordable fee-simple homeownership, while allowing cottages on a single lot provides opportunities for both rentals and condominium ownership.

6. What is the preferred approach for updating Special Area Zones (SAZs)?

Recommendation: At the March 9 Planning Commission work session, we heard general support for keeping standards relatively consistent throughout the city and not subjecting middle housing to special or more onerous standards in SAZs. However, the Project Team is examining each SAZ more closely before making a recommendation. The team may recommend individual approaches for each SAZ. Some SAZs would need only minor tweaks to be compliant with state requirements for middle housing, and some special design standards may be appropriate in certain zones. However, other SAZs will require significant revisions to make them compliant with state rules and to remove barriers to middle housing. More information about options for updating SAZs is provided below. The Project Team's recommendations will be included in the next version of this summary memo (provided before the April 26 work session).

UPDATE: At the April 13 work session, the Planning Commission expressed further support for an equitable approach to middle housing allowances throughout the city, including in Special Area Zones. Several PC members recommended the approach of exempting middle housing from special SAZ standards. A few Commissioners did acknowledge the public process that went into developing special standards in the SAZs, and advocated for staying true to that process by preserving some standards that do not limit feasibility for middle housing.

After weighing this input and considering the adopted administrative rules for the House Bill, **the Project Team recommends exempting middle housing from the SAZ standards.** The team instead recommends subjecting middle housing to the most applicable base zone standards, and also to the new Special Development Standards for Middle Housing that is proposed to be added to EC 9.5000. This way, middle housing will be subject to the same set of siting and design standards throughout the city. This would ensure that middle housing is equally feasible to build in neighborhoods throughout the city—at least in terms of the regulatory environment—and would be in keeping with the community's overwhelming support for an equitable approach to middle housing implementation.

Code Recommendations

The following tables summarize proposed code amendments for each middle housing type. The tables are organized by the “levels of implementation” framework—identifying potential standards according the ALLOW, ENCOURAGE, and INCENTIVIZE approaches. We’ve identified the Project Team’s recommended approach for each standard or topic area, where there are choices to make. These tables are intended to represent the “packages” approach to lot size, lot coverage, height, parking, other development standards that was discussed at the March 9 PC work session.

Duplex

	ALLOW	ENCOURAGE	INCENTIVIZE (near transit)
EC 9.0500 Definitions	Keep duplex definition as attached units. Revise to clarify that units are on a single lot.	Revise definition to allow both attached and detached units. *Recommended Approach*	Same as ENCOURAGE
EC 9.2700 Residential Zones			
Land Use and Permit Requirements (9.2740)	No change—duplexes already permitted in R zones.	Revise housing type description to reflect detached duplex allowance. *Recommended Approach*	Same as ENCOURAGE
Special Use Limitations (9.2741)	Remove note (4) with lot size and location limitations for duplexes.	Same	Same
Development Standards (9.2750)			
Density	Exempt duplexes from maximum density.	Same	Same
Maximum Height	Keep current standards: <ul style="list-style-type: none"> R-1: 30 ft (+ 7 ft for pitched roof ≥ 6:12) 	Increase height allowance for duplex:	Increase height allowance only near transit:

	<ul style="list-style-type: none"> R-2: 35 ft R-3: 50 ft R-4: 120 ft 	<ul style="list-style-type: none"> R-1: 35 ft (+ 7 ft for pitched roof) R-2 – R-4: <i>(no change)</i> 	<ul style="list-style-type: none"> R-1 near transit: 35 ft (+ 7 ft for pitched roof) R-1 elsewhere: 30 ft (+ 7 ft for pitched roof) R-2 – R-4: <i>(no change)</i> <p>*Recommended Approach*</p>
Minimum Setbacks	Keep current standards in R-1 – R-4: <ul style="list-style-type: none"> Front Yard: 10 ft Interior: 5 ft <p>*Recommended Approach*</p>	R-1 – R-4: <ul style="list-style-type: none"> Front Yard: 5 ft Interior: 5 ft 	Same as ENCOURAGE
Maximum Lot Coverage	Keep current standards: <ul style="list-style-type: none"> R-1 – R-2: 50% R-3 – R-4: N/A <p>*Recommended Approach*</p>	Increase allowance for duplex: <ul style="list-style-type: none"> R-1 – R-2: 60% R-3 – R-4: N/A 	Further increase allowance near transit <ul style="list-style-type: none"> R-1 – R-2 near transit: 70% R-1 – R-2 elsewhere: 60% R-3 – R-4: N/A
Minimum Open Space	Keep current standard in R-2 – R-4: 20% open space -- Applies to all development in these zones, so complies with OAR.	Reduce to 10% or remove. <p>*Recommended Approach*</p>	Same as ENCOURAGE
Special Development Standards for Table 9.2750 (9.2751)			
(15) Driveways and Parking Areas.	No changes.	Exempt middle housing from special driveway and parking area restrictions in Amazon, Fairmount, and South University	Same as ENCOURAGE

		Neighborhoods in R-1, and restrictions in R-3 and R-4. *Recommended Approach*	
(18) Alley Access Lots in R-1.	Allow duplexes on alley access lots (currently only single-family is permitted). Keep existing limits on building size (800 sf / 10% of lot) and height (18 ft + sloped setbacks).	Increase the building size and/or height allowances for duplexes so they're more feasible to build (e.g., increase maximum building size to 1,200 sf and allow 2 stories). *Recommended Approach*	Same as ENCOURAGE
Lot Standards (9.2760)			
Lot Area Minimum	Keep current standards: <ul style="list-style-type: none"> Standard Lots (R-1 – R-4): 4,500 sf Small Lots (R-2 – R-4): 2,250 sf 	Reduce lot area for duplex: <ul style="list-style-type: none"> Standard Lots: 3,000 sf Small Lots: <i>(no change)</i> 	Further reduce lot area near transit: <ul style="list-style-type: none"> Standard Lots near transit: 2,250 sf Standard Lots elsewhere: 3,000 sf Small Lots: <i>(no change)</i> *Recommended Approach*
Flag Lots	Keep existing lot area minimum: 6,000 sf	<i>(no change recommended)</i>	<i>(no change recommended)</i>
Lot Width / Frontage Minimum	Keep current standards: <ul style="list-style-type: none"> R-1: 50 ft R-2 – R-4: 35 ft 	Reduce width/frontage for duplex: <ul style="list-style-type: none"> R-1: 35 ft R-2 – R-4: <i>(no change)</i> *Recommended Approach*	Same as ENCOURAGE

Special Standards for Table 9.2760 (9.2761)	Remove housing mix maximum for duplexes in subdivisions.	Same as ALLOW	Same as ALLOW
Small Lot Standards for R-2, R-3, and R-4 Zones (9.2770)	Add note stating that duplexes are permitted on small lots.	Same as ALLOW	Same as ALLOW
Duplex Division Lot Standards (9.2777) <i>NOTE: These recommendations may change based on the outcome of proposed legislation (SB 458/ HB 2283), which would mandate the allowance of land divisions for middle housing.</i>	Keep current standards: <ul style="list-style-type: none"> Existing lot area minimum: 8,000 sf Resulting lot width minimum: 40 ft Resulting lot area minimum: 3,600 sf 	Reduce area/dimension standards: <ul style="list-style-type: none"> Existing lot area minimum: 4,500 sf Resulting lot width minimum: 20 ft Resulting lot area minimum: 2,250 sf *Recommended Approach*	Same as ENCOURAGE
EC 9.6400 Motor Vehicle Parking and Loading Minimum Off-Street Parking (9.6410)	Keep current minimum: 1 space per unit	1 space per unit; allow on-street parking credit ¹	<ul style="list-style-type: none"> Near transit: 0 spaces per unit Elsewhere: 1 space per unit Allow on-street parking credit everywhere¹ *Recommended Approach*
Design Standards (outside SAZs)	N/A (City can only apply the same standards that apply to single-family)	Same	Same

¹ The on-street credit would be provided only in areas or situations where on-street parking is available and feasible for residents of duplexes. For example, it would not be an option on streets where on-street parking is not allowed or available and may not be an option in areas with metered or permit parking on-street.

	<i>detached dwellings, but Eugene has no design standards for SFD)</i>		
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Cottage Cluster

General / Development Standards

	ALLOW	ENCOURAGE	INCENTIVIZE (near transit)
EC 9.0500 Definitions	Add a new definition of “cottage cluster” that is consistent with the HB 2001 definition. Define as units on a single lot.	Keep the definition flexible as to whether cottages are on a single lot or individual lots. *Recommended Approach*	Same as ENCOURAGE
EC 9.2700 Residential Zones			
Land Use and Permit Requirements (9.2740)	Add cottage cluster to use table.	Same	Same
Special Use Limitations (9.2741)	N/A	N/A	N/A
Development Standards (9.2750)			
Density	Exempt cottage clusters from maximum density. In R-1, apply a minimum net density of 4 units per acre (per the HB 2001 definition of cottage cluster). <i>NOTE: Required minimum lot sizes for cottage clusters will result in densities higher than 4 units per acre.</i>	Same	Same

Maximum Height	Refer to special height standards for cottage clusters (<i>see Design / Special Development Standards section below</i>).	Same	Same
Minimum Setbacks	Keep current standards in R-1 – R-4: <ul style="list-style-type: none"> Front Yard: 10 ft Interior: 5 ft *Recommended Approach*	(no change recommended)	(no change recommended)
Maximum Lot Coverage	Exempt cottage clusters from lot coverage requirements, per OAR.	Same	Same
Minimum Open Space	Keep current standard in R-2 – R-4: 20% open space -- Applies to all development in these zones, so complies with OAR.	Exempt cottage clusters from open space requirements, since common courtyard standards will apply. *Recommended Approach*	Same as ENCOURAGE
Special Development Standards for Table 9.2750 (9.2751)			
(15) Driveways and Parking Areas.	No changes.	Exempt middle housing from special driveway and parking area restrictions in Amazon, Fairmount, and South University Neighborhoods in R-1, and restrictions in R-3 and R-4. *Recommended Approach*	Same as ENCOURAGE
Lot Standards (9.2760) NOTE: Eugene’s lot standards typically control only the creation of new lots. However, the Middle Housing OARs permit cities to use minimum lot size to regulate on which <u>existing lots</u> middle housing (other than duplexes) is permitted. The lot standards proposed below would regulate both the creation of new cottage cluster lots and the minimum size of existing lots that could be developed with a new cottage cluster.			

Lot Area Minimum	For cottages on a single lot, add lot area standards according to minimum OAR compliance: R-1 – R-4: 7,000 sf <i>(No cottage cluster subdivision permitted.)</i>	Apply reduced lot area: <ul style="list-style-type: none"> R-1: 6,000 sf R-2 – R-4: none (this would be consistent with no minimum lot size for triplex/fourplex) <i>(See below for cottage cluster subdivision standards.)</i>	Further reduce lot area near transit: <ul style="list-style-type: none"> R-1 near transit: 4,500 sf R-1 elsewhere: 6,000 sf R-2 – R-4: none *Recommended Approach* <i>(See below for cottage cluster subdivision standards.)</i>
Flag Lots	Keep existing lot area minimum: 6,000 sf	<i>(no change recommended)</i>	<i>(no change recommended)</i>
Lot Width / Frontage Minimum	Keep current standards: <ul style="list-style-type: none"> R-1: 50 ft R-2 – R-4: 35 ft *Recommended Approach*	<i>(no change recommended)</i>	Same as ENCOURAGE
Special Standards for Table 9.2760 (9.2761)	N/A	Add note pointing to new Cottage Cluster Subdivision Lot Standards.	Same as ENCOURAGE
Cottage Cluster Subdivision Lot Standards (9.2771) <i>(Proposed new section)</i> <i>NOTE: These recommendations may change based on the outcome of proposed legislation (SB 458/ HB 2283), which would mandate the allowance of land divisions for middle housing.</i>	N/A	Establish standards for cottage cluster subdivisions, similar to EC 9.771 Small Lot Standards and EC 9.777 Duplex Division Standards. Establish special setbacks for cottage lots, requirements for access easements, etc.	Same as ENCOURAGE
EC 9.6100 Bicycle Parking Standards	Exempt cottage clusters from bike parking standards.	Same	Same

EC 9.6400 Motor Vehicle Parking and Loading			
Minimum Off-Street Parking (9.6410)	Apply minimum of 1 space per unit.	Reduce parking requirements for smaller units. Units <1,000 sf: 0 spaces Units >1,000 sf: 1 per unit Allow on-street credit. ²	Units <1,000 sf: 0 spaces Units >1,000 sf near transit: 0.5 per unit Units >1,000 sf elsewhere: 1 per unit Allow on-street credit everywhere. ² *Recommended Approach*
EC 9.6700 Site Development Standards			
Recycling and Garbage Screening (9.6740)	Exempt small cottage clusters from recycling and garbage screening requirements.	Exempt all cottage clusters (and other middle housing) from recycling and garbage screening requirements.	Same as ENCOURAGE
Underground Utilities (9.6775)	For cottage clusters (and other middle housing) created by adding units on a lot with an existing home that has overhead utilities – exempt the new units from underground utility requirements.	Same	Same
EC 9.6880 Tree Preservation	Since SFD is exempt, must also exempt middle housing from tree preservation standards.	Same	Same

² The on-street credit would be provided only in areas or situations where on-street parking is available and feasible for residents of cottage clusters. For example, it would not be an option on streets where on-street parking is not allowed or available and may not be an option in areas with metered or permit parking on-street.

Design / Special Development Standards

These standards would be added to a new section in EC 9.5000 Special Development Standards for Certain Uses. The Project Team recommends applying these in all zones where cottage clusters are allowed, including in SAZs.

	ALLOW	ENCOURAGE
Special Development Standards		
Number of Dwellings	<p><i>Per OAR, cities can establish a minimum and maximum number of cottages per cluster, as long as at least 8 units are permitted to share one common courtyard. Cities can also limit the number of clusters per lot (for single-lot development).</i></p> <p>ALLOW: Minimum 4; Maximum 8 cottages</p> <p>Limit to one cluster per lot.</p>	<p>Minimum 4; Maximum 12-16 (or no limit)</p> <p>No limit on the number of clusters per lot.</p> <p>*Recommended Approach – Hybrid of ALLOW and ENCOURAGE: Max 8 cottages per cluster (per courtyard); no limit on clusters per lot*</p>
Setbacks	<p>Minimum building separation: 6 feet</p> <p>Perimeter setbacks and setbacks for individual lots in cottage cluster subdivision according by base zone standards.</p> <p>*Recommended Approach*</p>	<p>No minimum building separation (allow building code to control).</p> <p>Perimeter and individual lot setbacks: same as ALLOW.</p>
Maximum Building Height	<p>Limit to 1 or 1.5 stories</p>	<p>Limit to 25 feet or 2 stories</p> <p>*Recommended Approach*</p>
Maximum Cottage Footprint	<p>900 sf (per HB 2001 / OAR)</p> <p>*Recommended Approach*</p>	<p>900 sf; allow additional 200 sf for attached garage (<i>Model Code approach</i>)</p>
Maximum Floor Area	<p>ALLOW Options:</p> <ul style="list-style-type: none"> Maximum floor area: 1,200 sf (<i>ensures each unit is equally limited in scale; could go as low as 900 sf, per OAR</i>) Maximum <u>average</u> floor area: 900 sf (<i>provides flexibility for larger and smaller units</i>) 	<p>ENCOURAGE Options:</p> <ul style="list-style-type: none"> No maximum floor area (<i>could allow up to 1,800 sf, based on footprint and height—or more if allowing additional footprint for garage</i>)

	<p>*Recommended Approach – Apply both max floor area of 1,200 sf and max average floor area of 900 sf*</p>	<ul style="list-style-type: none"> Maximum average floor area: 1,400 sf (<i>Model Code approach</i>)
<p>Design Standards: The ALLOW approach would adapt the Model Code design standards. The ENCOURAGE approach would relax the standards, where appropriate. As noted above, the Model Code includes a modest set of design standards that are already fairly flexible. The intent of the cottage clusters standards is to promote quality development, create a sense of openness and community of residents, and enhance the livability, walkability, and safety of the community. There is not much “wiggle room” to apply less restrictive standards than the Model Code, while still meeting the intent of the standards. As such, the team generally recommends the ALLOW approach here.</p>		
<p>Cottage Orientation (see Figure A below)</p>	<ul style="list-style-type: none"> Require cottages to be oriented around a common courtyard. Cottages must abut the common courtyard or be connected by a path. At least 50% of cottages must face the courtyard and be within 10 feet. Cottages near the street (within 20 ft) can face the street. <p>*Recommended Approach*</p>	<p>Don’t require cottages to face the common courtyard, but still require them to abut the courtyard or be connected by a path.</p>
<p>Common Courtyard Design</p>	<ul style="list-style-type: none"> Require each cottage cluster to share a common courtyard in order to provide a sense of openness and community of residents. Common courtyards must: <ul style="list-style-type: none"> Be abutted by cottages on at least two sides. Contain a minimum of 150 sf per cottage. Have a minimum width of 15 feet. Be developed with a mix of landscaping, lawn area, pedestrian paths, and/or paved courtyard area, and may also include recreational amenities. Impervious elements of the common courtyard shall not exceed 50% of the total common courtyard area. <p>*Recommended Approach*</p>	<p>Same as ALLOW, except:</p> <ul style="list-style-type: none"> Require cottages to abut the courtyard on only one side. Reduce minimum courtyard area (say, to 100 sf per unit). Allow additional impervious area.

Community Buildings	<p>Each cottage cluster may include one community building for the shared use of residents that provide space for accessory uses such as community meeting rooms, guest housing, exercise rooms, day care, or community eating areas.</p> <p>Limit size of community buildings in same way as cottages:</p> <ul style="list-style-type: none"> • Maximum floor area: 1,400 sf • Include community building in average floor area calculation for cottages. <p>*Recommended Approach*</p>	<p>Reduce limits on size of community buildings:</p> <ul style="list-style-type: none"> • No maximum floor area. • Do not require community building to be included in average floor area calculation for cottages.
Pedestrian Access	<p>An accessible pedestrian path must be provided that connects the main entrance of each cottage to the common courtyard, shared parking areas, community buildings, and public sidewalks. The path must be hard-surfaced and a minimum of 4 feet wide.</p>	<p>Same as ALLOW, except reduce required width to 3 feet (ADA standard).</p> <p>*Recommended Approach*</p>
Parking Design (see Figure B below)	<p><i>These standards are generally intended to limit the visual impact of parking areas and garages as viewed from within the cottage cluster, from the sidewalk, or from adjacent properties—especially for larger cottage cluster developments.</i></p> <ul style="list-style-type: none"> • Parking can either be clustered or provided with individual garages/driveways. Parking (both shared and individual) may or may not be covered. • For clustered parking, the number of contiguous spaces per grouping is limited, and landscaping is required between each grouping. Larger developments are allowed more contiguous spaces per grouping. • Parking areas must be setback from street. Screening is required from the street and from the common courtyard. • Garages and carports must not abut the common courtyard. 	<ul style="list-style-type: none"> • Relax the limits on contiguous parking spaces. • Relax parking area setbacks. • Exempt attached garages up to 200 sf from the building footprint calculation. • Allow garages or carports to abut no more than 25% of the courtyard perimeter. • Do not limit size of detached garages. • Do not limit garage door width.

	<ul style="list-style-type: none">• Individual detached garages are limited to 400 sf in size.• Width of individual garage doors is limited to 20 feet. *Recommended Approach*	
Existing Structures	If new cottages are added to a lot with an existing house (SFD) to form a cluster, the OAR requires that cities exempt the existing house from the design standards that would apply to the new cottages.	N/A

Figure A. Cottage Cluster Orientation and Common Courtyard Standards

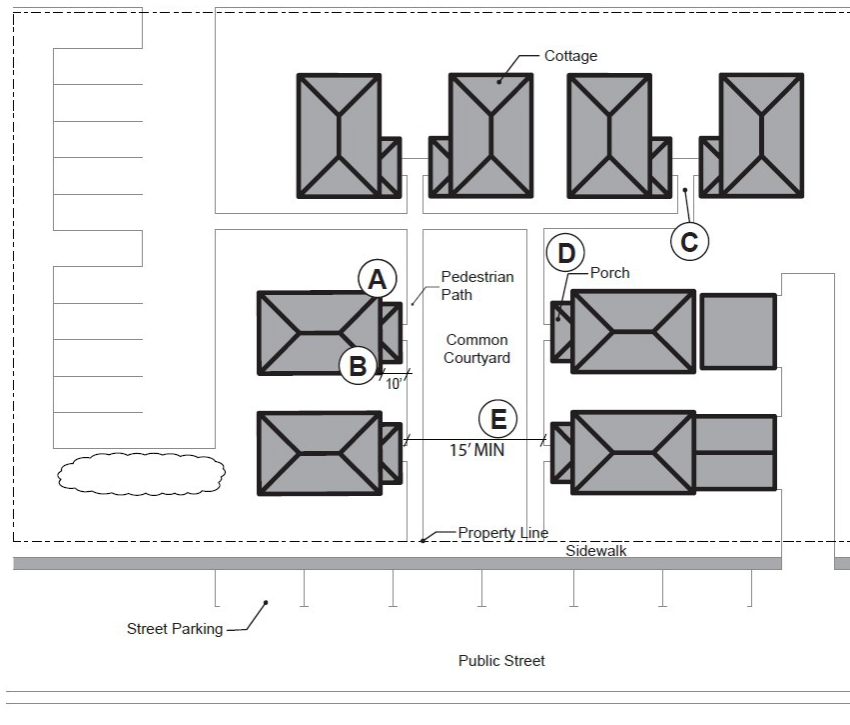
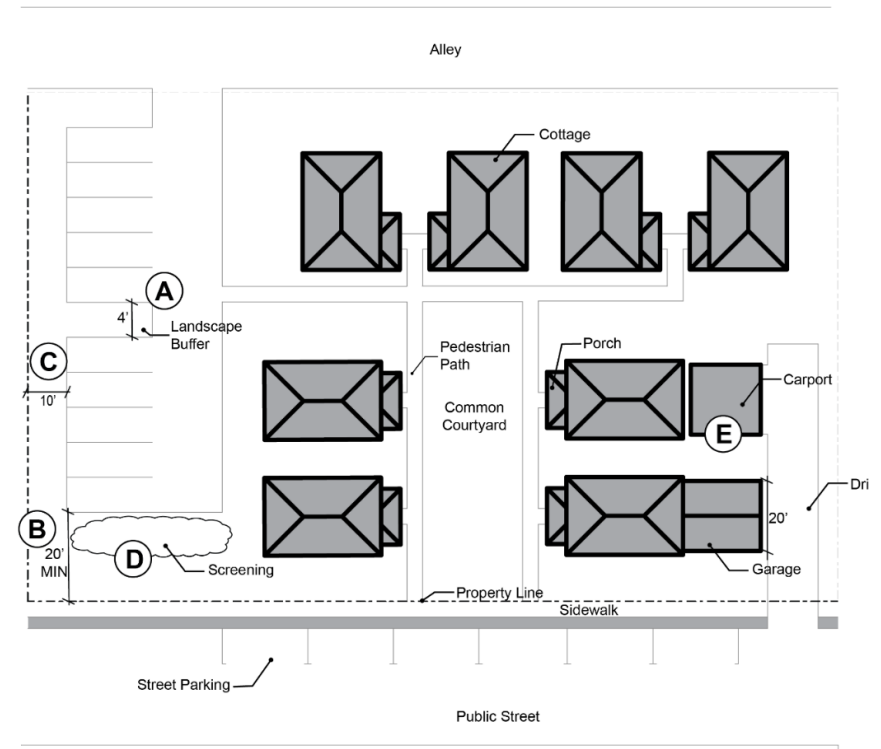


Figure B. Cottage Cluster Parking Design Standards



Triplex and Fourplex

General / Development Standards

	ALLOW	ENCOURAGE	INCENTIVIZE (near transit)
EC 9.0500 Definitions	Keep triplex and fourplex definitions as attached units. Revise to clarify that units are on a single lot. Revise multi-family definition to exclude triplexes and fourplexes.	Revise definitions to allow both attached and detached units. Revise multi-family definition in same way as ALLOW approach. *Recommended Approach*	Same as ENCOURAGE
EC 9.2700 Residential Zones			
Land Use and Permit Requirements (9.2740)	No change—triplex and fourplex already permitted in R zones.	Revise housing type descriptions to reflect detached unit allowance. *Recommended Approach*	Same as ENCOURAGE
Special Use Limitations (9.2741)	Remove notes (5) and (6), which only permit tri/fourplexes on lots designated as such in a plat, and prohibit them in Amazon, Fairmount, and South University neighborhoods.	Same	Same
Development Standards (9.2750)			
Density	Exempt tri/fourplex from maximum density.	Same	Same
Maximum Height	Keep current standards: <ul style="list-style-type: none"> R-1: 30 ft (+ 7 ft for pitched roof ≥ 6:12) R-2: 35 ft R-3: 50 ft 	Increase height allowance for tri/fourplex: <ul style="list-style-type: none"> R-1: 35 ft (+ 7 ft for pitched roof) R-2 – R-4: <i>(no change)</i>	Increase height allowance only near transit: <ul style="list-style-type: none"> R-1 near transit: 35 ft (+ 7 ft for pitched roof)

	<ul style="list-style-type: none"> R-4: 120 ft 		<ul style="list-style-type: none"> R-1 elsewhere: 30 ft (+ 7 ft for pitched roof) R-2 – R-4: <i>(no change)</i> *Recommended Approach*
Minimum Setbacks	Keep current standards in R-1 – R-4: <ul style="list-style-type: none"> Front Yard: 10 ft Interior: 5 ft *Recommended Approach*	<i>(no change recommended)</i>	<i>(no change recommended)</i>
Maximum Lot Coverage	Keep current standards: <ul style="list-style-type: none"> R-1 – R-2: 50% R-3 – R-4: N/A *Recommended Approach*	Increase allowance for duplex: <ul style="list-style-type: none"> R-1 – R-2: 60% R-3 – R-4: N/A 	Further increase allowance near transit <ul style="list-style-type: none"> R-1 – R-2 near transit: 70% R-1 – R-2 elsewhere: 60% R-3 – R-4: N/A
Minimum Open Space	Keep current standard in R-2 – R-4: 20% open space -- Applies to all development in these zones, so complies with OAR.	Reduce to 10% or remove. *Recommended Approach*	Same as ENCOURAGE
Lot Standards (9.2760) ECONorthwest’s analysis of code scenarios for triplexes and fourplexes suggests that the ENCOURAGE and INCENTIVIZE options for minimum lot size have a significant impact (when paired with reduced parking requirements) on the feasibility and affordability of smaller rental units. This supports the Project Team’s recommendation for reducing lot size for triplex/fourplex across all residential zones, and further reducing lot size near transit lines.			

NOTE: Eugene’s lot standards typically control only the creation of new lots. However, the Middle Housing OARs permit cities to use minimum lot size to regulate on which <u>existing lots</u> middle housing (other than duplexes) is permitted. The lot standards proposed below would regulate both the creation of new triplex and fourplex lots and the minimum size of existing lots that could be developed with a new triplex or fourplex.			
Lot Area Minimum	Revise for minimum OAR compliance. R-1: <ul style="list-style-type: none"> • Triplex: 5,000 sf • Fourplex: 7,000 sf R-2 – R-4: none (<i>consistent with current code</i>)	Apply reduced lot area. R-1: <ul style="list-style-type: none"> • Triplex: 4,500 sf • Fourplex: 6,000 sf R-2 – R-4: none	Further reduce lot area near transit. R-1 near transit: <ul style="list-style-type: none"> • Triplex: 3,500 sf • Fourplex: 4,500 sf R-1 elsewhere: <ul style="list-style-type: none"> • Triplex: 4,500 sf • Fourplex: 6,000 sf R-2 – R-4: none *Recommended Approach*
Flag Lots	Keep existing lot area minimum: 6,000 sf	(no change recommended)	(no change recommended)
Lot Width / Frontage Minimum	Keep current standards: <ul style="list-style-type: none"> • R-1: 50 ft • R-2 – R-4: 35 ft *Recommended Approach*	(no change recommended)	(no change recommended)
Special Standards for Table 9.2760 (9.2761)	Remove housing mix maximum for triplexes and fourplexes in subdivisions.	Same as ALLOW	Same as ALLOW
EC 9.6100 Bicycle Parking Standards	Exempt triplexes and fourplexes from bike parking standards.	Same	Same
EC 9.6400 Motor Vehicle Parking and Loading NOTE: The Middle Housing OARs generally allow cities to require up to 1 parking space per unit for triplexes and fourplexes, except the rules further limit the amount of parking that cities can require on smaller lots. The City currently has no minimum lot size requirements			

for triplexes or fourplexes in the R-2 through R-4 zones; therefore, those allowances for smaller lots will need to be reflected in reduced parking ratios. See the ALLOW column below.

As noted above, ECONorthwest’s analysis supports reducing off-street parking ratios for triplexes and fourplexes, since parking can have a significant impact on the feasibility and affordability of rental units developed on smaller lots.

Minimum Off-Street Parking (9.6410)	Apply minimum of 1 space per unit, except reduce parking ratios on smaller lots (per OAR requirement): <ul style="list-style-type: none"> • Triplex/Fourplex lots under 3,000 sf: 1 space per lot • Triplex/Fourplex lots 3,000 – 4,999 sf: 2 spaces per lot • Fourplex lots 5,000 – 6,999 sf: 3 spaces per lot 	<ul style="list-style-type: none"> • Same as ALLOW option, except allow on-street parking credit.³ 	<ul style="list-style-type: none"> • Near transit: 0 spaces • Elsewhere: same as ALLOW/ENCOURAGE • Allow on-street parking credit everywhere³ <p>*Recommended Approach*</p>
EC 9.6700 Site Development Standards			
Recycling and Garbage Screening (9.6740)	Exempt triplexes and fourplexes from recycling and garbage screening requirements.	Same	Same
Underground Utilities (9.6775)	For triplexes and fourplexes created by converting or adding units on a lot with an existing home that has overhead utilities – exempt the new units from underground utility requirements.	Same	Same
EC 9.6880 Tree Preservation	Since SFD is exempt, must also exempt middle housing from tree preservation standards.	Same	Same

³ The on-street credit would be provided only in areas or situations where on-street parking is available and feasible for residents of triplexes and fourplexes. For example, it would not be an option on streets where on-street parking is not allowed or available and may not be an option in areas with metered or permit parking on-street.

Design Standards

These standards would be added to a new section in EC 9.5000 Special Development Standards for Certain Uses. The ALLOW approach would adapt the Model Code design standards. The ENCOURAGE approach would relax the standards, where appropriate. As noted above, the Model Code includes a modest set of design standards that are already fairly flexible, and that are generally intended to promote pedestrian-friendly design. There is not much “wiggle room” to apply less restrictive standards than the Model Code, while still meeting the intent of the standards—even less so than for cottage clusters. As such, the team generally recommends the ALLOW approach here, given the importance of the Model Code standards in addressing community goals such as pedestrian connectivity and safety, among others.

	ALLOW	ENCOURAGE
Entry Orientation <i>(see Figure C - Figure E below)</i>	Apply several options for meeting orientation standard: <ul style="list-style-type: none"> • Face the street • 45 degree angle from street • Open onto porch that faces street • Face common open space adjacent to street (would only apply to detached units) *Recommended Approach*	N/A
Windows <i>(see Figure F below)</i>	<ul style="list-style-type: none"> • Require minimum window coverage of 15% of street-facing facades • Exempt units to rear of site (i.e., detached units) *Recommended Approach*	Reduce requirement to 10%
Garages and Off-Street Parking Areas <i>(see Figure G below)</i>	<ul style="list-style-type: none"> • Limit width of garages and off-street parking areas between a triplex/fourplex and the street to a combined width of 50% of street frontage • Intent is to promote a pedestrian-friendly environment by preventing parking areas from dominating the streetscape *Recommended Approach*	N/A

Driveway Approach <i>(see Figure H - Figure I below)</i>	<ul style="list-style-type: none">• Limit the total width of all driveway approaches to 32 feet per frontage.• Allow driveways to be separated when access is from a local street.• Also limit the total number of driveways on corner lots. <p><i>(NOTE: This is more flexible than the current code, which generally limits access to one driveway approach per lot. Modifications or exemptions for access standards in EC Chapter 7 may also be needed.)</i></p>	Increase total driveway width allowed
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Figure C. Main Entrance Facing the Street

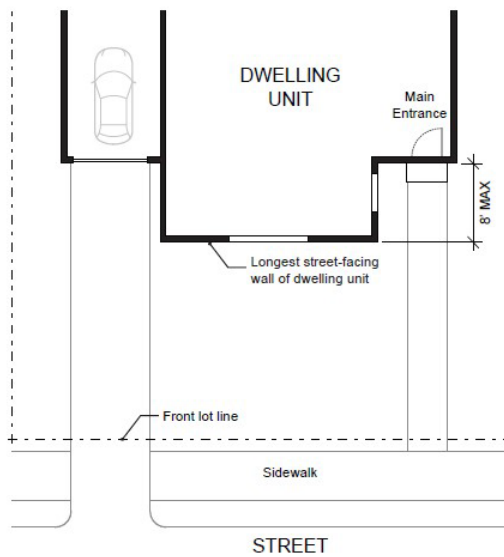


Figure D. Main Entrance Facing Common Open Space

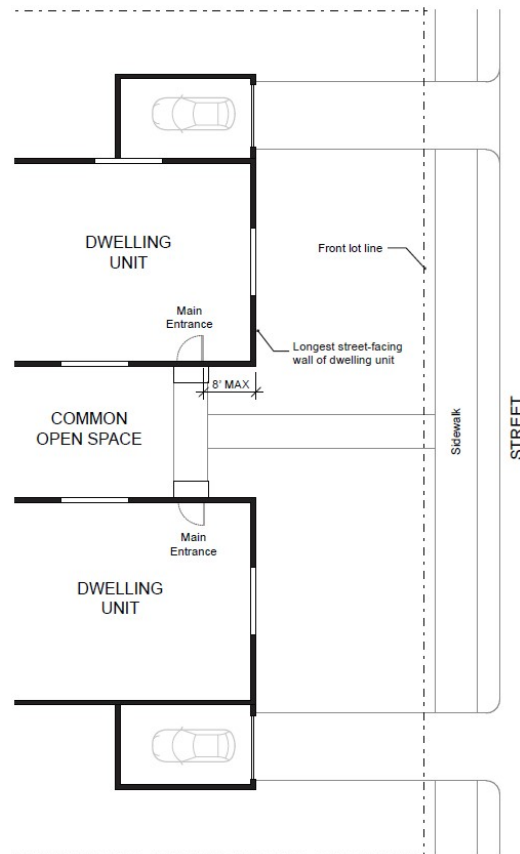


Figure E. Main Entrance Opening onto a Porch

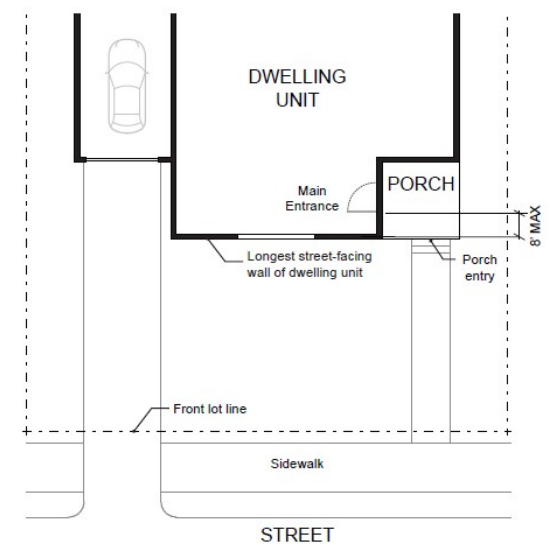
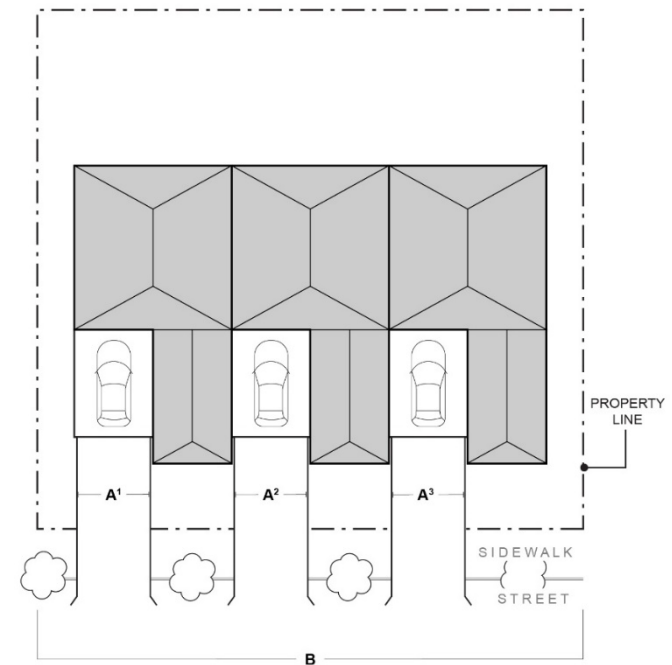


Figure F. Window Coverage



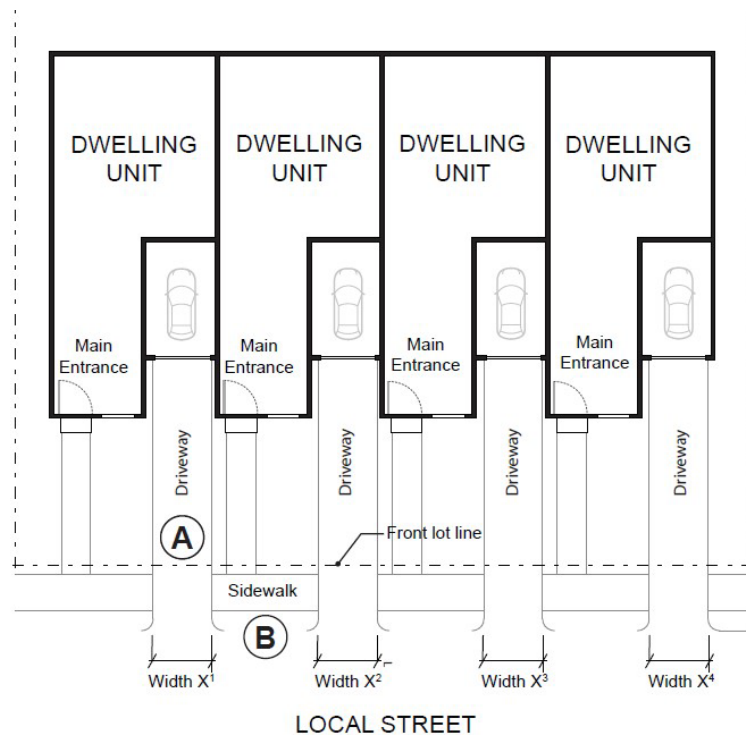
Figure G. Width of Garages and Parking Areas



- (A) Garage and on-site parking and maneuvering areas
 (B) Total street frontage

$$\frac{A^1 + A^2 + A^3}{B} \leq 50\%$$

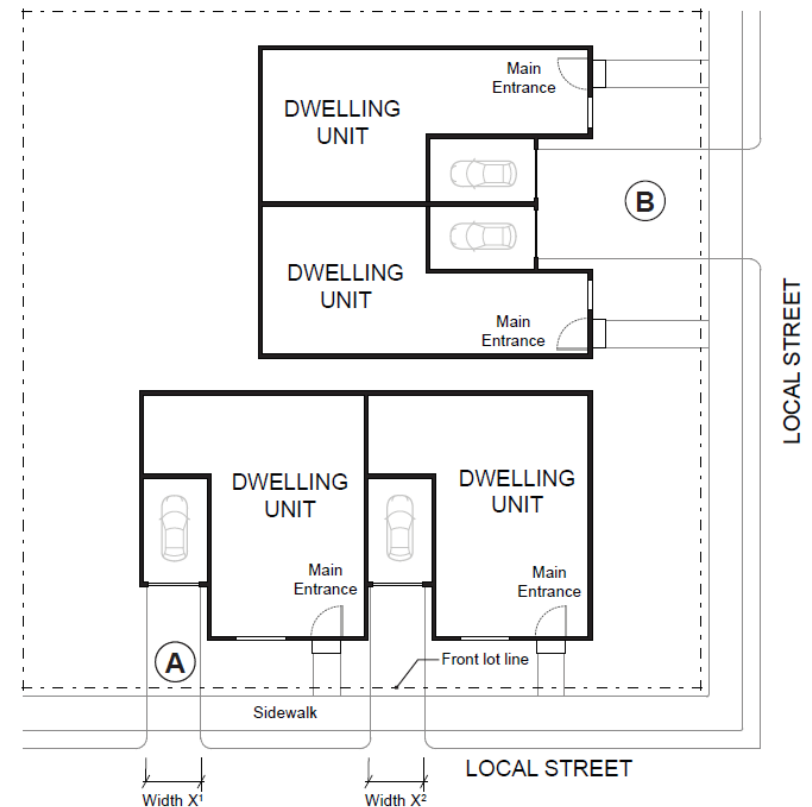
Figure H. Driveway Approach Width and Separation on Local Street



A $X^1 + X^2 + X^3 + X^4$ must not exceed 32 feet per frontage,

B Driveway approaches may be separated when located on a local street

Figure I. Driveway Approach Options for Multiple Local Street Frontages



Options for site with more than one frontage on local streets:

A Two driveway approaches not exceeding 32 feet in total width on one frontage (as measured $X^1 + X^2$); or

B One maximum 16-foot-wide driveway approach per frontage.

(Note: Both options are depicted here for illustrative purposes only. The standards do not allow both Options A and B on the same site.)

Rowhouse

General / Development Standards

	ALLOW	ENCOURAGE	INCENTIVIZE (near transit)
EC 9.0500 Definitions	Existing definition of “rowhouse” is consistent with OAR definition of “townhouse.” Minor tweaks recommended for clarity.	Same	Same
EC 9.2700 Residential Zones			
Land Use and Permit Requirements (9.2740)	No change to use allowances, except change P (Permitted) to S (Permitted, subject to the Special Development Standards for Certain Uses).	Same	Same
Special Use Limitations (9.2741)	Remove note (3), which prohibits rowhouses in the Amazon, Fairmount, and South University Neighborhoods.	Same	Same
Development Standards (9.2750)			
Density and Lot Area Minimum	<p>Density and minimum lot area for rowhouses should be considered together—therefore, both standards are discussed here.</p> <p>Rowhouses are the one middle housing type for which the OAR allows cities to apply maximum density standards—cities can limit density to four times the maximum density that applies to SFDs or 25 units per net acre, whichever is less dense. For minimum lot area, the standard can be no less than 1,500 sf. Currently, Eugene’s minimum lot size for rowhouses is 1,600 sf and the following maximum densities apply:</p> <ul style="list-style-type: none"> • R-1: 14 units per net acre • R-2: 28 units per net acre • R-3: 56 units per net acre 		

	<ul style="list-style-type: none"> • R-4: 112 units per net acre <p>The ALLOW approach would reduce the minimum lot size to 1,500 sf in all zones. It would also increase the density allowance for rowhouses in R-1 to 25 units/acre and keep the existing density limits in the remaining zones.</p> <p>The ENCOURAGE and INCENTIVIZE approaches would allow additional density, but the extent of that additional allowance warrants some discussion. The Project Team’s initial proposal for the ENCOURAGE approach is to reduce minimum lot size to 1,125 sf—this is ¼ of the minimum lot size for SFDs (4,500 sf), so it would be equivalent to allowing four rowhouse lots to be created from one single-family lot. However, this equates to a density of approximately 39 units per net acre, which would exceed the current permitted density in the R-2 zone. The Project Team is seeking direction from the Planning Commission as to whether rowhouses should be allowed to exceed the OAR-allowed maximum of 25 units/acre in R-1 or the current-code maximum of 28 units in R-2.</p> <p>One point to consider is that rowhouses already have an advantage over other middle housing types because they offer “fee simple” ownership options. Reducing lot sizes could potentially make rowhouses an even more attractive option for most builders in comparison to triplexes and fourplexes. This essentially would favor owner-occupied and somewhat more expensive housing (rowhouses) over rental housing (most plexes). This isn’t necessarily a bad thing but is a worthwhile policy discussion. One option to “encourage” rowhouses, while still limiting density to some extent, would be to allow smaller lots—e.g., 1,125 sf—but to limit the number of rowhouses that could be created at that size. For example, only 8 rowhouses could be allowed at 1,125 sf per unit; beyond that, rowhouse lots would have to be at least 1,500 sf. Other options are presented in the ENCOURAGE column below.</p>		
	<ul style="list-style-type: none"> • R-1: <ul style="list-style-type: none"> ○ Lot Area: 1,500 sf ○ Density: Increase to 25 units per acre (<i>per OAR requirement</i>) • R-2 – R-4: <ul style="list-style-type: none"> ○ Lot Area: 1,500 sf ○ Density: No change (<i>density allowance already exceeds 25 units per acre</i>) 	<ul style="list-style-type: none"> • R-1: <ul style="list-style-type: none"> ○ Lot Area: 1,125 sf ○ Density: <ul style="list-style-type: none"> ▪ OPTION 1: same as ALLOW ▪ OPTION 2: Limit number of rowhouse lots that can be created at the min lot size (e.g., up to 8 lots) ▪ OPTION 3: Exempt rowhouses from maximum 	<p>Near transit: Exempt rowhouses from maximum density in all R zones. No minimum lot area.</p> <p>Elsewhere: Apply the “ENCOURAGE” approach, to be determined.</p>

		density; allow minimum lot size to control • R-2 – R-4: same options as R-1	
Maximum Height	Keep current standards: • R-1: 30 ft (+ 7 ft for pitched roof ≥ 6:12) • R-2: 35 ft • R-3: 50 ft • R-4: 120 ft	Increase height allowance for rowhouse: • R-1: 35 ft (+ 7 ft for pitched roof) • R-2 – R-4: <i>(no change)</i>	Increase height allowance only near transit: • R-1 near transit: 35 ft (+ 7 ft for pitched roof) • R-1 elsewhere: 30 ft (+ 7 ft for pitched roof) • R-2 – R-4: <i>(no change)</i> *Recommended Approach*
Minimum Setbacks	Keep current standards in R-1 – R-4: • Front Yard: 10 ft • Interior: 5 ft • 0 setback where units attach *Recommended Approach* (NOTE: Porches, balconies, bay windows, etc. are allowed to intrude 5' into the front setback.)	Reduce front yard setback for rowhouses: • Front Yard: 5 ft • Interior: 5 ft • 0 setback where units attach	Same as ENCOURAGE
Maximum Lot Coverage	Keep current standard in R-1 – R-4: 75% for rowhouse lots	<i>(no change recommended)</i>	<i>(no change recommended)</i>
Minimum Open Space	Keep current standard in R-2 – R-4: 20% open space (applies to development site, which includes all rowhouse lots within the same development)	Reduce to 10% or remove. *Recommended Approach*	Same as ENCOURAGE

Lot Standards (9.2760)			
Lot Area Minimum	<i>See Density discussion above</i>		•
Flag Lots	Do not permit rowhouses on flag lots.	Same	Same
Lot Width / Frontage Minimum	<p>Lot Frontage Options to ENCOURAGE or INCENTIVIZE Rowhouses:</p> <p>The current code requires rowhouses to have frontage on a street. However, the Model Code approach is not to require street frontage, but instead to allow alternative configurations such as rowhouses facing a shared access drive that is perpendicular to a public street, or a second row of rowhouses behind a street-fronting row. This would open up more possibilities for rowhouse development—including on infill sites—but would be a significant policy change. The Project Team recommends the more flexible approach of not requiring street frontage for rowhouses.</p>		
	Keep current standards in R-1 – R-4: 15 ft minimum street frontage and width	Do not require street frontage. Reduce minimum width to 10 ft.	<p>Do not require street frontage.</p> <ul style="list-style-type: none"> Near transit: no minimum lot width Elsewhere: minimum width of 10 ft <p>*Recommended Approach*</p>
Special Standards for Table 9.2760 (9.2761)	Remove note (3), which requires both street frontage and alley access for all rowhouse lots. Because alley access is not required for SFDs, it cannot be required for rowhouses, per OAR standards.	Same	Same
EC 9.6400 Motor Vehicle Parking and Loading	Keep current minimum: 1 space per unit	1 space per unit; allow on-street parking credit ⁴	<ul style="list-style-type: none"> Near transit: 0 spaces Elsewhere: 1 space per unit

⁴ The on-street credit would be provided only in areas or situations where on-street parking is available and feasible for residents of rowhouses. For example, it would not be an option on streets where on-street parking is not allowed or available and may not be an option in areas with metered or permit parking on-street.

Minimum Off-Street Parking (9.6410)			<ul style="list-style-type: none"> Allow on-street parking credit everywhere⁴ *Recommended Approach*
EC 9.6700 Site Development Standards Recycling and Garbage Screening (9.6740)	Exempt triplexes and fourplexes from recycling and garbage screening requirements.	Same	Same
EC 9.6880 Tree Preservation	Since SFD is exempt, must also exempt middle housing from tree preservation standards.	Same	Same

Design / Special Development Standards

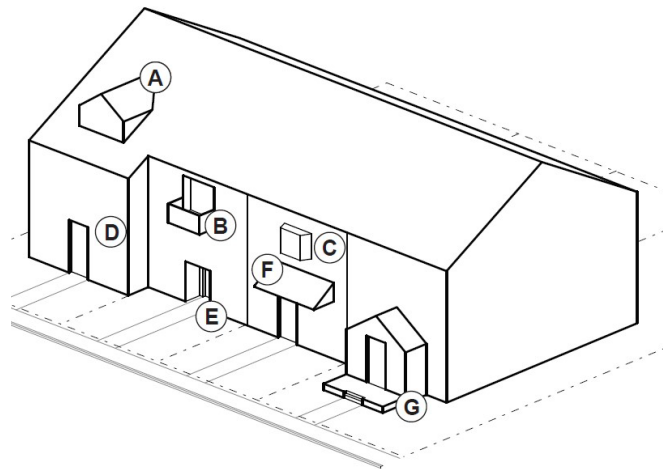
These standards would be added to a new section in EC 9.5000 Special Development Standards for Certain Uses.

For design standards, the ALLOW approach would adapt the Model Code design standards. The ENCOURAGE approach would relax the standards, where appropriate. As noted above, the Model Code includes a modest set of design standards that are already fairly flexible, and that are generally intended to promote pedestrian-friendly design. There is not much “wiggle room” to apply less restrictive standards than the Model Code, while still meeting the intent of the standards—even less so than for cottage clusters. As such, the team generally recommends the ALLOW approach here, given the importance of the Model Code standards in addressing community goals such as pedestrian connectivity and safety, among others.

	ALLOW	ENCOURAGE
Maximum Number of Attached Units	<p>According to the OAR, cities can limit the number of rowhouses in a grouping as long as the limit is four or higher. Limiting the number of attached rowhouses can help control the scale of buildings and provide more open space. At the same time, this requirement limits flexibility for developers and by requiring additional land for side yards, it can make units a bit more expensive.</p> <ul style="list-style-type: none"> R-1: 4 rowhouses per grouping 	<ul style="list-style-type: none"> R-1: 10 rowhouses per grouping

	<ul style="list-style-type: none"> R-2 – R-4: 10 rowhouses per grouping 	<ul style="list-style-type: none"> R-2 – R-4: no maximum *Recommended Approach*
Entry Orientation <i>(see Figure C - Figure E above)</i>	Apply same orientation options as for triplex and fourplex (face the street, open onto a porch, etc.). *Recommended Approach*	N/A
Windows <i>(see Figure F above)</i>	Require minimum window coverage of 15% of street-facing facades. *Recommended Approach*	Reduce requirement to 10%.
Unit Definition <i>(see Figure J below)</i>	<ul style="list-style-type: none"> Require each unit to include at least one design feature from a list of options (roof dormer, balcony, bay window, offset, etc.). Intended to help break up façade of attached rowhouses *Recommended Approach*	N/A
Driveway Access and Parking <i>(see Figure K - Figure M below)</i>	<ul style="list-style-type: none"> No longer require rear alley access for rowhouses (since this violates state rules), but allow alley access as an option. Allow garages on front façade and off-street parking in front yard only if on a local street and if garages and driveways are limited to 12 ft wide. Potentially require paired/shared driveways for every two units—this would help limit curb cuts and potentially create space for on-street parking. Otherwise, access must be provided to the rear of rowhouse units—via shared access, consolidated driveway, or alley. *Recommended Approach*	Do not limit driveway width per rowhouse lot.

Figure J. Rowhouse Unit Definition



- (A) Roof dormer, minimum of 4 feet wide
- (B) Balcony, minimum 2 feet deep and 4 feet wide. Accessible from interior room.
- (C) Bay window extending minimum of 2 feet from facade
- (D) Facade offset, minimum of 2 feet deep
- (E) Recessed entryway, minimum 3 feet deep
- (F) Covered entryway, minimum of 4 feet deep
- (G) Porch, meets standards of subsection (1)(b)(iv) of section (C)

Figure K. Rowhouses with Parking in Front Yard

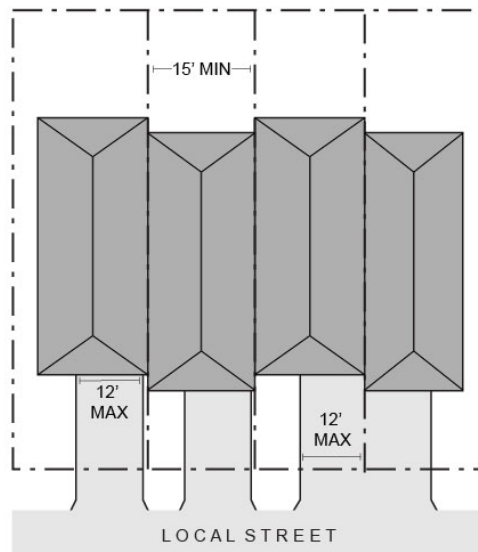


Figure L. Rowhouses on Corner Lot with Shared Access

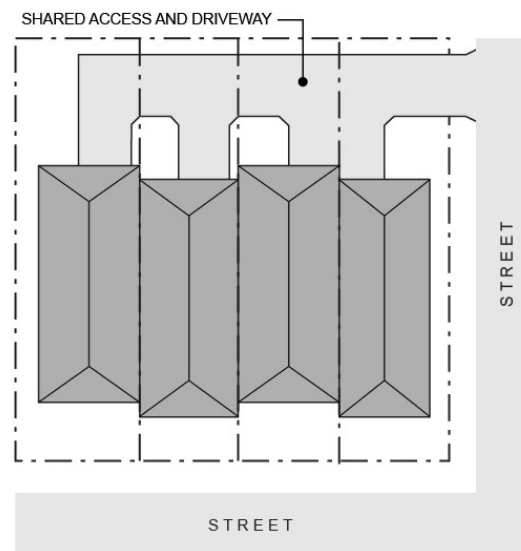
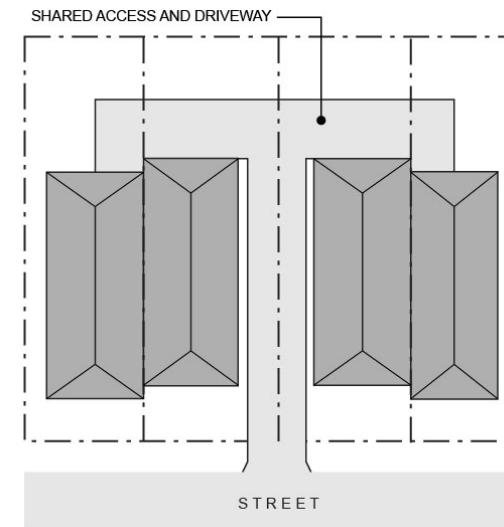


Figure M. Rowhouses with Consolidated Access



Special Area Zones

We have limited the primary options for updating SAZs to the ALLOW and ENCOURAGE approaches. The ALLOW approach would make only those changes needed to comply with state rules and those needed to remove major barriers to middle housing. The ENCOURAGE approach would make more significant changes to remove barriers and/or for consistency with the base zones, or would simply exempt middle housing from certain standards (or all SAZ standards). Below is a high-level summary of potential approaches and examples of standards that would be affected.

NOTE: Most middle housing types are already permitted in applicable SAZs; however, cottage clusters will need to be added as a permitted use in all SAZs and standards for cottage clusters should be added. Because cottage clusters have a specific set of design considerations, the Project Team's initial recommendation is to apply the same set of design standards in SAZs as will apply in base zones. The exception could be where specific SAZ standards are additive to the standard cottage cluster requirements (e.g., building material or roof pitch standards).

UPDATE: As noted in the "Key Decision Points" section above, the Project Team recommends exempting middle housing from Special Area Zone standards and instead applying base zone standards and the new design standards proposed to be added to EC 9.5000 Special Development Standards for Certain Uses. Also, a closer look at the Whiteaker and Walnut Station SAZs revealed that they do not implement a Residential Land Use Designation and therefore HB 2001 would not require changes within these zones. Accordingly, the Walnut Station SAZ has been excluded from the table below. However, the team recommends updating the Whiteaker SAZ to be consistent with the other SAZs, because few changes are needed for compliance.

Proposed amendments are *in italics*.

	ALLOW	ENCOURAGE
9.3050 S-C: Chambers	<p><u>S-C/R-1 Subarea:</u> The code defers to the R-1 zone use and development standards. <i>No substantive changes needed for OAR compliance.</i></p> <p><u>S-C/R-3 Subarea:</u> The code generally defers to the R-2 zone use standards, but also provides additional standards.</p> <ul style="list-style-type: none"> <i>Special density standards must be amended for OAR compliance. Keep minimum lot sizes consistent with R-2 base zone.</i> 	<p><u>S-C/R-1 Subarea:</u> <i>Potentially exempt middle housing from the 400-square foot alley open space requirement, which could be a barrier.</i></p> <p><u>S-C/R-2 Subarea:</u></p> <ul style="list-style-type: none"> Interior sloped setbacks and special height standards are likely barriers. <i>Potentially exempt middle housing.</i> Same 400-square foot alley open space requirement applies as in the S-C/R-1 subarea; <i>potentially exempt middle housing.</i>

	<ul style="list-style-type: none"> All other special development/design standards apply to all housing types and therefore comply with the OAR. 	
9.3100 S-CN: Chase Node	Development and design standards—such as alley access, exterior wall material, and roof pitch requirements—apply to all housing types and don't present major barriers to middle housing. <i>Therefore, no substantive changes are needed for OAR compliance.</i>	<i>Potentially revise the 50% maximum lot coverage standard consistent with the ENCOURAGE approach for base zones. Cottage clusters must be exempt from lot coverage requirements.</i>
9.3200 S-DW: Downtown Westside	The code defers to the R-4 zone for any standards not covered in the SAZ. <i>Minimum lot size standards must be amended for OAR compliance.</i>	<i>Amend minimum lot sizes consistent with the ENCOURAGE approach for the R-4 zone. Potentially exempt middle housing from 20% landscaping requirement.</i>
9.3300 S-E: Elmira Road	Housing is subject to R-1 development and lot standards. <i>No changes needed for OAR compliance or to remove barriers.</i>	N/A
9.3500 S-HB: Blair Boulevard Historic Commercial	Development and design standards apply to all housing types. Because this is a historic district, it is acceptable to have discretionary standards for housing. <i>No changes needed for OAR compliance.</i>	N/A
9.3600 S-JW: Jefferson Westside	R-2 residential use standards apply. Numerous development/design standards do not comply with OAR standards and/or create potentially significant barriers. <i>At minimum, address OAR compliance issues:</i> <ul style="list-style-type: none"> <i>Parking minimums are based on bedroom count.</i> <i>Maximum dwellings per lot effectively establish larger minimum lot sizes than what the OAR allows.</i> 	<i>Amend standards to address barriers (or exempt middle housing):</i> <ul style="list-style-type: none"> <i>Alley open space requirement of 400 sf and other alley development standards.</i> <i>Interior sloped setbacks are very limiting to middle housing with more than one story.</i> <i>Limitations on quantity and width of garage doors is a barrier for duplexes, triplexes, and fourplexes.</i>

	<ul style="list-style-type: none"> • <i>Bedroom counts are capped for multi-unit development.</i> • <i>Building height is limited to 18 feet for portions of lots (not a duplex or cottage compliance issue, but it is for triplex/fourplex and rowhouse).</i> • <i>Front setback—exceeds OAR 10-foot limit for cottage cluster.</i> • <i>20% open space requirement applies to 3+ units, but not SFD; therefore, doesn't comply.</i> 	<ul style="list-style-type: none"> • <i>Driveways are limited to one curb cut and 12-foot width, with is a barrier to duplex and tri/fourplex.</i>
9.3800 S-RN: Royal Node	<p><i>Minimum lot size standards must be amended for OAR compliance.</i></p> <p>Design standards—including building orientation, windows, façade materials, front porches, and roof pitch—apply to all housing types, and therefore generally comply with the OAR. However, <i>some design standards need minor revisions for OAR compliance.</i></p>	<p><i>Amend minimum lot sizes consistent with the ENCOURAGE approach for base zones.</i></p> <p><i>Potentially revise the 50% maximum lot coverage standard consistent with the ENCOURAGE approach for base zones. Cottage clusters must be exempt from lot coverage requirements.</i></p> <p><i>Consider exempting middle housing from some or all of the SAZ-specific design standards.</i></p>
9.3900 S-W: Whiteaker	<p>Maximum density is determined by R-4 zone standards.</p> <p>Residential development is subject to C-2 zone development standards, which appear to comply with the OAR.</p>	<p><i>Amend minimum lot sizes consistent with the ENCOURAGE approach for residential base zones (e.g., R-1 or R-2).</i></p>

DATE: April 19, 2021
TO: Matt Hastie, Angelo Planning Group
CC: Terri Harding, City of Eugene
FROM: Becky Hewitt and Tyler Bump, ECONorthwest
SUBJECT: Impacts of Code Scenarios (Allow/Encourage/Incentivize) on Small Rental Units

Introduction

The City of Eugene is in the process of preparing Middle Housing Code Amendments to comply with Oregon House Bill 2001 (HB 2001). In brief, as required by HB 2001, these code amendments will allow middle housing—duplexes, triplexes, fourplexes, cottage clusters, and townhomes—in all residential zones that allow single-family detached housing, at densities higher than those for single-family housing and without restrictions that would create “unreasonable” cost or delay for middle housing development. The City is currently considering options for the specific standards that will apply to middle housing. **This analysis considers the impacts of varying development regulations on small, rental units that tend to be lower cost. The purpose is to determine how the City’s code choices can increase the affordability of middle housing development.**

ECONorthwest’s prior analysis showed that:

- New middle housing is comparatively less expensive than new single-family housing, because sales prices and rents tend to be lower for attached housing than for comparable detached housing, and new single-family detached housing tends to be larger and sometimes more luxury-oriented than even high-end middle housing.
- While many types of middle housing development are potentially feasible as rental or as ownership, typically building new ownership housing is more financially feasible.
- The smallest middle housing units will offer the lowest prices/rents overall; however, they are also likely to be higher priced on a per-square-foot basis, and may be less financially feasible to develop than larger units.

Based on these findings, the City asked ECONorthwest to look at whether the code options under consideration could help encourage middle housing at lower costs that would be attainable by people earning 80% to 120% of area median income (AMI), such as smaller rental housing units.

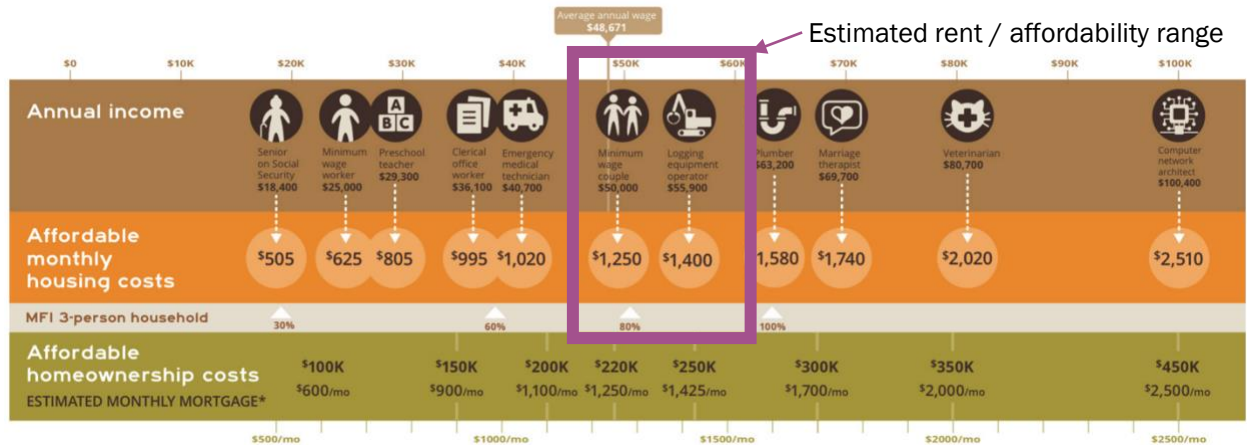
Approach

Unit Type and Affordability Level

We evaluated the financial feasibility of developing small rental duplex, triplex, fourplex examples, with two-bedroom units that would be roughly affordable to a three-person household with two minimum wage earners, or a three-person, single-income household with a job paying under \$60,000 per year, as shown in Exhibit 1.

Exhibit 1: Housing Affordability by Income, 2-Bedroom Middle Housing Rental Units

Source: Lane County Affordable Housing Action Plan



Code Options

We compared financial feasibility of development with different standards based on three code options—Allow, Encourage, and Incentivize packages. In particular, we tested how variations in lot size and parking affected feasibility. (The other code standards had less impact for this type of development.) The standards tested with each package are summarized in brief below. These standards reflect draft code packages as of early April 2021; however, the specific recommendations may continue to change through community and planning commission discussion.

Exhibit 2: Minimum Lot Size (square feet) by Code Package

	Allow	Encourage	Incentivize
Duplex	4,500	3,000	2,250
Triplex	5,000	4,500	3,500
Fourplex	7,000	6,000	4,500

Exhibit 3: Parking Requirements per Unit by Code Package

	Allow	Encourage	Incentivize
Duplex	1	1	0
Triplex	1	0.67	0
Fourplex	1	0.5	0

We kept unit size (810 square feet, two bedrooms) the same across the duplex, triplex, and fourplex development examples, and across the different code options, in order to isolate the impacts of density and parking on smaller rental units.

Feasibility Measures

Our analysis used residual land value (RLV) per square foot of land as an indicator of relative financial feasibility. RLV is a measure of what a developer is able to pay for land, given expected construction, operating costs, and revenue. In other words, it is the budget that developers have remaining for land after all the other development constraints have been accounted for. It is a useful metric for assessing how code changes and potential development incentives interact to impact development feasibility. A development with a higher RLV can spend more on land, which expands the options for where the development can occur (all else equal). When two types of development are both possible on a given site, the one with the higher RLV may be more likely, because the developer can spend more to acquire the site. Higher RLV does not itself indicate greater affordability, but if a more affordable housing type has an RLV comparable to that of a more expensive housing type, it makes it more likely that the lower-cost housing type will get built at least some of the time.

We compared the RLV of the small, rental plexes to two example development types evaluated in earlier testing—single-family detached homes and townhouses. To the extent that the code options increase the RLV of the small, rental plexes, this increases the chances that this type of development will be built rather than single-family detached homes and townhouses.

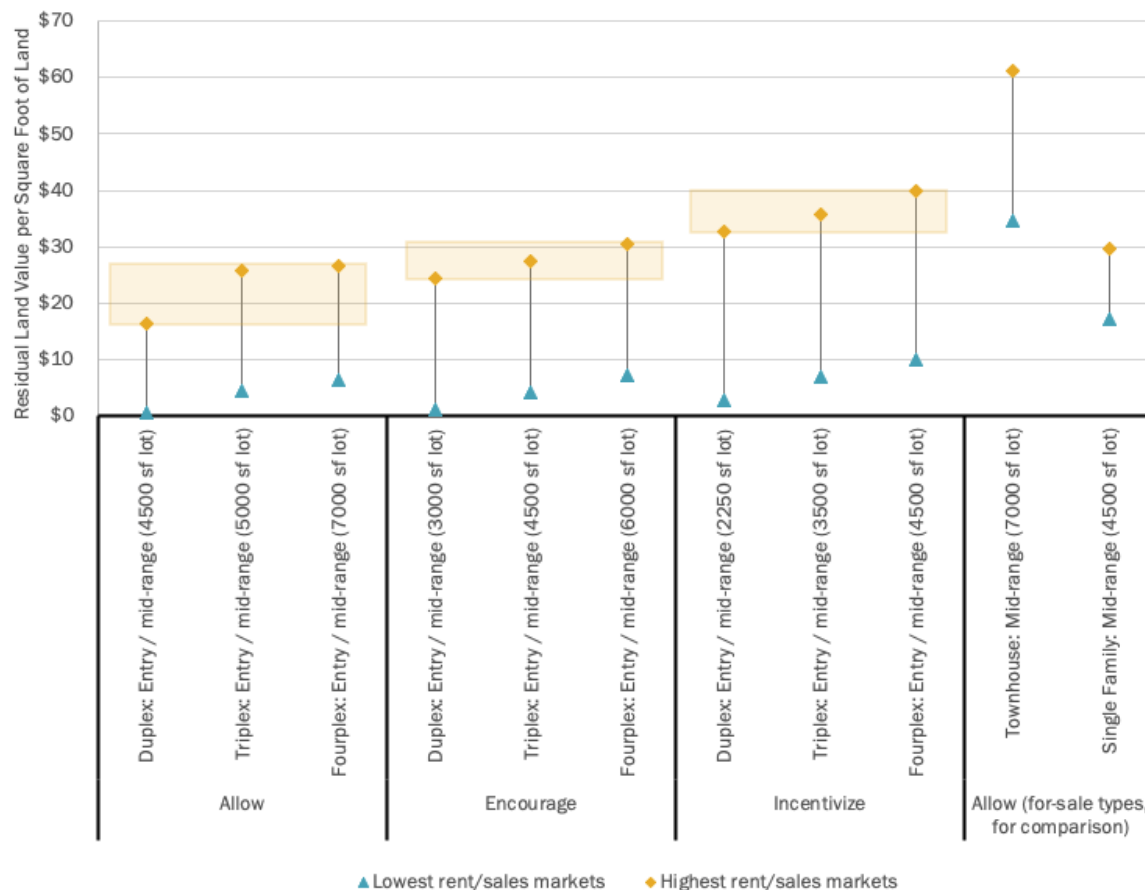
Findings

Impact on Feasibility

Exhibit 4 shows how RLV varies for each prototype across the different code packages. It shows that:

- The Encourage package improves feasibility somewhat relative to Allow, but Incentivize helps noticeably more in making plexes with smaller rental units feasible. The RLV per square foot for the smaller rental housing development examples is roughly double with Incentivize compared to Allow, meaning that they could afford substantially higher land costs and still be financially feasible to develop.
- With Encourage, smaller rental units are roughly comparable in terms of financial feasibility with single-family detached development. With Incentivize smaller rental housing is more feasible than single-family detached development.
- Even with the Incentivize package, smaller rental plexes still don't compete very well with townhouses. However, they are more comparable. This is true despite not applying any code incentives for townhouses.
- Fourplexes have the highest RLV among the small rental plexes, making these more likely to be financially feasible than the other small plexes if each is developed at the lot sizes assumed here.

Exhibit 4: Residual Land Value Range by Housing Type and Code Package



Most of the impact on feasibility is a result of needing less land. Not building off-street parking reduces construction cost somewhat, but its primary impact is to allow the development to fit on a smaller lot.

One other consideration is that by allowing units on smaller lots, there is a greater chance that someone could split their existing lot and sell part of it for middle housing development without needing to redevelop the whole lot, though this depends on the layout of the site.

Impact on Affordability

The rent is anticipated to be lower for the options that provide less or no off-street parking. This reduces construction cost slightly, as noted above, but the main reason for the difference is market-driven: people generally will pay a bit less for unit without parking. However, as noted above, the smaller lot size makes this option more financially feasible on a per square foot basis, despite the lower rents.

The rents for this type of development are likely to vary more based on variations in market conditions around the City. Assuming a three-person family (which is the standard that HUD uses for setting rent limits for a two-bedroom unit), these smaller rental plexes would be affordable at roughly the percentages of AMI listed below.

- Allow: 75-94% of AMI
- Encourage: 74-93% of AMI
- Incentivize: 71%-89% of AMI

This affects development feasibility as well as affordability. At the low end of the rent range, development has a lower RLV (shown with the blue markers on Exhibit 4) and is less likely to be financially feasible, particularly in a redevelopment situation.

Conclusions

The Encourage and Incentivize code provisions related to reducing minimum lot size and minimum parking requirements for middle housing positively impact the feasibility and affordability of smaller rental units. These units would be affordable to households between 71% and 94% of AMI, generally earning less than \$60,000 per year. While they will continue to face challenges competing with townhomes, with the Incentivize code provisions they may be more feasible than single-family development. This suggests that these code options support the City's affordability goals and expand development potential for middle housing.

EUGENE CITY COUNCIL AGENDA ITEM SUMMARY



Work Session: Wildfire Preparedness

Meeting Date: May 24, 2021
Department: Fire & Emergency Services
www.eugene-or.gov

Agenda Item Number: 2
Staff Contact: Interim Fire Chief Chris Heppel
Contact Telephone Number: 541-682-7115

ISSUE STATEMENT

Fire & Emergency Services is providing an update to City Council on past, current, and future work being done in collaboration with other local and state organizations on Wildfire Preparedness in our community.

BACKGROUND

The Eugene metro area is the largest urbanized area in Lane County. This region is characterized as intermingled areas of moderate and low fire risk. However, there are pockets of high wildfire risk within the region. These areas are mainly found at the urban fringe, where urban development meets forest land. The areas identified as high wildfire risk are the South Hills of Eugene (see Attachment B – 2020 Lane County CWPP- Community Wildfire Protection Plan). The Community Wildfire Protection Plan is a plan that provides a community with a set of goals, actions and resources specifically designed to address the threat of wildfire. Additionally, a Community Wildfire Protection Plan is a critical tool required in order to leverage funding for hazard mitigation and recovery work through mitigation grants and other resources.

Eugene Springfield Fire

The risk of wildfire has become an increasing concern. Eugene's South Hills present all the challenges associated with a Wildland Urban Interface area: abundance of vegetation (fuel load), residential development intermingling with forested areas, steep slopes, and limited egress routes. Wildland Urban Interface (WUI) is a zone of transition located between wilderness and land developed by human activity. It is an area where a built environment meets or intermingles with a natural environment. Communities in the Wildland Urban Interface are at a greater risk of wildfire.

The Eugene Springfield Fire Marshal's Office does not have any nuisance vegetation authority or enforcement capabilities on privately owned property. Our pathway to compliance and safety assurance is through education. The City of Eugene does have a Nuisance Vegetation Program located within Parks and Open Space with ordinances located in Eugene City Code Section 6.

We are committed to providing the community with the most comprehensive fire and life safety education, code enforcement, fire investigation and coordinated property development

May 24, 2021, Work Session – Item 2

information possible. Fire Prevention Education is the first step in our commitment to protecting the quality of life for the citizens. We offer a variety of educational topics specifically designed for content and target age groups. Individualized programs or presentations are available for other age groups, community organizations and service providers.

Defensible space is one of the easiest, most efficient ways of allowing a property owner to provide a 150-foot area around their home that will provide a first line of defense against a wildfire. Not only does defensible space significantly increase the survivability of a property during a fire, it also allows emergency crews a safe space to fight the fire from. Unfortunately, we still encounter situations where local Homeowners Association (HOA) rules and restrictions do not allow vegetation removal for the creation of defensible space.

We are actively engaged in public education through social media, community presentations and advertising. We believe strong partnerships and resource leveraging are key components in empowering and educating the community. Our 2019 Wildland Urban Interface Fuels Reduction Project was a great success and projects similar to it continue today with funding from local partnerships right here in our South Hills (Eboard Eugene South Hills Collaboration Fuels Reduction 2021). We continue to actively pursue grants and additional funding.

We are committed to making our communities a safer place to live, work and visit by providing effective fire prevention services through education, empowerment, engineering, commercial code enforcement and fire investigation.

Our Operations division has years of fire response plans and emergency agreements in place to address any hazards or emergencies located in the South Hills should they arise, but they cannot do it alone. A fire response plan consists of defensible space concepts, community meetings regarding fire safety in the Wildland Urban Interface and evacuation considerations. For example, The University of Oregon in coordination with Lane County has created a fire evacuation map that displays fire evacuation zones relative to the University of Oregon campus. Wildfire Preparedness truly lies with all of us. We all must actively assume our role in Prevention and diligently strive for success. It is our goal to continue to educate the public on the benefits of defensible space and encourage neighbors helping neighbors.

The solution lies in Firewise communities, maintaining strong public and private partnerships, sharing and leveraging resources, and an actively engaged community collectively working together to reduce fuel loads on their property. As the city grows into the urban growth boundary and the wildland urban interface, planning and preparation will be key components and may require the potential adoption of codes and standards that mandate defensible space and fire-resistant construction.

Eugene Springfield Fire's 2020 Community Risk Assessment concluded with the following recommendations regarding Wildfire Preparedness:

- Continue a Targeted Wildfire Prevention/Mitigation Program given the significant wildfire risk in portions of the service area.

- Eugene Springfield Fire should continually dedicate efforts to educating those living and working in the wildland-urban interface neighborhoods about their wildfire risk and steps they can take to better prepare through Wildland Urban Interface fuel reduction.
- Lane County offers the Firewise program to residents living in unincorporated rural Lane County areas; however, residents within the Eugene and Springfield city limits do not qualify for this program which includes access to wildfire mitigation grant funds.
- It was noted that the Fire Prevention Division was managed by an Acting Fire Marshal, whose previous position was not backfilled. This leaves only three Deputy Fire Marshals to handle complaints, public education, the Juvenile Fire Setters' Program, and operational permit and target hazard inspections. Three other Deputy Fire Marshals primarily perform plan reviews, new construction related inspections, and fire protection system acceptance testing. All Deputy Fire Marshals conduct fire investigations as required. As previously noted, due to the lack of resources to support consistent fire code compliance efforts, and the lack of consistent periodic inspections of target hazard occupancies, the department should consider increasing Fire Prevention Division staffing to ensure life safety code compliance is maintained in all relevant occupancies in the cities of Eugene and Springfield. This is critical in meeting Eugene Springfield Fire's safety objectives, and the Oregon State Fire Marshal's partial exemption status allowance.

City of Eugene Parks and Open Spaces (POS)

Eugene's 2,500-acre Ridgeline Park System and several Neighborhood Natural Areas consist of forested steep-sided hills encircling residential neighborhoods and critical infrastructure in the wildland-urban interface. Many parks have areas overgrown with vegetation and are in need of habitat restoration and fuels reduction. Steep slopes and limited access pose serious challenges to wildland fire response.

What Parks and Open Space is Doing in Natural Areas

Parks and Open Space implements hazardous fuels reduction projects through grants and assistance funds from state and federal funding sources. To date, we have been fortunate to receive over \$750,000 from the Bureau of Land Management's (BLM), Community Wildfire Assistance Program, five Northwest Youth Corps (NYC) crew days from the City's 2019 funding, and \$13,500 and six days of crew work through Oregon Department of Forestry's (ODF) Emergency Board funding.

In many cases, hazardous fuels treatments and habitat restoration projects go hand-in-hand. Grants from the Oregon Watershed Enhancement Board (\$270,000) and assistance funds from the Bonneville Power Administration (\$290,000) have helped restore oak and prairie habitats and decrease fuel loads in natural area parks.

In total, \$1.3 million in grant funds have resulted in 750 acres of hazardous fuels cleared from natural area parklands since 2007. Many areas have required 2-3 rounds of mechanical fuels treatment. This treatment includes mowing, mastication (shredding), hand cutting, brush hauling, forestry equipment use, pile burning, and grinding.

Parks has supported this work through in-kind project planning and management, outreach tours and presentations, and a \$300,000 capital project that complements the work funded by Bureau of Land Management (BLM).

Fuels reduction actions have occurred in 12 natural area parks ranging from east to southwest Eugene, and in the downtown core at Skinner Butte. Projects are located in the Ridgeline Park System and in Neighborhood Natural Areas. Controlled ecological burns have occurred in the West Eugene Wetlands and at Suzanne Arlie Park.

Controlled ecological burns have been occurring in the West Eugene Wetlands for the past 30 years, in coordination with the Rivers to Ridges partnership. In addition to maintaining high-quality native habitats, these burns prevent the accumulation of woody vegetation, keeping fuel loads low.

Community Wildfire Assistance funds from the Bureau of Land Management also provide for outreach and interagency coordination. Parks and Open Space has shared wildfire preparedness and awareness messaging and resources across a broad range of community members: homeowners/Homeowners Associations, park and trail visitors, all households in Eugene (Picture Your Parks publication), children and families.

Interagency Coordination: has hosted two tours from Bureau of Land Management's National Fuels Review Team (2015, 2019); built relationships with Bureau of Land Management and Oregon Department of Forestry fuels specialists; grew the Eugene Springfield Fire and Parks and Open Space partnership; and currently collaborates projects with Eugene Springfield Fire, Bureau of Land Management, Oregon Department of Forestry, Northwest Youth Corps, Oregon State University-Extension, Long Tom Watershed Council, and the Eugene Wildfire Coalition.

Sustainability: for some projects, biomass has been transported to Seneca for use as renewable fuel.

Partnerships: working within the Rivers to Ridges Partnership, 250 trees removed from one of our projects were installed as habitat logs at TNCs Willamette Confluence Preserve near Mt. Pisgah.

What's Next for Parks and Open Space Natural Areas

- Continued on-the-ground fuels reduction actions, expanding to parks awaiting treatment.
- Hazardous fuels assessment for up to 30 natural area parks to help prioritize future projects
- Continued active participation in the "Wildland Urban Interface Collaborative," including renewing outreach materials
- Continuing to seek additional funding as a multi-agency collaborative partnership

Oregon Department of Forestry – Western Lane

Firewise: 15 active Firewise Communities in various stages of renewal and pending statuses
Spanning between Florence and Eugene, 7 in South Eugene

Eboard South Hills Eugene Collaboration Project (2021): this project intends to reduce fuel loading on private and public lands in the Eugene South Hills using \$200,000 provided by the Oregon Department of Forestry and utilizing Northwest Youth Corps workforce. There is intent to increase outreach to private landowners and propagate fire awareness within Lane County. This project will run from February 2021 to June of 2021.

Partners included on this project:

- Oregon Department of Forestry
- Eugene Parks and Open Spaces
- Northwest Youth Corps
- Long Tom Watershed Council
- Oregon State University Extension Services
- Eugene Springfield Fire
- Eugene Wildfire Preparedness Coalition

Acres to be Treated:

- Private and Public land
- 122 Treated acres in the Eugene Area (primary focus on South Eugene) through Oregon Department of Forestry, Northwest Youth Corp, Eugene Parks and Open Spaces, and Long Tom Watershed Council.

Outreach:

- Eugene Springfield Fire
- Media
- Oregon State University Extension
- Media and Webinar Video
- Eugene Wildfire Preparedness Coalition
- 100 Landowner contacts for future interest

Fuels Reduction (2010 to Present):

- 100% grant funded with some matching funds from Oregon Department of Forestry
- 10-year average of 146 Acres per year = 1462.38 total acres treated
- 558 Projects treated equals 2.62 acres per job
- \$260,000 per year spent removing hazardous fuels
- \$5,000,000 has been spent with grant funds for fuels reduction in Lane County

Northwest Youth Corps:

Northwest Youth Corps is a non-profit organization which provides opportunities for youth and young adults to learn, grow, and experience success in areas such as employment preparation and procurement, environment, environmental education, job training, natural resources conservation and protection. Northwest Youth Corps has been involved in fuels reduction/defensible space creation throughout Eugene's South Hills in the following projects:

- 2019 City of Eugene Wildland Urban Interface Fuels Reduction Project
- 2021 Eboard Eugene South Hills Collaboration Fuels Reduction Project

The current status report on projects in Eugene's South Hills are as follows:

- Sites: (5) Campus, Cascades Raptor Center and 3 Homeowners Association's
- Acres: 45
- Units Effected: 250+
- Project Hours: 120
- Total Crew Staff Hours: 720
- Total Crew Members: 12

The above summary does not include the work that the Long Tom Watershed Council, Eugene Wildfire Preparedness Council, and the Oregon Department of Forestry have completed.

The ten locations associated with this project have accomplished a minimum of one of the following tasks:

- Provide volunteer support hours (coordination & labor)
- Offered or supplied privately funded equipment (containers, chippers, etc.) to make the project function more efficient
- Intend to couple this work with a community event to further Wildfire Preparedness

Eugene Wildfire Preparedness Coalition:

Past activities:

- Three 2020 Wildfire Forum Presentations
- Giving presentations at Neighborhood Associations meetings
- Produced 16-minute video of 2020 Wildfire season

Present activities:

- ODF Grant to locate 100 private residents in Eugene South Hills interested in future fuel reduction
- HRNI Matching Grant to improve NLC website, purchase tree trimming tools for free rental to homeowners & community wildfire education

Future Activities:

- Continue producing educational wildfire preparedness media
- Working with OSU Ext. to develop a Volunteer Wildfire Risk Assessment Program
- Assist the City of Eugene with funding & hiring a Fire Adaptive Community Coordinator position

Summary

Preparedness is the act of changing behaviors or processes to reduce the impact a disaster may have on a population or group. Although the City of Eugene sits in an area of moderate risk, areas of our South Hills are defined as high risk. Empowering our community with education and resources will better allow the community as a whole to prepare and sustain during any type of emergency.

ATTACHMENTS

- A. [2019 Wildland Urban Interface Project](#)
- B. [2020 Lane County Community Wildfire Protection Plan \(CWPP\)](#)
- C. [City of Eugene Fire Hazard Map](#)
- D. [Eugene Springfield Fire Community Risk Assessment Report](#)
- E. [City of Eugene Nuisance Vegetation Program](#)
- F. Letter to City Council and Mayor Vinis from Eugene Wildfire Preparedness Coalition

FOR MORE INFORMATION

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WILDLAND URBAN INTERFACE **FUELS REDUCTION PROJECT**

Ian Appow





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Ages 4 to Adult
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WUI FUELS REDUCTION **PROJECT**

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WUI FUELS REDUCTION PROJECT

MESSAGE FROM THE COORDINATOR

Ian Appow



Dear Partners,

The past few months of this project has been quite the journey! Not so long ago, our best options were cold calls and going door to door in hopes of finding interest in the program from residents. Five months later, we have an overflow of community members insisting on wanting to know what comes next for this project and how they can get involved.

When this project started, I called fifteen different established community fuel reduction programs in California and Oregon, asking for advice on how to achieve sustained success for this type of work. When they asked what we were doing, all of them thought as admirable as it was, our project mission was going to be impossible to pull off starting from scratch with only a five-month window.

"Present equitable opportunities for as many residents of the Southeast Neighborhood to improve the community's wildfire resiliency"

This program is groundbreaking, and I couldn't be prouder of this team. We have given this community hope. Too many people initially reached out overwhelmed with fear in how they could survive if a wildfire sparked in their neighborhood, and now? They're hosting meetings, giving presentations, and pushing city council for more programs like ours. Your organizations have earned these people's trust in ways that will have them championing you not only now, but for years to come.

I also want to take a moment to thank the exceptional young women and men of the Northwest Youth Corps crews that executed this tremendous task over the past few months.

"These crews comprised of young adults are involved not only to gain fieldwork experience but to specifically develop workforce opportunities within the Fire Service, Forest Service, Land Management, Urban Forestry, and Park departments"

I'm not sure many of them had any idea what "fuels reduction" meant coming into this project, yet quickly became the real ambassadors of this program for the community. There was every possible bit of diversity thrown at them, and yet they prevailed through over 200 acres of treated properties. I honestly believe that their involvement was what made this experience special for so many homeowners; it was honest work, by honest working youth, something that inspires all of us. To quantify this further, the crews had multiple instances where neighbors made them food as thanks and offer them keys to their house so they could use the bathrooms or warm-up on colder days. I hope that they were able to realize how much of a positive impact their past few months have been for not only the collaboration but for the Southeast Neighborhood.

Lastly, I would like to thank all of the partners in the collaboration for turning what started as an internship position into a passion project for me. The experience has been immeasurable in what I can bring forward to the next step in my career. I would have never imagined being able to connect with so many different workgroups and communities with the confidence I have gained and couldn't be more grateful. I hope you are as proud of this project as I am and look forward to working with you all again in the future.

A handwritten signature in black ink that reads "Ian J. Appow". The signature is written in a cursive, flowing style.

IAN APPOW
Project Coordinator

WUI FUELS REDUCTION COLLABORATIVE



Eugene Springfield Fire

Appointed Project Lead. Engaged with stakeholders and collaborative to administer the strategy and mission to ensure success throughout the project. Provided informational resources on wildfire safety and accompanying topics for public participants wishing to learn more. Supplied truck for tow-behind brush chipper as well.



Northwest Youth Corps

Executed the prescribed fuel reduction labor for the project. The work force was composed of two young adult crews, one group was made up of Eugene residents, the other comprised of out of state's. NYC also was responsible for staffing the project coordinator. This position adhered to collaborative priorities by creating marketing material, conducting outreach, giving evaluations, making community presentations, organizing crew work, administering quality control, and reporting of the project.



Oregon Department of Forestry

Provided support to the Project Coordinator in creating defensible space treatment plans with landowners as well as provide limited training to the NYC crews to treat hazardous fuel while meeting the specifications of landowner treatment of plans. As the project evolved ODF transferred primary duties to provide logistical support to transport and ensure safe operation of the wood chipper.



City of Eugene's Public Works

Urban Forestry

Aided in identifying suitable neighborhood/community partners, undertake the support of Northwest Youth Corp with tree work in the public right-of-way and provide the collaborative team with a tow-behind brush chipper.

Parks & Open Space

Provided oversight for habitat conservation during fuels reduction work in both public and private properties. Included in their contribution was access to GIS applications and data on taxlots and zoning for the City of Eugene allowing for responsible designations of worksite priorities.

Photo:

NYC Crew NCS 4 manages a worksite adjacent to Spencer's Butte that has suffered from severe storm damage. Even though this property has been managed over the years, fuel builds up quickly in forests with this level of density.

Photo Credit: Liana Germick, Northwest Youth Corps



Why a Fuels Reduction Project?

City of Eugene's Climate Action Plan 2.0

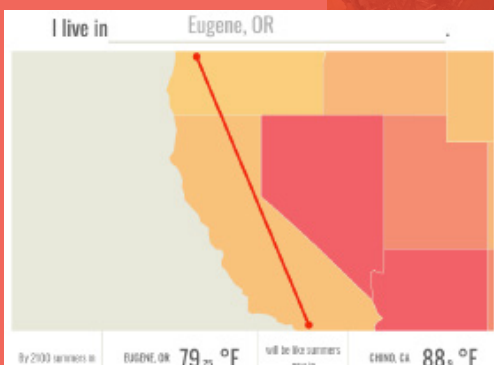
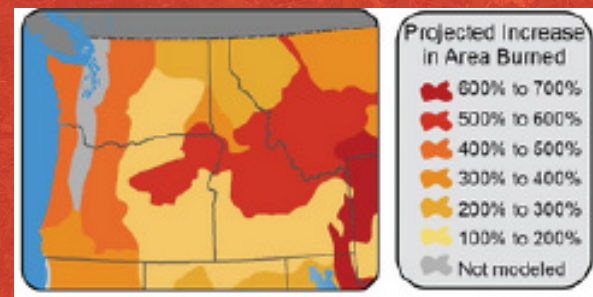
Left

Average Summer Increase of 10° - 12 ° by 2100 . This means our 79° summer average will be about 88.9°(Comparable to Chino, California)

Right

Wildfire surface area increasing by 400-500% acres burned by 2040.

<https://www.eugene-or.gov/DocumentCenter/View/58135/CAP20-Full-Documents-Appendices>



WORK DEVELOPMENT

NETWORK BUILDING

Community Engagement

Engaging NYC crews with community members to develop relationships and opportunities while showcasing their work. Interactions lend to building customer service skills and problem solving. Opportunities like working with the Cascades Raptor Center allow for a holistic approach to learning about the importance of natural habitats.



SKILLS TRAINING

NYC

The Young Adult Program (Ages 19-26) delivers local jobs that evolve soft skills, physical endurance and technical abilities. The Leadership Development Program (Camping Program, Ages 20+) focuses on leadership training with members spanning across the country. The LDP curriculum is centered around conservation work and management.



FORESTRY EDUCATION

ODF

ODF served as the foundation for the fuels reduction work itself. They administered topic training, worksite quality, and equipment troubleshooting for the NYC crews. Their staff's professional experience provided on site solutions to a wide range of issues on a regular basis. ODF gave homeowners and crews trust in delivering high-standard final products.



PROJECT MANAGEMENT

City of Eugene

ESF and Public Work departments aided with fielding situations that called upon their specific expertises (Fire, Ecology, Urban Forestry). They provided vehicles and chipping equipment for crews. These groups had the most relationships with the community and served as the project organizers. Their influence helped demonstrate effective management.



“

***Providing
Opportunities For
Youth and Young Adults
to Learn, Grow, and
Experience Success.***

Photo on left

Kyle of Urban Forestry helps facilitate heavy equipment during Chipper Day event held in July.

Photo on right

Relative Fire Hazard map of Eugene and Springfield. The Southern hills of Eugene that line the UGB are some of the most highly vulnerable locations.

Source: <https://www.eugene-or.gov/DocumentCenter/View/20573/Eugene-Springfield-Multi-Jurisdictional-NHMP-2014?bidId=>

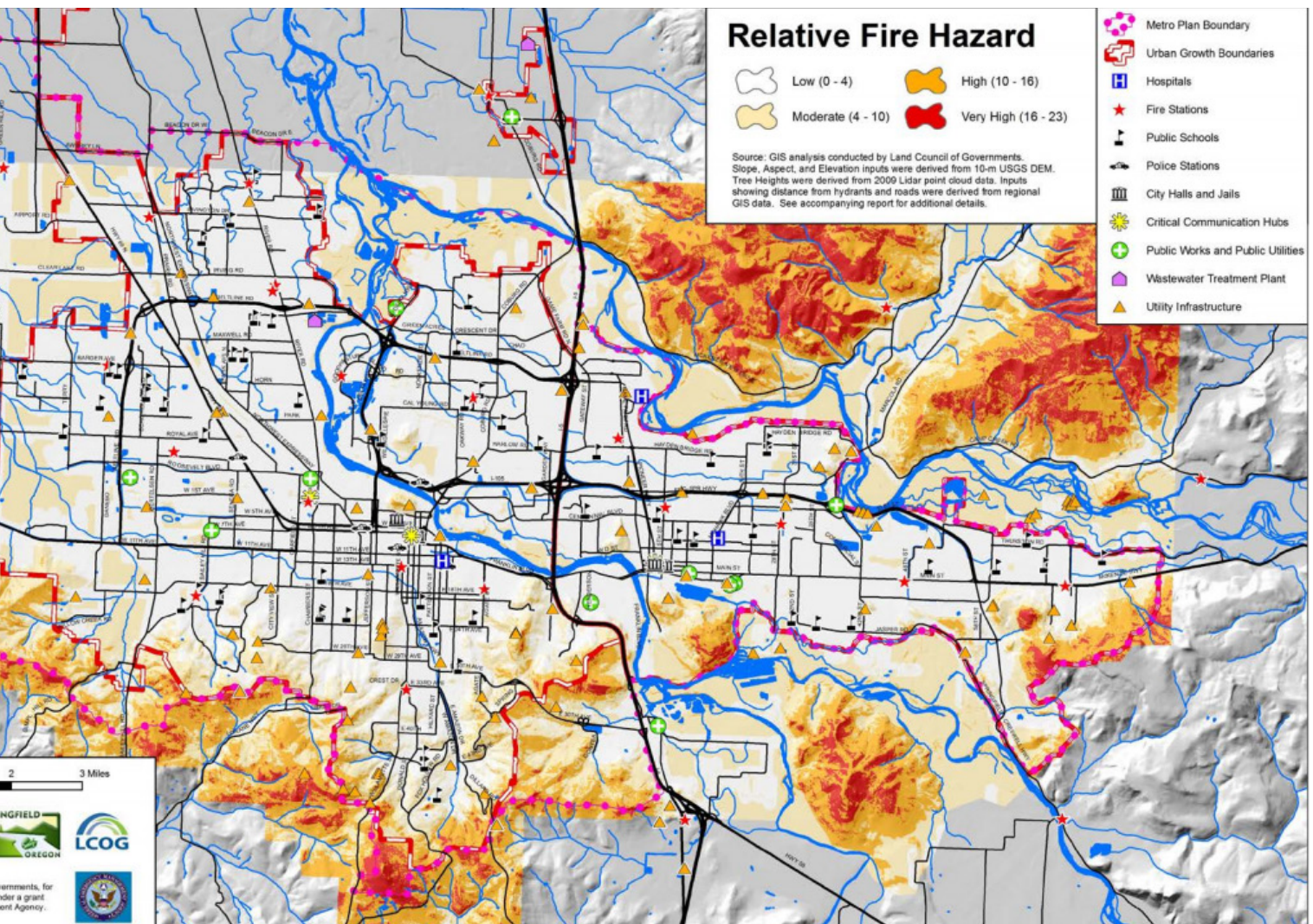


PROJECT STRATEGY

"Fire is an essential part of Oregon's ecosystem, but it is also a serious threat to life and property particularly where urban areas encroach upon forested, open range or grassland areas. Wildfires occur when fire impacts large vegetated areas that require a suppression response. In this region, changes in historic vegetation, climate and fire occurrence are resulting in changes to the patterns and character of fire.

In short, the risks and potential impacts of wildfire are increasing."

*Eugene-Springfield Natural Mitigations Plan
2.6.1 Causes and Characteristics of Wildfires*



To be a success we had to create clear targets that would be obtainable in five months, but also appropriately scale into a larger format in the future. The goal was to positively influence the community and habitat in the most equitable way possible.

We first needed to decide on a geographical target and referenced the "Relative Fire Hazard" map above. The distribution of "high-very high" in and adjacent to the Southeast Neighborhood Association (SENA) stood out as an organized location to start. Focusing on that section would allow us to focus our messaging and get a better understanding of the public's reaction to wildfire safety.

The first action item was hosting a "Chipper Day" at Charlemagne Elementary where we invited adjacent neighbors to bring any brush or woody material to be processed free of charge. This allowed us to start the narrative for the project and get some work done in July right before fire season.

Then using the knowledge of what resonated with homeowners the project coordinator marketed the program to other residents,

local businesses, and the SENA Board which led to over 6,000 postcards being sent to homeowners with invitations to the program. This stage was set to expand on educating the public about wildfire safety by giving free personal defensible space evaluations of their private property. Based on those evaluations each property was given an objective score based on:

1. Severity
2. Location Vulnerability
3. Financial Accessibility
4. Fire Marshall's Assessment

The higher the total score, the higher priority that particular location was given for potential work to be done by NYC using the defensible space evaluation as a prescription. **In totality we were able to conduct 152 property evaluations, treat 204 acres of land, and in turn affect 218 primary units (main structures, not including sheds, storage, garages, etc.) from the fuels reduction work this program provided.**

PROJECT VISION & MISSION

VISION

This project is to carry out fuel reductions in the Southeast Neighborhood of Eugene. This area is considered a Wildland Urban Interface and susceptible to wildfire due to fuel density and topography in conjunction with urban growth. The goal is to educate property owners in the Southeast Neighborhood on the value of defensible space by offering private consultation, educational resources, and prescription-based fuel management. The first step is in making free defensible space evaluations available to households by subject matter experts.

The collaboration then looks to use the assessments to identify and prioritize residents that would benefit most from financially aided fuel reduction work via Northwest Youth Corps.

Northwest Youth Corps crews are then assigned to administer the suggested fuels reduction work via cooperative agreements between coordinator and homeowner. These crews comprised of young adults are involved not only to gain fieldwork experience but to specifically develop workforce opportunities within the Fire Service, Forest Service, Land Management, Urban Forestry, and Park departments.

MISSION

Present equitable opportunities for residents of the Southeast Neighborhood to improve the community's wildfire resiliency. This starts with educating as many homeowners we can on what they can do themselves first and then supplementing that knowledge with prescribed fuel reduction recommendations from the free defensible space evaluations. Supporting youth workforce development with opportunities to positively impact the adaptive resiliency of this community provides both immediate and future barometers of success in this project.

Top Photo

Matt Grimes of ODF describes species differentiation to the young adult crews.

Bottom Photo

Josiah Grey of NYC administers chipping material on Owl Road.



CORE VALUES

ENVIRONMENT

Protecting the Future

Enriching canopy coverage by thinning suppressed and dead/dying understory trees. Removing invasive species like blackberries, scotch broom and poison oak. Promote ecosystem health by keeping habitats and native species a priority.

FINANCIAL

Access to Prosperity

Investing in wildfire resiliency practices to mitigate chance of property damage. Increasing property values by lowering disaster risk. Upfront maintenance addresses other potential property damage potential like storm or fall damage from trees.

SOCIAL

Equal Opportunity

Prioritizing residents that may have a harder time financially accessing fuels reduction work. Leaning on community education and relationships to establish geographic fuel breaks. Embolden homeowners to develop disaster preparedness strategies.

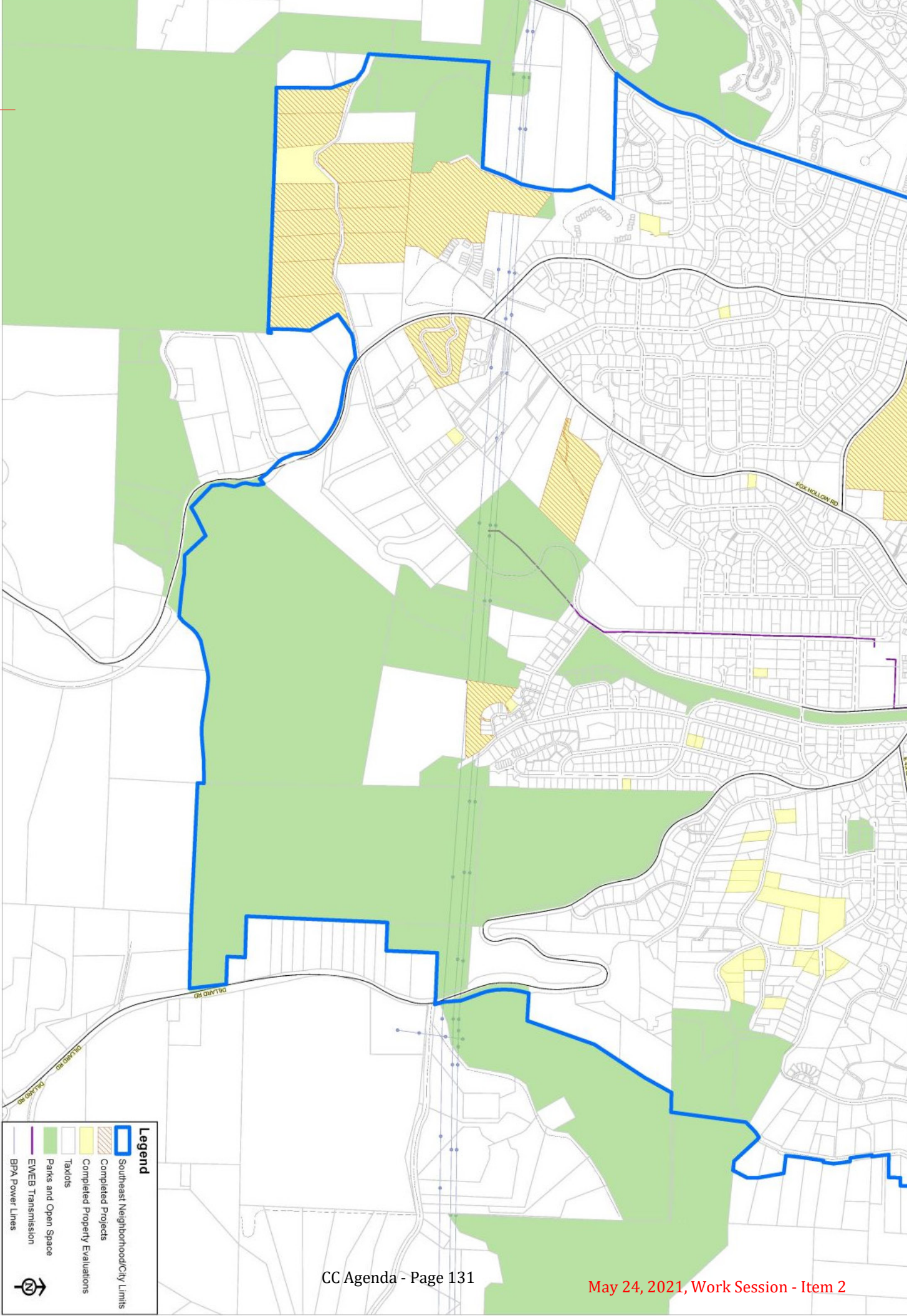
STEWARDSHIP

Keeping our Promises

Proving that the budget allocated for this project from City Counsel was in the best interest of the public. Supplementing public work that was previously pending and creating new windows for constituents to see the strength of interagency projects when supported.

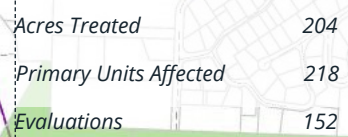


SE Neighborhood - WUI Collaborative Project - 2019



Legend

- Southeast Neighborhood/City Limits
- Completed Projects
- Completed Property Evaluations
- Taxlots
- Parks and Open Space
- EWEB Transmission
- BPA Power Lines



ENVIRONMENT

OWL & CLINE ROAD



Just north of Spencer's Butte and right on the the Urban Growth Boundary, both Owl and Cline Roads serve as the prototypical Wildland Urban Interface work sites.

Homes tucked away under dense canopied forests with Spencer's Butte in their backyard while only 15 minutes from downtown, this is some of Eugene's finest real estate. 23 houses reside in this area only connected through one-way in, one-way out access roads. Creating space on these roads for emergency vehicles to access is critical for their survival in the case of an emergency. However, due to the dense forest properties of these ecosystems there are many critical wildlife habitats present. Some residents had strong convictions that the risk was too great to have this work done. However, we took considerate time to work with the neighbors to present information and alternatives that helped make this a process they could trust. ODF and Public Works provided intensive support to help navigate the NYC crews to understanding the potential ecological impacts and where emergency access had to take priority. This was as a major learning experience in balancing stakeholder's interests.

*Upper left photo
Before*

This Willamette Pine failed in a recent ice storm on a homeowners property.

*Bottom left photo
After*

With the fuels from the fallen tree taken care of, the focus is now on a replanting plan.

SOCIAL 4J SCHOOLS



Spencer's Butte Middle School and Edgewood Elementary share a large forested area next to their buildings. Many students walk through this forest to get to and from school on a regular basis.

Most school campuses wish to keep their maintenance easy-meaning open grass fields. However, Facilities Manager of the 4J District, Daniel Temple connected with us to help promote their unique grounds.

[Academic research](#) shows that students perform better in classrooms that look out to forested landscapes compared to manicured lawns. Additionally, this type of environment helps strengthen the culture and identity of Eugene to it's rising leaders. Promoting healthy ecosystems within their learning institutions provides an undeniable precedent for what a healthy productive learning environment looks like.

Being involved with such a prominent local presence in 4J helped us earn trust through association with the public. There was also a lot of pride within the ODF and NYC staff working on this site, noting that it felt like more meaningful community engagement. We also loved that our work allowed 4J to allocate their budget for promoting other forestry enhancing projects.



*Upper Right Photo
Before*

Low hanging limbs that connect the ground to canopy on a steep hill outside Edgewood Elementary.

*Lower Right Photo
After*

Trees are thinned, and pruned so a ground fire is not as likely to climb vertically into the forest.

FINANCIAL WOODLEAF VILLAGE



Woodleaf Village is a low-income housing community off of Fox Hollow Road. Their limited maintenance budget makes projects like fuel reduction work hard to justify, but that's where we came in.

This started as an inquiry from Woodleaf facilities manager Christina Knighten calling about two failing street trees. Urban Forestry received the call, made a site visit and referred her to this project as a possible fit for additional support. Upon the defensible space evaluation it was determined that there were multiple common areas that could greatly benefit from a fuels reduction treatment. The work itself was able to provide wildfire resiliency to the 60 unit community and save thousands on their budget to focus on future issues instead of only being able to react as problems arose.

This was a great moment for the project as finding low-income participants proved to be harder than expected despite the potential benefit the supplemental work could provide. It seemed that the elusiveness came with a disbelief that these individuals were "actually" entitled to this program, and were afraid of a catch. This is where a consistency in the program would help alleviate this perception.



*Upper left photo
Before*

A common area covered with invasive blackberries, storm damage, and suppressed trees.

*Lower left photo
After*

Less hazardous horizontal interactions and native species finally given a chance to flourish.



STEWARDSHIP 30TH & SPRING

30th Ave was a location that the public had expressed concerns to the Fire Marshall's Office and Public Works before the start of the project.

With it being a precarious enough job, it was difficult for the City to have previously administered the ask to manage this worksite. However, this was a perfect example of how the fuels reduction project can fill needs for work groups.

With a ton of storm damage, invasive species and a tremendously steep cliff into the busy 30th ave, citizens had felt that the site had been "abandoned". Yet with a bit of hardwork and good communication with the departments who had been hearing about this site for awhile, it looks almost unrecognizable with the work done. It helped alleviate City staff time dedicated to it and also won a major swing of support from the neighbors. This led to an additional involvement of 20+ homeowners with the program due to their satisfaction with how the situation was handled.

Being able to earn their trust by following up with their concerns and getting the work done quickly made them some of our biggest advocates.



*Upper right photo
Before*

Heavily trafficked area with dramatic topography. A cigarette or car accident would roar uphill.

*Lower right photo
After*

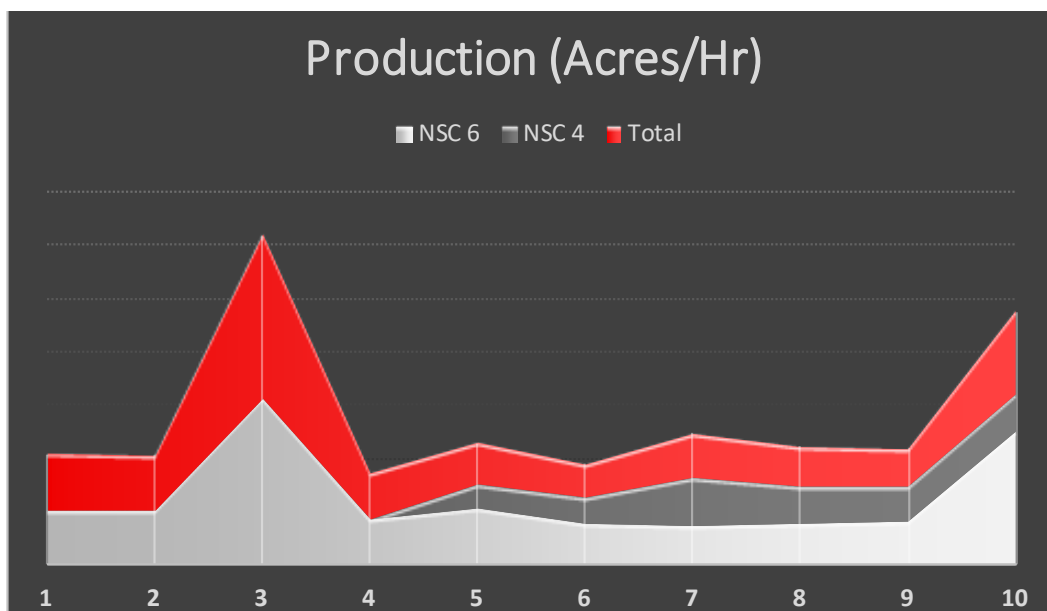
Invasive ground cover is removed, thinning is appropriate. Ground fires would have nowhere to go now.

PROJECT BREAKDOWN

Finding performance indicators in a project like this can be challenging. Fuels reduction work does not inherently lend itself to be tracked easily as there is high variance in the types of work, mechanical performance, and accessibility of the sites. The information below was my attempt to get a basic quantitative capture. Expanding on these metrics will be critical in making reports in the future have more overall value and meaning.

WORK BREAKDOWN

Week	Description	Hours	Acres	Productivity (Acre/Hr)
1	Owl Road (NSC 6)	337.5	17.5	0.052
2	Owl Road (NSC 6)	360.5	18.5	0.051
3	Owl Road / 4J (NSC 6)	309	53.25	0.154
4	Cline Road / Owl Road (NSC 4 & 6)	536.5	19.25	0.043
5	Cline Road, 30th & Spring (NSC 4 & 6)	448.5	17.5	0.039
6	Fox Hollow, Edgewood, 30th, Kimberly Circle (NSC 4 & 6)	519.5	16.5	0.032
7	Woodleaf, 30th, Kimberly Circle, Fox Hollow (NSC 4 & 6)	448	18.5	0.041
8	Wendell Lane (NSC 4 & 6)	467	17.25	0.037
9	30th, Onyx, Overbrook (NSC 4 & 6)	504	18.5	0.037
10	Cascades & Graduation (2 Workdays) (NSC 4 & 6)	104	8	0.077
Average Per Week		403	20.48	0.056
Total Sum		4034.5	205	



GOVERNOR'S COUNCIL ON WILDFIRE RESPONSE
27 OF 37 RECCOMENDATIONS TOUCHED ON WITH THIS PROJECT

TAKEAWAYS

Goal 1: Creating Fire-Adapted Communities	Directly Addressed	Enabled Conversation
Transmission System Wild-fire Plan	X	X
Defensible Space	X	X
Building Codes		X
Land Use	X	X
Property Insurance		X
Health - Remove Barriers to Air Filtration Systems		X
Disaster Recovery - Local Economic Opportunity Fund		X
Goal 2: Restore and Maintain Resilient Landscapes	Directly Addressed	Enabled Conversation
Leadership & Government	X	X
Near-Term Capital Infusion	X	X
Prioritization+	X	X
Near-Term Restoration Treatments	X	X
Building Project Pipeline	X	X
Capacity Building	X	X
Program Expansion		X
Long-Term Barriers		X
Goal 3: Respond Safely and Effec- tively to Wildfire	Directly Addressed	Enabled Conversation
Financing Facility		X
Expansion of Protected Areas		X
State Suppression Capacity		X
Suppression Funding Formula		X
ODF Organizational Model		X
State-Federal Interagency Performance		X
Suppression Collaborative	X	X
Goal 4: Cross-Functional Support System	Directly Addressed	Enabled Conversation
Public Engagement	X	X
Organization & Governance	X	X
Workforce Development	X	X
Research & Decision Support	X	X
Funding	X	X

The most significant result of this project came in the community development. Even though giving a "free service" with the evaluations and potential fuels reduction work was a great package to deliver, it was met with a lot of skepticism. In the beginning, promoting the chipper day event with only a two week turnover time was not very successful and required more preparation in hindsight. So I stepped away from mass outreach strategies and focused on quality opportunities that would hopefully convey our commitment to the neighborhood. I started attending community events, giving presentations, connecting local programs, referencing previous citizen concerns from collaborative partners, and looking for endorsements from local businesses. This was the turning point, the in person interactions were by far the most successful medium in gathering participation. Developing genuine relationships with the people that care so deeply about their community created the foundation for how this project could succeed. Taking the time to understand the culture allowed me to understand where I could help, who we could help, and how we could help. As time went on, being able to have prominent local influencers vouch for the program along with having completed work to reference was what snowballed our public acclaim.

The work itself had an extremely high variance in specifications which is expected to come with such a customer service oriented mission, but put an intense strain on the NYC crews. Without specific project training beforehand, the case by case prescription details often became either overbearing or too hard to explain. The inconsistencies in interpretations of the evaluations between the homeowner, crews, and myself was an all too regular occurrence that consumed a tremendous amount of effort to rectify. I don't believe that anyone was misinformed, but the range of vision on the topic was so drastically different by each party, this result is no surprise. ODF's ability to support this specific issue not only saved the project countless times, but has been identified as one of, if not the most critical component to elevate future iterations. They have the unique experience to be able to intuitively manage the fluctuating standards of the homeowner while simultaneously support the technical work of the NYC crews on site.

A debrief I conducted with the NYC work group suggested a longer training period, more professional led work sessions like Edgewood Park (led by PW's Evan Gammon) or classroom sessions on ecological topics would have helped their performance significantly. Additionally, having the critical equipment for this work more accessible has to be a serious priority. The transportation alone of getting the truck from the FMO, the chipper from PW, to the worksite and back after each use cost a minimum of 80 staff hours.

Lastly, I believe that as strong as the results of this one time project were by triple bottom line standards, it can only be considered a true success if it is continued. The work itself requires regular maintenance and the community needs to see consistency to build the trust in the program to make it meaningful. Other than obviously acquiring additional funding, concentrating on a larger investment into the work development component of this project is key. Giving the young adult crews opportunities to extend their experience of the work is the real strength of the program and what makes this program so special. With the right support, they will become the true ambassadors of the collaborative and future of this community.

REPORT BY

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Lane County, Oregon

COMMUNITY WILDFIRE PROTECTION PLAN



Photo by Marcus Kauffman, ODF



Adopted on August 25, 2020



Oregon State University
Extension Service
Lane County



Lane County Community Wildfire Protection Plan



Prepared by:

CWPP Project Steering
Committee

July 2020



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Acronyms and Abbreviations

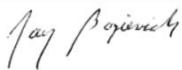
BLM	– Bureau of Land Management, housed within the U.S. Department of the Interior.
CAR	– Community at Risk
CWPP	– Community Wildfire Protection Plan
GIS	– Geographic Information System
HFRA	– Healthy Forest Restoration Act
LMD	– Lane County Land Management Division
EM	– Lane County Emergency Management
LCPW	– Lane County Public Works
NFP	– National Fire Plan
ODF	– Oregon Department of Forestry
OSU	– Oregon State University Extension Service- Lane County
ONHW	– Oregon Natural Hazards Workgroup
OWRE	– Oregon Wildfire Risk Explorer
USFS	– United States Forest Service housed within the U.S. Department of Agriculture.
WUI	– Wildland Urban Interface

Signature Page

The Healthy Forest Restoration Act (HFRA) requires that three entities must mutually agree to the final contents of a CWPP:

- Lane County Board of Commissioners
- Lane County Fire Defense Board, and
- Oregon Department of Forestry

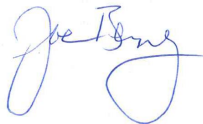
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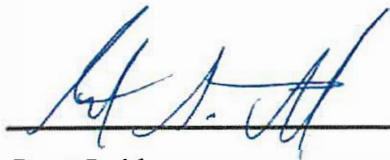
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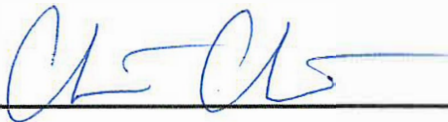
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Lane County Wildfire Risk Assessment:

Information for most maps in this plan were derived from Pyrologix's 2017 Northwest Quantitative Wildfire Risk Assessment, using layers available from the free wildfire mapping tool, "Oregon Wildfire Risk Explorer" developed by Oregon State University and the Oregon Department of Forestry. Care was taken in the creation of these maps but are provided "as is" using the "best available" data, displayed to better inform local decision making. Lane County cannot accept any responsibility for any errors, omissions, or positional accuracy, and therefore, there are no warranties that accompany these products (the maps). Although information from Land Surveys may have been used in the creation of these products, in no way does this product represent or constitute a Land Survey. Users are cautioned to field verify information on this product before making any decisions.

Executive Summary

The Lane County Community Wildfire Protection Plan (CWPP) seeks to identify mitigation strategies and priorities to reduce impacts of wildfires throughout Lane County, while providing a foundation for collaboration across boundaries, industries and values towards improved social, ecological and economic resilience. The plan identifies general areas with high wildfire risk and provides a framework of technical support and guidance to assist local communities in developing and refining their own community wildfire mitigation strategies. The CWPP is not a regulatory document and does not have authority over incorporated communities within Lane County, but rather seeks to develop strategies to align, collaborate and coordinate efforts for sharing information and resources across jurisdictional boundaries.

The CWPP includes a Risk Assessment for identifying areas of Lane County susceptible to wildfire risk, a Community Outreach and Collaboration section that evaluates input regarding wildfire gathered through a community survey, an Action Plan section which identifies future efforts for wildfire planning and mitigation, and a Plan Implementation and Maintenance section.

The CWPP Action Plan section identifies 24 Action Items that reflect the Goals and Objectives of the plan as identified by the CWPP Steering Committee. The following five Action Items are identified as priorities for wildfire planning in Lane County.

Action Item 2.1.1 Review and develop recommendations to the Lane County Board of Commissioners for revisions to land use regulations, such as: Implementation of fire safety standards within rural residential zoning districts; Distribution of educational materials at the outset of the building permit review process; and Outreach services with neighborhood organizations and special interest groups.

Action Item 2.1.3 Identify and prioritize areas for local evacuation plan development across Lane County's Rural Fire Protection District, potentially including data from the CWPP Rural Response: Priorities for Fuel Reduction Map.

Action Item 2.3.1 Utilize maps in the CWPP risk assessment to guide and identify new partners and opportunities for cross-boundary collaboration. Coordinate the implementation of landscape scale hazardous fuel projects.

Action Item 3.1.1 Develop a coordinated multi-agency seasonal outreach campaign that includes county-specific educational materials to promote effective risk reduction practices and communicate landowner assistance programs in the wildland/urban interface.

Action Item 3.2.1 Implement landowner assistance for fuel reduction projects including cost-share incentives. Increase local capacity, establish incentive programs to support yard debris disposal to assist landowners with hazardous fuels removal. Create disposal opportunities using alternative methods to burning.

The priority Action Items are intended to be the primary focus for the next implementation term of the plan and will be reevaluated by the Steering Committee during future plan updates.

Section 1 Introduction

Plan Purpose

The Lane County Community Wildfire Protection Plan (CWPP) is a collaborative agreement between the Oregon Department of Forestry, Lane County, and Federal partners. This document strives to:

- Provide countywide leadership through partnerships to implement wildland-urban interface fire mitigation strategies in Lane County.
- Improve community strategies for reducing the impacts of wildland-urban interface fires.
- Promote wildfire risk reduction activities for private and public lands in Lane County.

The CWPP is non-regulatory in nature, meaning that it does not set forth any new policy. The CWPP is designed to be an action plan and depends upon people and partnerships to carry it forward. The guiding principles of the plan include:

- A foundation to help improve cross-boundary coordination between agencies to reduce negative wildfire impacts through the pursuit of fire resilient landscapes and communities in Lane County.
- Identification and prioritization of areas for hazardous fuel reduction and wildfire resilience projects through the creation of county-level risk maps.
- Landowner resources for understanding wildfire risk in our community, including maps and recommended actions homeowners and local communities can take to help reduce their structure's exposure to wildfire risk (structural ignitability).
- A way to meet federal and state planning requirements and qualify for assistance programs.

Importance of Developing a CWPP

The increase of structures in and near forestlands exposes greater numbers of people and property to the wildfire hazard. According to the State Natural Hazards Risk Assessment, Lane County has a high probability of and vulnerability to wildland-urban interface fires¹. Wildfire Suppression Costs in Oregon set consecutive records in 2017 and 2018 with over 500 million dollars spent statewide in 2018.² The Governor's Council on Wildfire reminds Oregonians the true cost of wildfire, from suppression to recovery, can be 11 times greater than the cost of suppression, potentially costing the state several billions of dollars in just one fire season.³ The effect poor air quality has on residents and local business is an example of these added costs. In 2017 Oregon experienced 160 days of unhealthy air quality related to wildfire smoke⁴,

with the Eugene-Springfield area experiencing unhealthy air quality for approximately two months⁵.

The destruction caused by recent fire seasons illustrates that fire response and emergency management efforts alone are not enough to prevent losses. Reducing a community's risk to wildfire is a shared responsibility that includes the participation of federal, state, and local government agencies, the private sector, and citizens. Risk reduction strategies are typically most effective when organized at the local level.

The Lane County CWPP focuses on achieving the three minimum requirements for community wildfire protection plans described by the Healthy Forest Restoration Act (HFRA):

1. Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.

2. Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.

3. Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Area Covered

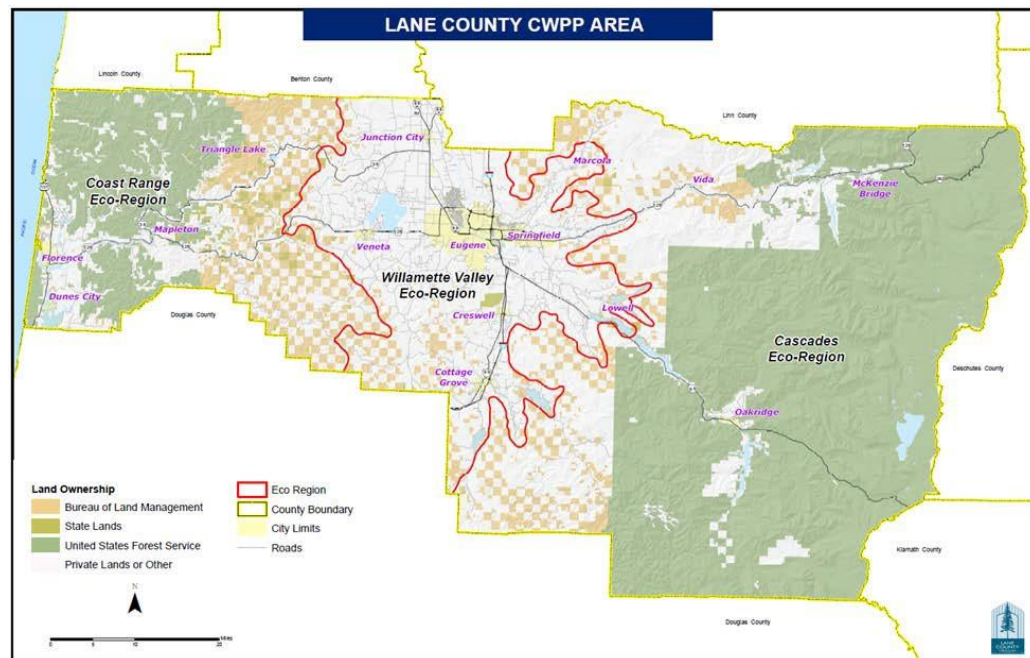
Lane County covers 2.9 million acres, stretching from the Pacific Ocean to the crest of the Cascade Mountains. Nearly 90% of Lane County is forestlands. Lane County is made up of three distinct ecoregions with differing vegetative, geographic, and fire regime characteristics.⁶ These ecoregions are described below:

Willamette Valley: The valley landforms include floodplains and terraces interlaced with surrounding rolling hills. The natural vegetation includes a mix of oak prairies and hardwood forests composed of oak, cottonwood, alder, Oregon ash, and big leaf maple. Douglas-fir, ponderosa pine, grand fir, incense-cedar, and western red cedar occur in moister areas. The valley has lower precipitation, warmer temperatures, and historic fire regimes of higher frequency and lower severity than adjacent Cascades or coast range.⁷

Coast Range: This ecoregion is characterized by steep, highly dissected slopes with narrow ridges. The natural vegetation includes forests of Douglas-fir, western hemlock, western red cedar, and Sitka spruce. The coast range historically experienced lower frequency, higher severity fires when compared to both the Willamette Valley and Western Cascades.⁸

Cascades: This ecoregion is characterized by ridge crests at similar elevations, separated by steep valleys. The natural vegetation consists of forests of Douglas-fir, western red cedar, and western hemlock at lower elevations and silver fir and mountain hemlock at higher elevations.⁹ The Cascade region typically sees more fire than the coast range, at mixed to high severities due to more natural ignitions via lightning events.

Figure 1.1: Lane County CWPP Area Map



Source: Lane County Public Works GIS, 2020

Wildfire History

Wildfire plays a critical ecological role in many ecosystems across the country, including those in Lane County. Native Americans annually burned large areas of the Willamette Valley and coastal valleys to help maintain grasslands and savannahs.¹⁰ Forest fires were relatively infrequent, although their size and severity were often large. Between 1846 and 1853, a series of large fires burned over 800,000 acres in the central Oregon coast range.¹¹

The disruption of natural fire cycles over the last century has created dangerous vegetative fuel loads and made forests vulnerable to catastrophic wildfires. Logging came to the region in the early twentieth century, combining with fire to change the landscape of the coast range and western Cascades.¹² During and after World War II, an emphasis on better wildland fire suppression and fire prevention dramatically reduced damage caused by wildfires. More people moved into suburban areas during this same period, enlarging the wildland-urban interface.

There are many examples of disastrous fires, both in Lane County and in surrounding counties that share similar landscape characteristics. In 1910, the Nelson Mountain Fire burned many areas that are now state forestlands in Lane County. Large fires burned again in western Lane County in 1917, 1922, and 1929.¹³ The 1966 Oxbow Fire, started by a faulty spark arrester, burned 44,000 acres in Lane County.¹⁴ To the north of Lane County, the 1933-1951 Tillamook Burn fires consumed a combined 355,000 acres.¹⁵

Forest Characteristics

Historic wildfire regimes played a predominant role in the development of Lane County forests. Natural cycles of fire disturbance influence all facets of ecosystem dynamics from structure and composition to wildlife habitat and nutrient cycling. Fire suppression, timber harvesting, the introduction of exotic species, and other human factors have disrupted natural fire cycles. West of the Cascade Mountains, fire frequency and severity depend upon environmental variables, such as temperature, moisture, ignitions, and broad, fire-driving winds.¹⁶

Throughout Lane County, Douglas-fir and Western Hemlock climax is the most predominant forest type.¹⁷ Fire regimes in moist Douglas-fir habitat types are mixed, ranging from low to moderate severity surface fires at relatively frequent intervals (7 to 20 years) to severe crown fires at long intervals (50 to 400 years).¹⁸ Significant annual precipitation and historically low occurrence of lightning throughout much of Lane County contribute to a low probability of natural fire ignitions in many areas. However, the high vegetative fuel loads are vulnerable to catastrophic fire once ignited. Catastrophic fires are those that “burn more intensely than the natural or historical range of variability, thereby fundamentally changing the ecosystem, destroying communities and/or rare or threatened species/habitat, or causing unacceptable erosion” (National Fire Plan, 2001).¹⁹

Current Wildfire Protection Framework

Several agencies share responsibility for fire protection in Lane County; these roles are described in the Lane County Emergency Operations Plan.

The City of Eugene and City of Springfield Fire Departments provide emergency fire services to the most densely populated and developed areas of Lane County. Much of the remainder of the County’s fire protection lies within the jurisdictions of the agencies that make up the Lane County Fire Defense Board. The Oregon Department of Forestry is responsible for wildfire protection on all state-owned forestland, privately owned rural lands, and Bureau of Land Management lands. The U.S. Forest Service is responsible for national forest lands.

The Oregon Department of Forestry administers hazardous fuel mitigation funding via the Western States Fire Managers and Community Assistance grants through the National Fire Plan (NFP). Lane County utilizes Title III funds to implement the Firewise Communities program, which provides numerous wildland-urban interface resources for firefighting safety, community planning, landscaping, construction, and maintenance to lower the structural ignitability of rural homes and properties. Federal agencies utilize various methods and funding avenues to reduce wildfire risk on federal lands, with a focus on designing and prioritizing fuel treatments to reduce fire intensity, structure ignition and extent. A brief explanation of these roles and responsibilities is outlined below.

Federal

US Forest Service (USFS) and Bureau of Land Management (BLM):

- Manages the majority of Lane County's 2.5 million acres of F1 zoned forestlands;
- USFS participates in fire response and co-op agreements with Oregon Department of Forestry;
- BLM agreement with Oregon Department of Forestry for wildland fire protection on lands within ODF district boundaries.

State

Oregon Department of Forestry:

- Provides wildland fire protection on 1.2 million acres in Lane County on state owned and state protected lands within district boundaries;
- Contracts with private lands to provide wildland fire protection outside of district boundaries;
- Participates in first-response agreements with all adjoining counties and with co-op agreements with USFS;
- Provides protection to BLM lands within district boundaries by agreement;
- Promotes education, outreach, and prevention activities.

Oregon State Fire Marshal:

- Provides technical assistance to local fire departments and unprotected areas;
- Promotes education and outreach in the wildland-urban interface;
- Adopted the Oregon Fire Service Mobilization Plan, which is reviewed annually and updated as needed.

County

Rural Fire Districts:

- 20 Rural Fire Districts within Lane County;
- Provide all hazard response in their districts, including structural fire protection within district boundaries throughout Lane County.

Lane County Fire Defense Board:

- There is a countywide mutual aid agreement to which all local fire protection agencies in Lane County and the Oregon Department of Forestry are signers;
- Focuses on the coordination and preparedness of structural fire districts on wildfire topics ranging from prevention and education, initial attack, mutual aid agreements and local conflagration planning in Lane County.

Lane Fire Prevention Co-op

- Facilitates interagency cooperation in the local delivery of wildfire fire prevention messages and materials;
- Includes Lane County Fire Defense Board, OSFM ODF, USFS and BLM representatives.

Municipal

City Fire Departments provide structural fire protection within city limits, often respond during initial attack of vegetation fires within city limits.

Existing Plans and Policies

The CWPP works in conjunction with other plans, policies, and programs. More information regarding these relationships can be found on Table 1.1 below.

Table 1.1 Existing Plans and Policies

Federal Policy	Requirements	How the CWPP Addresses Policy
<p>Healthy Forests Restoration Act (HFRA): Congress adopted HFRA in 2003 to assist community, state, and federal land managers in the prevention of catastrophic wildfire on public lands through fuels reduction activities.</p> <p>The Act requires 50% of appropriated fuel treatment funding through HFRA is to be used in the wildland-urban interface protection zone and give priority funding to communities with a community wildfire protection plan in place.</p>	<p>(1) Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.</p> <p>(2) Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.</p> <p>(3) Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.</p> <p>(4) Three entities must mutually agree to the final contents of a CWPP: the applicable local government; the local fire departments; and the state entity responsible for forest management.</p>	<p>(1) The CWPP was collaboratively developed by a Steering Committee representing local, state, and federal agencies. The plan conducted outreach activities to gain input from public and private stakeholders.</p> <p>(2) The CWPP includes an assessment of wildfire risk in Lane County and a process for prioritizing fuel reduction projects. The plan also includes a table identifying appropriate fuel treatment methods for Lane County.</p> <p>(3) The CWPP recommends actions for promoting risk reduction activities on private and public lands in Lane County.</p> <p>(4) The Lane County Board of Commissioners, the Lane County Fire Defense Board, and the Oregon Department of Forestry approved the Lane County CWPP.</p>
<p>National Fire Plan 10-Year Comprehensive Strategy: The National Fire Plan was developed in 2000, following a landmark wildfire season, to actively respond to severe wildfires and their impacts to communities while ensuring sufficient firefighting capacity for the future.</p>	<p>The National Fire Plan addresses five key points:</p> <p>(1) Firefighting</p> <p>(2) Rehabilitation</p> <p>(3) Hazardous Fuels Reduction</p> <p>(4) Community Assistance Accountability</p>	<p>The CWPP will aid in effectively implementing National Fire Plan goals by providing a collaborative framework reducing wildfire risk to communities in Lane County.</p> <p>The advisory committee responsible for coordinating the CWPP will also serve as the local coordinating body for National Fire Plan projects.</p>

Table 1.1 (Continued)

Federal Policy	Requirements	How the CWPP Addresses Policy
Disaster Mitigation Act of 2000: The Act emphasizes mitigation planning and establishes a pre-disaster hazard mitigation program.	Requires state and local governments to have an approved natural hazard mitigation plan in place to qualify for post-disaster Hazard Mitigation Grant Program funds.	The CWPP currently serves as the Wildfire Annex for the 2018 Lane County Natural Hazard Mitigation Plan.
Federal Land Assistance, Management, and Enhancement (FLAME) Act 2009	Directed the Departments of Agriculture and Interior to develop a cohesive wildland fire management strategy (Cohesive Strategy). The strategy is a framework to coordinate multiple agency and homeowner efforts toward three goals: -Restore and maintain landscapes -Create fire-adapted communities -Improve fire response	The CWPP provides a framework to coordinate a multi-agency and stakeholder approach to fire planning and response across Lane County.
State Policy	Requirements	How the CWPP Addresses Policy
Oregon Statewide Land Use Goal 7: Areas Subject to Natural Hazards: Goal seven requires local governments to adopt measures in their comprehensive plan to reduce risk to people and property from natural hazards.	The Goal requires local governments, federal and state land managers to complete natural hazard inventories, and local land managers alter land use designations to minimize risk to people and property from natural hazards.	The CWPP includes a wildfire risk assessment for Lane County, which may be used as new wildfire hazard inventory information in the Lane County Rural Comprehensive Plan.
Oregon Forestland Dwelling Units Statute, ORS 215.730: The statute provides criteria for approving dwellings located on lands zoned for forest and mixed agriculture/forest use.	The Statute directs county governments to require, as a condition of approval, that single family dwellings on lands zoned as forestland meets requirements for construction materials, fuel breaks, water supply, and location in fire protection districts.	The Lane County Code and Rural Comprehensive Plan currently meet requirements of the state statute for dwellings on lands zoned forestlands. The Hazardous Fuel Subcommittee drafted suggested revisions to County Code.

Table 1.1 (Continued)

State Policy	Requirements	How the CWPP Addresses Policy
Oregon Forestland-Urban Interface Fire Protection Act (Oregon Defensible Space Law): Promotes the creation of a comprehensive wildland-urban interface fire protection system in Oregon.	The Act contains provisions for county governing bodies to: -Establish a forestland-urban interface classification committee -Establish a forestland-urban interface criteria and classification program -Encourage landowner forestland-urban interface fire mitigation actions	The advisory committee convened to coordinate the CWPP may also serve as the forestland-urban interface classification committee. The CWPP includes a risk assessment and designates a wildland-urban interface in Lane County that may be used in the criteria and classification program required by Oregon Defensible Space Law.
Oregon Natural Hazards Mitigation Plan 2020 "Identifies hazards, vulnerabilities, and risks facing a local, state, or tribal government, and prioritizes actions to reduce the risks." ²⁰	"Create a disaster-resilient state of Oregon such that natural hazard events result in no loss of life, minimal property damage, and limited long-term impacts to the economy." ²¹	The CWPP includes a wildfire risk assessment for Lane County, which may be used as wildfire hazard inventory and will inform strategies/future projects.
Action Plan 2020 A statewide Forest Assessment and Resource Strategy to help identify and prioritize forestlands and communities at risk to wildfire. Includes strategies, actions and opportunities for implementation.	Provides a prioritized framework for opportunities, strategies and actions regarding forest restoration in Oregon, including how and where funding for fuels reduction and restoration work will be most effective. Identifies potential funding needs for each opportunity. Fulfill requirements of the 2008 Farm Bill ²²	The CWPP Risk Assessment Includes communities at risk and identifies local actions to reduce community and risk from wildfire. The Hazardous Fuel subcommittee identified treatment strategies for fuels reduction and forest restoration. Action Items provide local opportunities for implementation.

Table 1.1 (Continued)

County Plans	Plan Objective	How the CWPP works towards objective
Lane County Natural Hazards Mitigation Plan 2018: Intended to assist in reducing Lane County risk from natural hazards.	(1) Meet the Disaster Mitigation Act of 2000, requirements for mitigation planning. (2) Identify resources, information, partnerships, and strategies for risk reduction.	The CWPP will begin to serve as the wildfire annex for the County's Natural Hazards Mitigation Plan. The CWPP includes a wildfire risk assessment for Lane County, which may be used as wildfire hazard inventory.
Lane County Rural Comprehensive Plan Contains a natural hazards inventory to meet the requirements of Oregon State Planning Goal 7: Areas Subject to Natural Hazards.	Addresses Oregon State Planning Goals and sets forth policy to address each Goal for the purpose of guiding future growth and development in unincorporated areas of Lane County.	The wildfire risk assessment in the CWPP could be used to update the Natural Hazards Inventory for Lane County to identify wildfire as a hazard and implement land use regulations to address this hazard
Lane County Emergency Operations Plan Establishes guidelines regarding the management of disasters.	Create a safer community through planning.	The CWPP builds upon this document to facilitate effective pre-incident coordination and planning to future wildfire emergencies.
Lane County Parks and Open Space Plan 2018 "Provides realistic guidance for managing existing assets and providing well-maintained parks and open spaces." ²³	(1) "Identifies where strategic improvements, community collaborations and partnerships will help position County Parks to more strongly support outdoor recreation and a vibrant local economy." (2) "Presents an investment strategy for enhancing parks and open space." ²⁴	The wildfire risk assessment in the CWPP helped identify the wildfire risk in or near parks and will continue to prioritize fuels reduction projects countywide.

Summary

As human development continues to spread into forestlands, the risk of wildland-urban interface fire escalates. The diverse geography, population, and land ownership patterns in Lane County create further challenges to reducing Lane County's risk of wildfire. Many entities and programs aimed at wildfire risk response, reduction, and education exist, but capacity to integrate resources and information are limited. The risk assessment and action plan of the Lane County CWPP strives to create opportunities to improve collaboration, enhance wildfire mitigation efforts, and reduce Lane County's overall risk to wildfire.

¹ Community Service Center. (2003). *Region 3: Mid/Southern Willamette Valley Hazards Assessment*. State Natural Hazard Mitigation Plan.
<http://csc.uoregon.edu/PDR_website/projects/state/snhra/snha_pdf/>.

² State of Oregon (2019). *Wildfire Response Council Report: Governor's Council on Wildfire*. Retrieved from <https://www.oregon.gov/gov/policy/Pages/wildfirecouncil.aspx>.

³ Ibid.

⁴ Oregon Forest Resource Institute (January 2, 2018). *Impacts of Oregon's 2017 Wildfire Season Time for a Crucial Conversation*. Oregon Forest Resource Institute. <https://oregonforests.org/sites/default/files/2018-01/OFR%202017%20Wildfire%20Report%20-%20FINAL%2001-02-18.pdf>

⁵ Guiles, L. (2019). Unpublished Lane Regional Air Protection Agency 2017 summary report data. Retrieved January 30th, 2019.

⁶ Loy, William et al. (2001). Atlas of Oregon.

⁷ National Association of Foresters, Western Governors Association, National Association of Counties, and Society of American Foresters. (2004). *Preparing a Community Wildfire Protection Plan*.
<<http://www.stateforesters.org/pubs/cwpphandbook.pdf>>.

⁸ Ibid.

⁹ Ibid.

¹⁰ Oregon Department of Forestry. (2001). *Northwest Oregon State Forests Management Plan: Final Plan*.

¹¹ Ibid.

¹² Ibid.

¹³ Oregon Department of Forestry. (2001). *Northwest Oregon State Forests Management Plan: Final Plan*.

¹⁴ Ballou, B. (2003). "A Short History of Oregon Wildfires." *Wildfire Chapter: State of Oregon Natural Hazard Mitigation Plan*. State Natural Hazard Mitigation Plan.

- ¹⁵ Decker. D. (March 17, 2018). Oregon Encyclopedia, *Tillamook Burn*. https://oregonencyclopedia.org/articles/tillamook_burn/#.Xrllb2hKjRY , accessed 5/11/2020.
- ¹⁶ Pacific Northwest Research Station, and the USDA Forest Service. 2002. When the Forest Burns: Making Sense of Fire History West of the Cascades. Science Findings (46).
- ¹⁷ Ibid
- ¹⁸ USDA Forest Service. (2004). *Healthy Forests Pacific Northwest – Fire & Ecosystems in the Pacific Northwest*. USDA Forest Service. <www.fs.fed.us/r6/colville/hfi/ecosystems/index.shtml>.
- ¹⁹ National Fire Plan. (2001). A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: A 10-Year Strategy.
- ²⁰ State of Oregon (n.d.) *Natural Hazards Mitigation Planning*. Natural Hazards. Department of Land Conservation and Development. <https://www.oregon.gov/lcd/NH/Pages/Mitigation-Planning.aspx>
- ²¹ Ibid.
- ²² Oregon Department of Forestry (2013). *Oregon's Forest Action Plan*. <https://www.oregon.gov/odf/Documents/AboutODF/OregonActionPlan.pdf>
- ²³ Lane County Parks and Open Spaces (2018). *Parks & Open Space Master Plan*. Lane County https://lanecounty.org/UserFiles/Servers/Server_3585797/File/Government/County%20Departments/Public%20Works/Parks/Parks%20Advisory%20Committee/LANE%20COUNTY_FINAL%20P_LAN_110818_print.pdf
- ²⁴ Ibid.

Section 2 Risk Assessment

Introduction

A primary component of the Lane County CWPP is the Wildfire Risk Assessment, which evaluates the potential loss of lives, property, and essential infrastructure in the event of a wildland-urban interface fire. This assessment provides a local perspective on wildfire risk and broadly identifies communities and areas within Lane County that are at risk. It does not replace regional, statewide, or national data. Rather, it has been updated to better understand wildfire risk at a scale useful for local county-level decision making and should be used in conjunction with other wildfire assessment tools and data when appropriate. Information gathered through this assessment is intended to help emergency managers and fire-fighting professionals prioritize areas of concern for further analysis and mitigation activities.

The CWPP Steering Committee updated the risk assessment using current wildfire data from the Oregon Wildfire Risk Explorer (OWRE), compiled and published by Oregon Department of Forestry and US Forest Service, as well as a wide variety of stakeholders throughout Oregon. This data is the most up to date, quantitative fire risk data available at this time. The 2005 Risk Assessment included in-depth analysis done at that time which provides important details regarding Lane County's wildfire risk. Specifically, the 2005 Risk Assessment evaluated wildfire risk at a finer scale as compared to the data from the OWRE, which provides wildfire risk data for the state. Refer to the 2005 CWPP for more information.

The specific goals of updating the assessment are to:

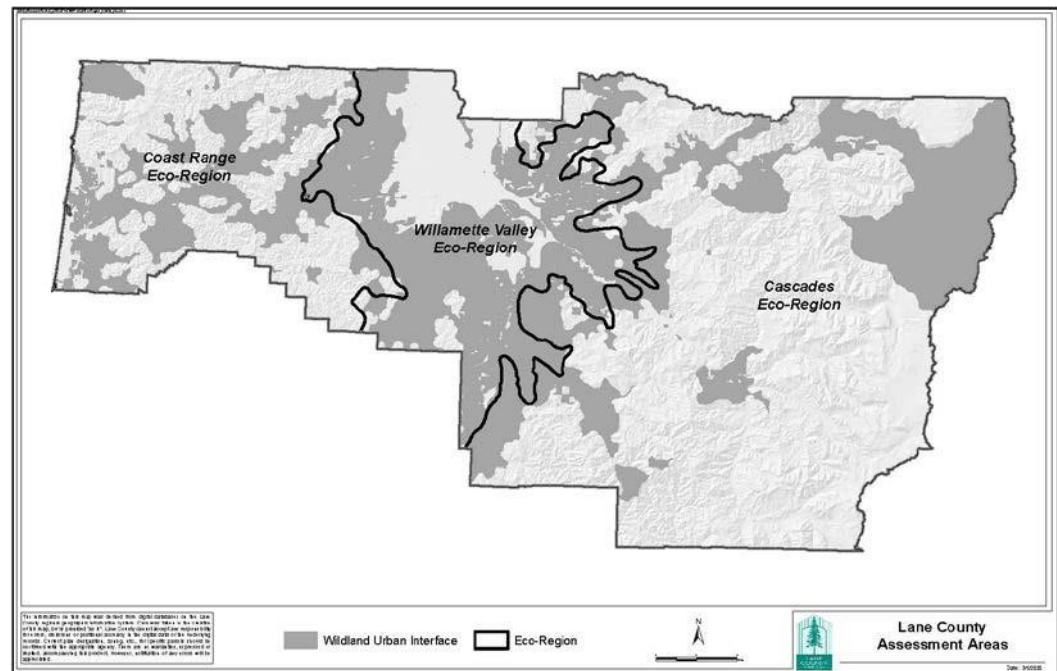
1. Incorporate the most current wildfire risk data into the CWPP in order to determine the potential risk from interface fires for Lane County communities;
2. Establish updated community base maps for overall wildfire risk and for the wildland-urban interface;
3. Identify areas for refined analysis, potentially through community or neighborhood level assessments;
4. Provide insight for the prioritization of hazardous fuel treatment projects.

The updated Risk Assessment Section provides a discussion of the scale at which wildfire risk was assessed in Lane County and the approach of the assessment. The section evaluates maps demonstrating wildfire risk, wildland-urban interface areas, potential impact of wildfire, and communities at risk. The final part of this section explains limitations of the assessment and provides general assessment findings. Appendix C of the CWPP provides a more in-depth explanation of the data sources and methods utilized in this Risk Assessment.

Assessment Areas and Approach

In order to present mapped findings at a meaningful scale, the updated maps have been divided into assessment areas that align with Lane County's ecoregions: the Coast Range, Willamette Valley, and the Cascades. Ecoregions were chosen as the assessment level to accommodate the scale provided by the OWRE, as well as reflect the dominant fire regimes in Lane County. The watershed level assessment areas from the 2005 plan were not utilized in the updated maps because the watershed assessment level represented Lane County at a scale not compatible with data from the OWRE.

Figure 2.1: Assessment Areas



The ecoregions utilized in the updated maps are defined as Level III by the United States Environmental Protection Agency, where the ecoregion data was sourced.¹ Ecoregions are areas where ecosystems, including the type, quality, and quantity of environmental resources are generally similar. At Level III, the continental United States is divided into 105 ecoregions, three of which fall within the boundaries of Lane County. The following maps are presented at a countywide and ecoregion level.

Map Discussion and Findings

The following section includes analysis of the maps generated for the updated risk assessment. The maps displayed below were generated using data from the OWRE, a statewide tool that provides wildfire data to communities across Oregon for the purpose of aiding the development of community wildfire protection plans. The CWPP Steering Committee identified new overall wildfire risk and wild-land urban interface (WUI) maps as being the most critical maps to update. This assessment also includes analysis of the potential impact of wildfire

and a map depicting priority areas for fuel reduction. The risk assessment maps are an important aspect of the CWPP because they inform areas of wildfire risk related to resources and development. The following maps are presented and discussed in this section.

- Overall Wildfire Risk
- Overall Wildfire Risk: Coast Range Ecoregion
- Overall Wildfire Risk: Willamette Valley Ecoregion
- Overall Wildfire Risk: Cascades Ecoregion
- Wildland-Urban Interface (WUI) Map
- WUI: Coast Range Ecoregion
- WUI: Willamette Valley Ecoregion
- WUI: Cascades Ecoregion
- Overall Wildfire Potential Impact
- Wildfire Potential Impact: Coast Range Ecoregion
- Wildfire Potential Impact: Willamette Valley Ecoregion
- Wildfire Potential Impact: Cascades Ecoregion
- Rural Response: Priorities for Fuel Reduction Map
- Communities at Risk

Overall Wildfire Risk Map

The Lane County Overall Wildfire Risk Map presents modified wildfire risk data from the OWRE. This data is the product of the likelihood and consequence of wildfire on all mapped highly valued resources and assets combined: critical infrastructure, developed recreation, housing unit density, seed orchards, sawmills, historic structures, timber, municipal watersheds, vegetation condition, and terrestrial and aquatic wildlife habitat. Risk categories from OWRE data were consolidated to better inform local decision making. See Appendix C for a description of how overall wildfire risk data and display was changed to reflect local considerations. The dataset considers the likelihood of wildfire greater than 250 acres (likelihood of burning), the susceptibility of resources and assets to wildfire of different intensities, and the likelihood of those intensities. The data values reflect a range of impacts from a very high negative value, where wildfire is detrimental to one or more resources or assets (for example, structures, infrastructure, early seral stage and/or sensitive forests), to positive, where wildfire will produce an overall benefit (for example, vegetation condition/forest health, and wildlife habitat).

It should be noted that specific conditions can vary widely with local topography, fuels, and weather, especially local winds. In all areas, under warm, dry, windy, and drought conditions, higher likelihood of fire starts, higher flame lengths/fire intensities, more ember activity, a wildfire more difficult to control, and more severe fire effects and impacts should be expected.

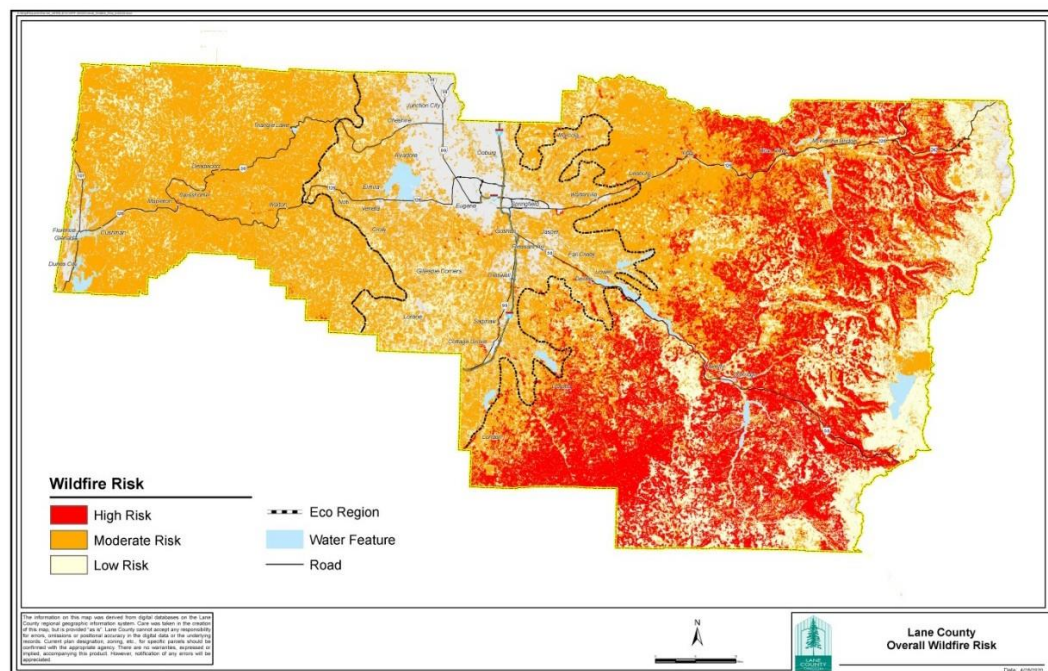
The wildfire risk identified throughout Lane County is classified as high, moderate, and low risk. These classifications are defined below:

High Risk: Wildfire risk is very high or high for all mapped resources and assets combined: critical infrastructure, developed recreation, housing unit density, seed orchards, sawmills, historic structures, timber, municipal watersheds, vegetation condition, and terrestrial and aquatic wildlife habitat. High represents the 80th to 100th percentile of values across the landscape.

Moderate Risk: Wildfire risk is moderate or low for all mapped resources and assets combined: critical infrastructure, developed recreation, housing unit density, seed orchards, sawmills, historic structures, timber, municipal watersheds, vegetation condition, and terrestrial and aquatic wildlife habitat. Moderate represents the 29th to 80th percentile of values across the landscape.

Low Risk: Wildfire risk is very low or could be beneficial for mapped resources and assets combined (for example, the cumulative value is positive, typically due to beneficial effects on forest health/vegetation condition and/or wildlife habitat). Low risk represents 0-29th percentile of values on the landscape.

Figure 2.2: Overall Wildfire Risk

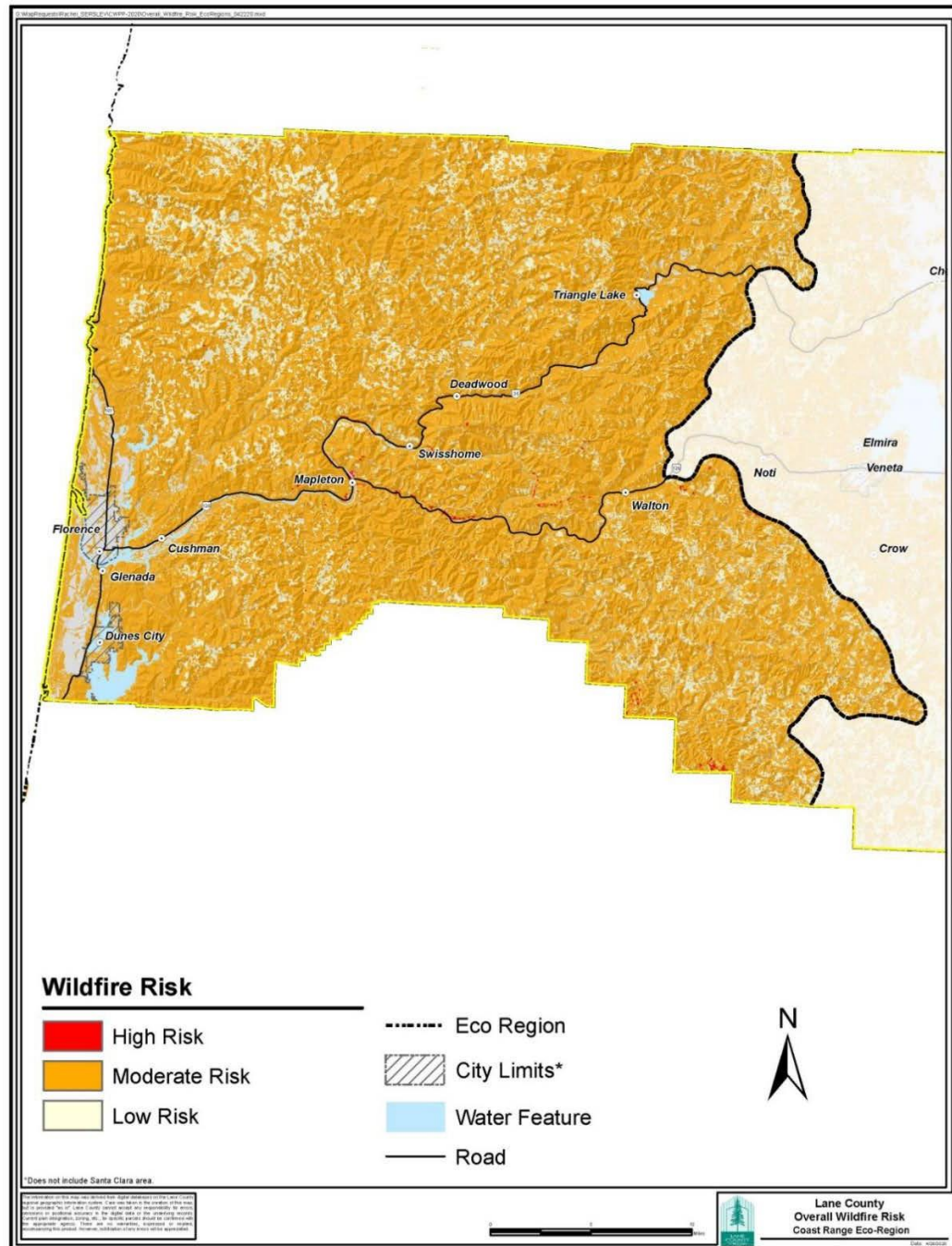


Overall, the County is mainly characterized by high and moderate wildfire risk. The high risk exists primarily in the Cascades Ecoregion while the Willamette Valley and Coast Range Ecoregions contain moderate risk. The wildfire risk for each ecoregion is described in the following sections.

Overall Wildfire Risk – Coast Range Ecoregion Map

The Coast Range Wildfire Risk Map shows primarily moderate risk with some areas of low risk. There are small areas of high risk along Highway 126, near Mapleton, and along East Mapleton Road. As compared to the other ecoregions, wildfire risk in the Coast Range can be characterized as moderate.

Figure 2.3: Overall Wildfire Risk – Coast Range Ecoregion

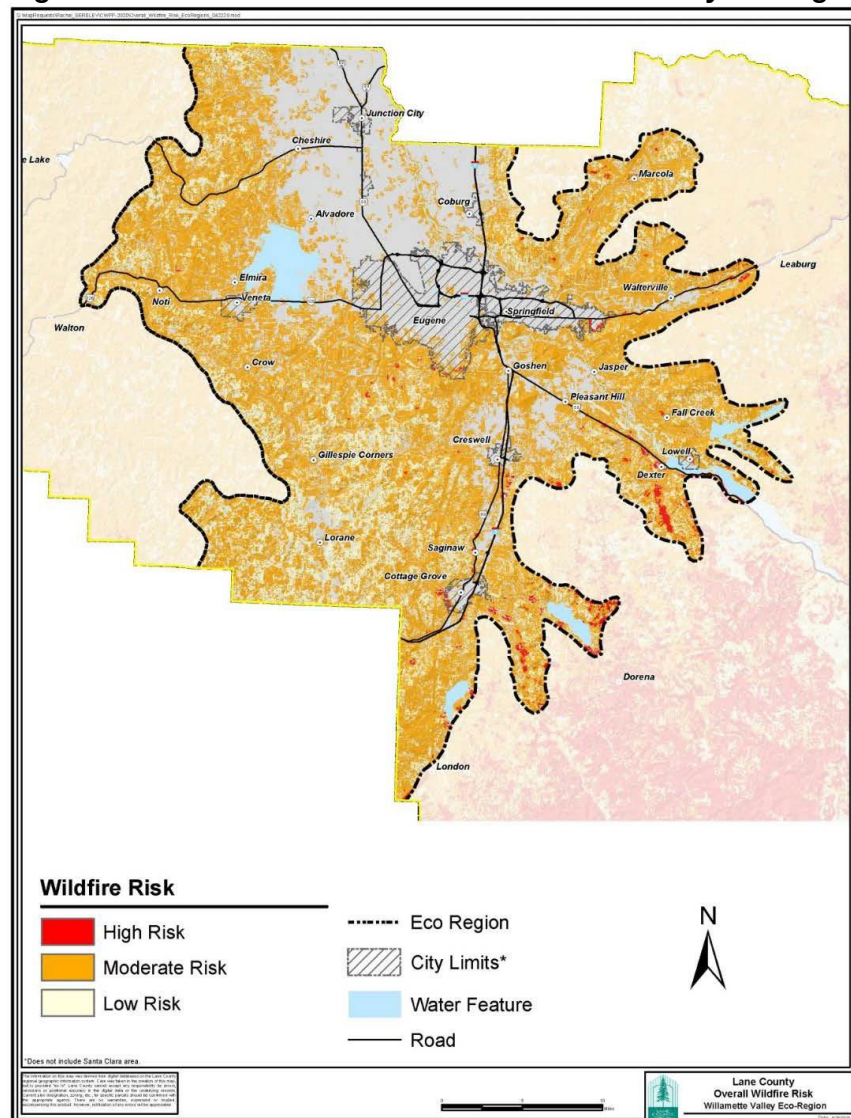


Overall Wildfire Risk – Willamette Valley Ecoregion Map

The Willamette Valley ecoregion contains the Eugene-Springfield metro area, the largest urbanized area in Lane County. This ecoregion is characterized as intermingled areas of moderate and low wildfire risk. However, there are pockets of high wildfire risk within the ecoregion. These areas are mainly found at the urban fringe, where urban and suburban level development meets forestlands.

Areas identified as high wildfire risk are the south hills of Eugene, southeast Springfield, Marcola, Dexter, along Lost Creek Road (south of Dexter), south of Creswell, west of Cottage Grove, and along Mosby Creek Road (southeast of Cottage Grove). Although, the Willamette Valley Ecoregion does not have wide swaths of high wildfire risk, areas of high risk exist and are concerning due to the residential development close to and intermixed with forestlands.

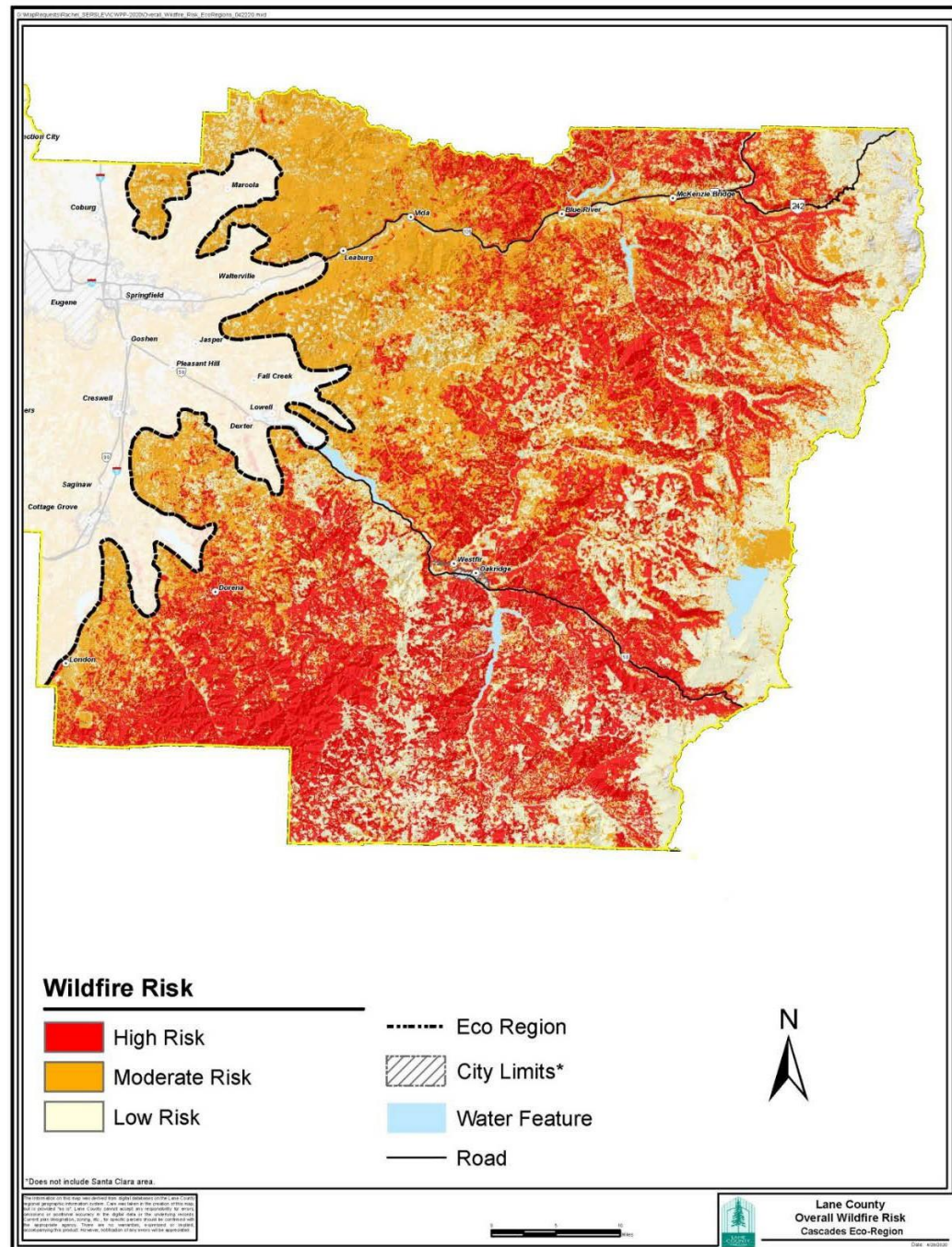
Figure 2.4: Overall Wildfire Risk – Willamette Valley Ecoregion



Overall Wildfire Risk – Cascades Ecoregion Map

The Cascades ecoregion contains a majority of Lane County's high wildfire risk because the area is mainly forested lands with mountainous topography, frequent lightning events, and less development. There are several communities within the Cascades ecoregion that contain, or are near high wildfire risk areas, including Westfir, Oakridge, Dorena, Blue River, and McKenzie Bridge. Generally, wildfire risk in the Cascades ecoregion can be characterized as high.

Figure 2.5: Overall Wildfire Risk – Cascades Ecoregion



Wildland Urban Interface Map

The wildland-urban interface (WUI) is the area where houses meet or intermingle with undeveloped wildland vegetation. This makes the WUI a focal area for human-environment conflicts such as wildland fires, habitat fragmentation, invasive species, and biodiversity decline. Using geographic information systems (GIS), the Oregon Wildfire Risk Explorer integrated U.S. Census and United States Geological Survey National Land Cover Data, to map the Federal Register definition of WUI (Federal Register 66:751, 2001) for the conterminous United States from 1990-2010. This WUI layer was clipped to the boundaries of Lane County and further separated into Lane County's ecoregions as the assessment areas.

The Lane County WUI is large, approximately 1,481,400 acres or 2,315 square miles. This WUI is over 1,000 square miles less than the WUI defined in the 2005 CWPP. The reduction in WUI area presents more specificity regarding where development meets and intermingles with forestlands, which allows a more precise identification of communities that may be at risk.

Although the WUI has decreased in size with this assessment compared to the 2005 assessment, the updated WUI still extends east to west across Lane County – from the Western Cascades, well up the McKenzie and Middle Fork Willamette watersheds, down through the Willamette Valley foothills and floor, across the coastal lowlands and mountains to the Pacific Ocean. The size of Lane County's wildland-urban interface is the result of a dispersed population in close proximity to abundant vegetative fuels. Nearly 90% of Lane County is forestland and nearly 2.5 million of the county's 2.9 million acres are zoned F-1, non-impacted forestland. The U.S. Forest Service and the Bureau of Land Management own and manage the majority of the F1 zoned property. These forestlands contain extensive fuels comprised of flammable grasses, brush, slash and timber. Excluding the population of Eugene/Springfield metro area, nearly 100,000 Lane County residents live throughout or adjacent to these forestlands. The majority of these residents live in rural population centers along the I-5 corridor and other major transportation routes, including Highways 126, 101, 58, and 36. In addition, substantial pockets of residential development exist in the Mohawk Valley, Wolf Creek, Deadwood Creek, Row River Road, Mosby Creek Road, Lost Creek Road, High Prairie Road, and the North Fork Siuslaw Road areas.

The OWRE WUI map has been simplified to display three categories of wildland-urban interface: interface, medium density intermix and low density intermix. Generally, interface areas are defined as urban or suburban development that exists adjacent to forestlands while intermix areas are characterized as suburban or rural development within forestlands. The specific classifications are defined below.

Interface: High and Low Density: The WUI in these areas contains varying densities of urban and suburban residential development that are adjacent to forestlands.

Intermix: Medium Density: The WUI in these areas contains suburban residential development that is within forestlands.

Intermix: Low Density: The WUI in these areas contains rural residential development within forestlands.

These categories are displayed on the following map for the entire county.

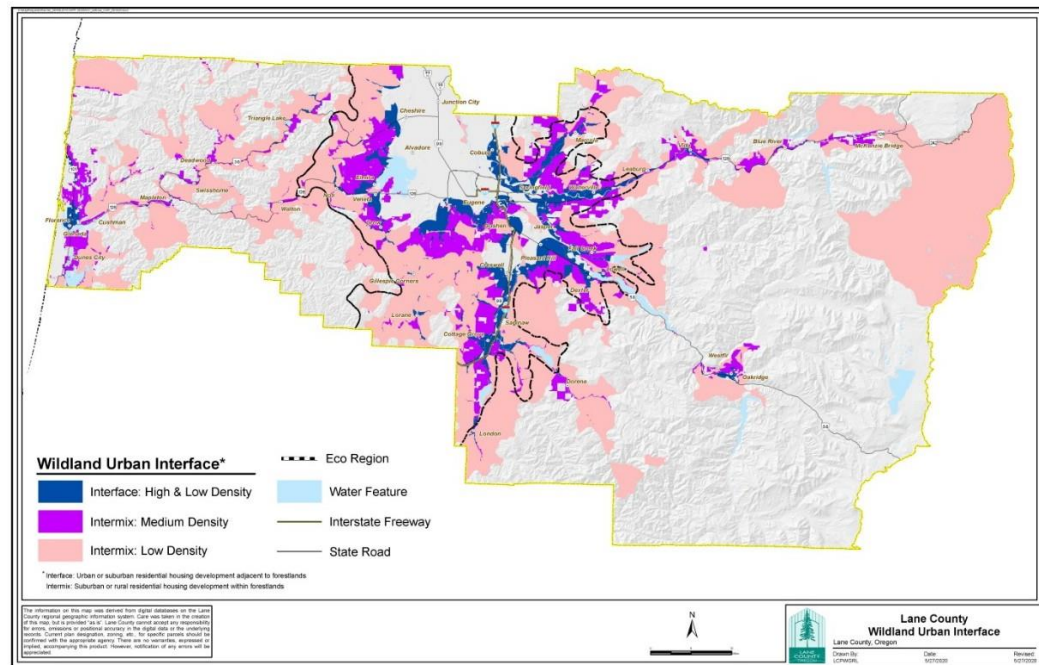
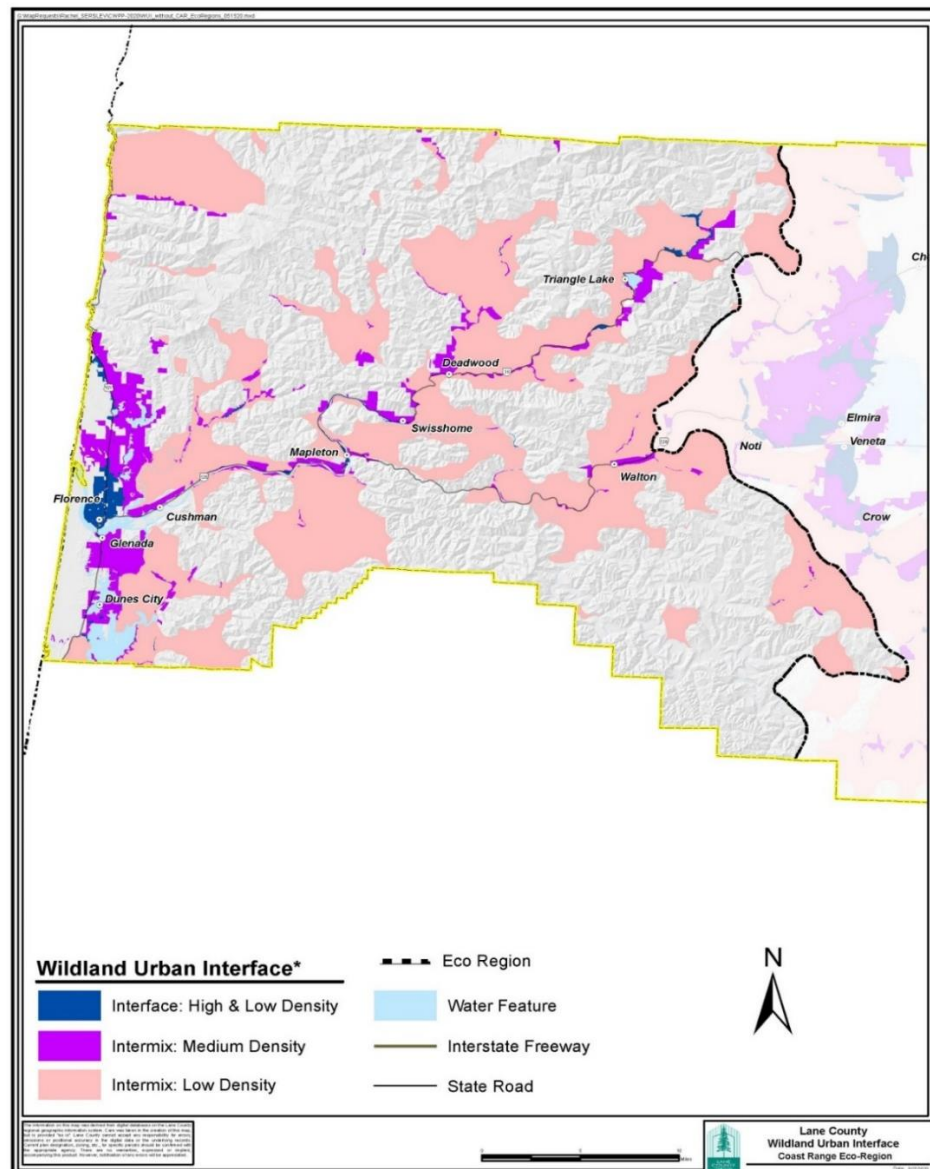


Figure 2.6: Wildland Urban Interface

Wildland Urban Interface - Coast Range Ecoregion Map

The Coast Range ecoregion WUI is generally characterized by low density intermix with some areas of medium density intermix throughout the ecoregion. Areas of high and low density interface are minimal in this ecoregion and are primarily found around and within the City of Florence. Notable areas of medium density intermix and low density interface are: Dunes City, north of Florence city limits, areas around Mercer and Sutton Lake, Highway 126 between Florence and Mapleton, Mapleton, Swishome, Deadwood, Triangle Lake, High Pass Road, and Walton.

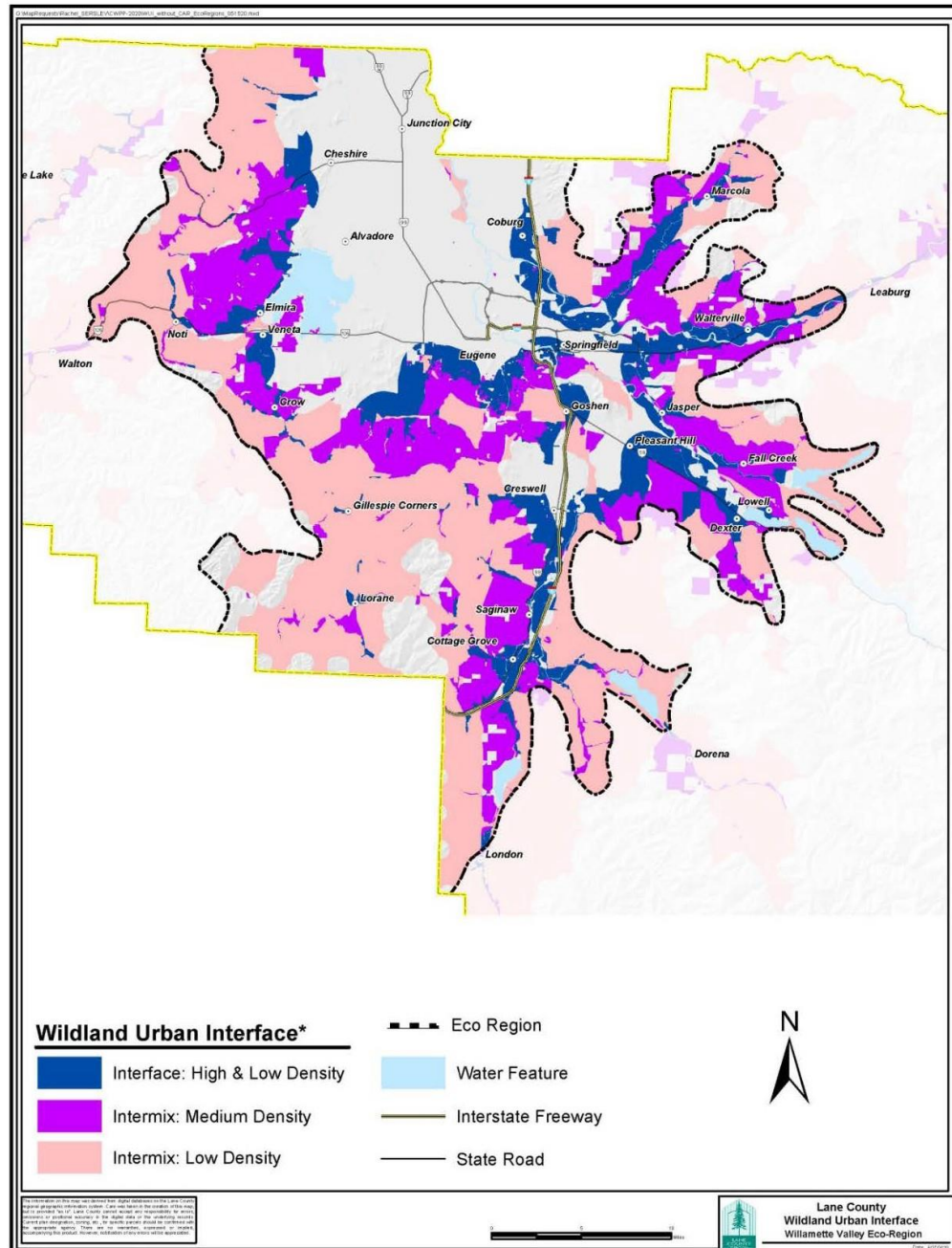
Figure 2.7: Wildland Urban Interface - Coast Range Ecoregion



Wildland Urban Interface - Willamette Valley Ecoregion Map

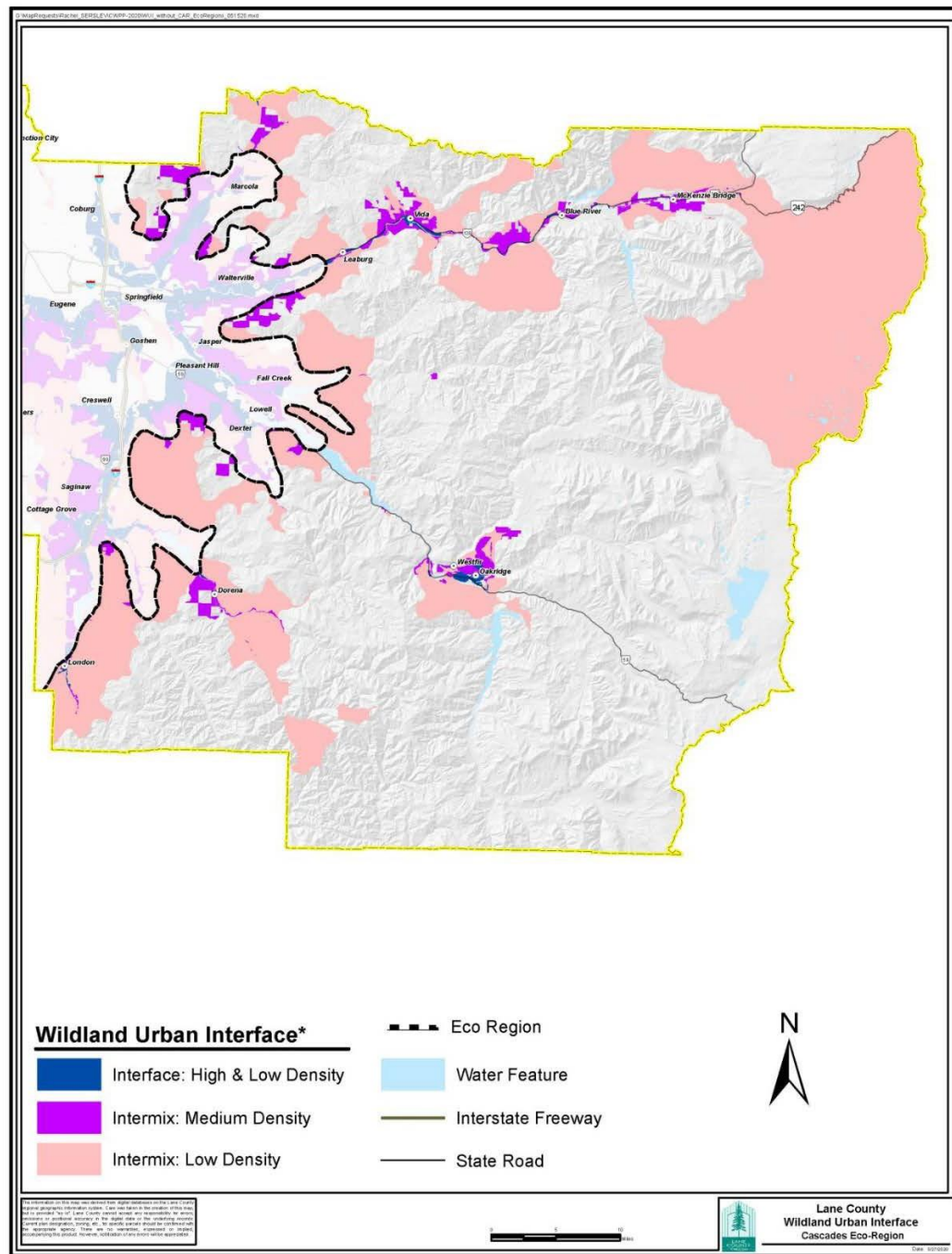
The majority of the Willamette Valley ecoregion is classified as WUI, extending primarily from the Eugene-Springfield metro area. Notable corridors include Marcola Road, McKenzie Highway, Highway 58, and Interstate 5. Notable areas include Veneta, Elmira, north of Fern Ridge Reservoir, Crow, Lorane, Lowell, Pleasant Hill, the south and southwest hills of Eugene, and Coburg. These corridors and areas are almost exclusively classified as WUI areas.

Figure 2.8: Wildland Urban Interface - Willamette Valley Ecoregion



Wildland Urban Interface - Cascades Ecoregion Map

The Cascades ecoregion WUI is generally characterized by primarily low density intermix with some areas of medium density intermix throughout the ecoregion. Notable corridors include the eastern portions of McKenzie Highway, Row River Road and Hwy 58. Notable areas include: Leaburg, Vida, Blue River, McKenzie Bridge, Westfir, Oakridge, London and Dorena. These communities are interface and intermix WUI areas.

Figure 2.9: Wildland Urban Interface - Cascades Ecoregion

Overall Wildfire Potential Impact Map

The Lane County Overall Wildfire Potential Impact map presents data from the OWRE showing the impact that wildfire can have on a certain area. Overall, potential impact represents the consequence of a potential wildfire on all mapped highly valued assets and resources combined: critical infrastructure, developed recreation, housing unit density, seed orchards, sawmills, historic structures, timber, municipal watersheds, vegetation condition, and terrestrial and aquatic wildlife habitat. This data layer does not include the likelihood of an area burning, but it shows potential impact only to characterize exposure to wildfire risk. The values reflect a range of impacts from a smaller negative rating, where wildfire is detrimental (for example, to structures, infrastructure, and early seral stage and sensitive forests), to a larger number, where wildfire has limited negative effects and/or produces an overall benefit (for example, to improve vegetation condition or wildlife habitat). See the next page for a countywide map.

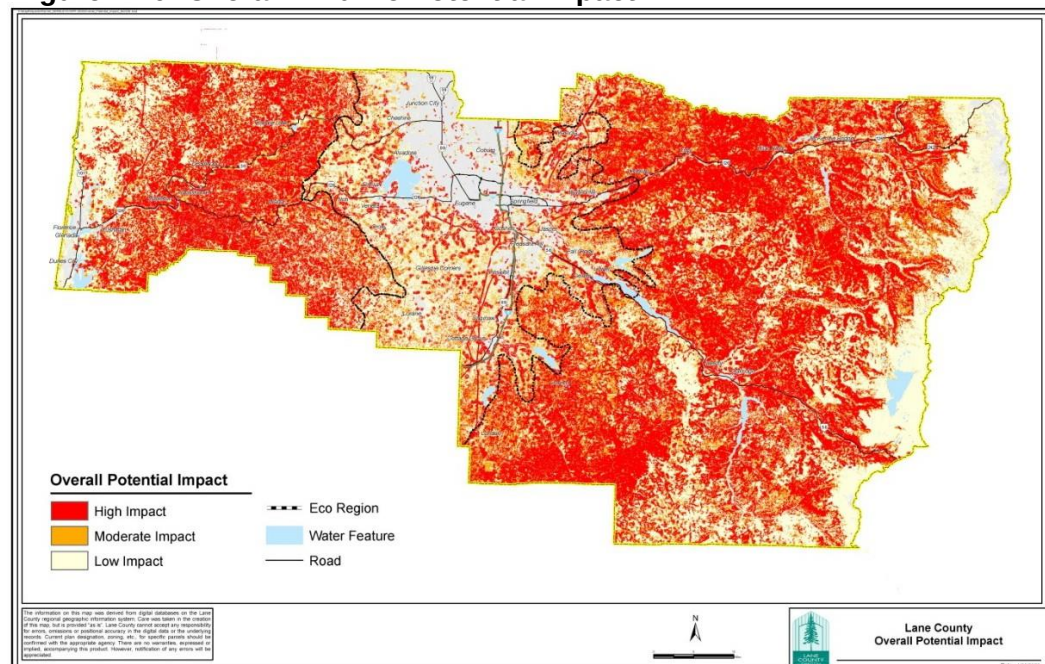
The CWPP Steering Committee labeled potential impacts as high, moderate, and low impact. These classifications are further defined below.

High Impact: The consequence, or potential effect of wildfire to mapped timber resources is high or very high. Wildfire is highly detrimental to timber values. Very high represents the top 20 percent of negatively-impacted values across the landscape.

Moderate Impact: The consequence, or potential effect of wildfire to mapped timber resources is moderate to low. Wildfire is damaging to timber values. Moderate represents the 29th to 80th percentile of values across the landscape.

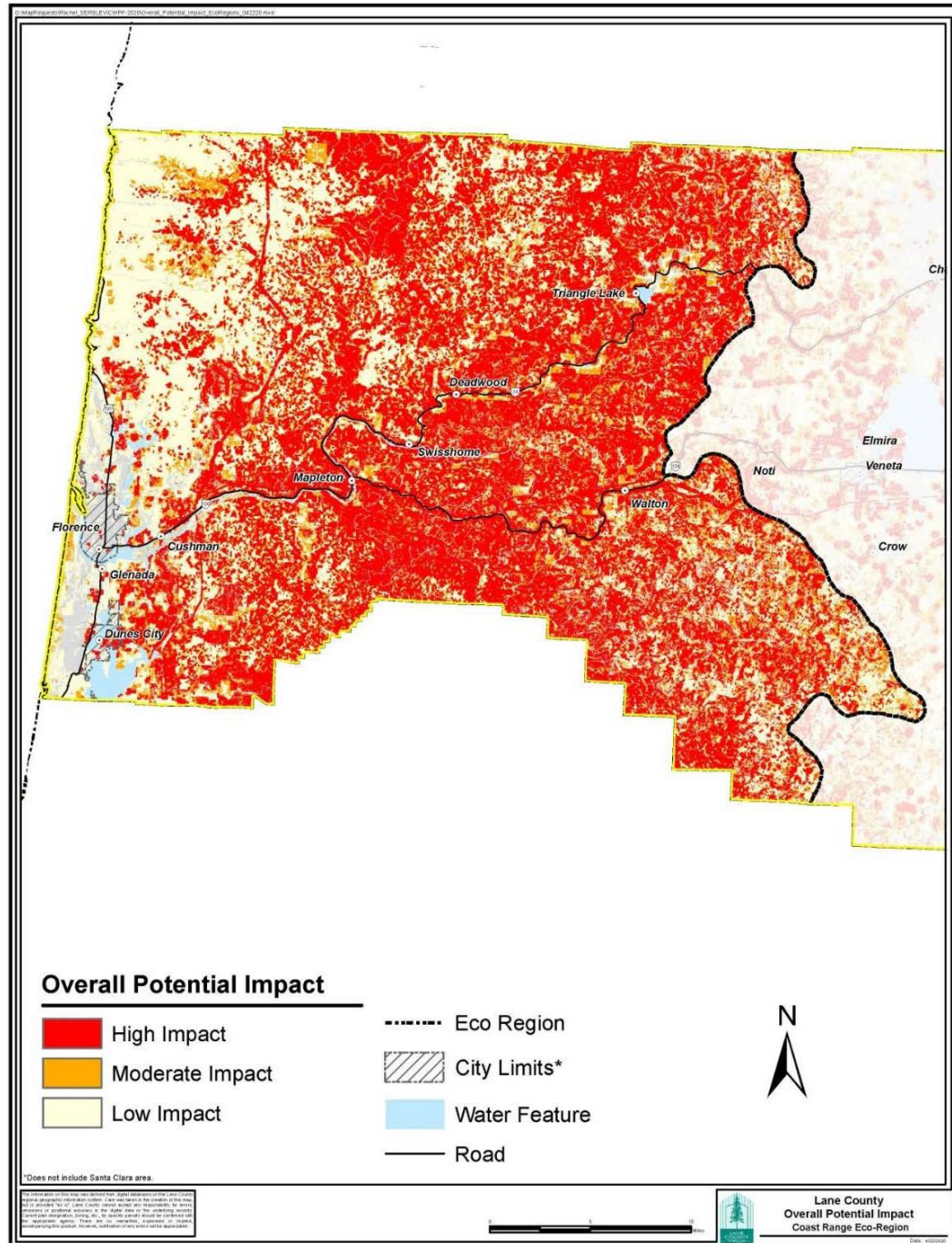
Low Impact: The consequence, or potential effect of wildfire to mapped timber resources is very low (e.g. reduced hazardous fuel, and reduced, forest health/vegetation condition), producing a "fuel treatment effect" at very low flame lengths. Low impact and benefit represents 0-29th percentile of values on the landscape.

Figure 2.10: Overall Wildfire Potential Impact



Wildfire Potential Impact - Coast Range Ecoregion Map

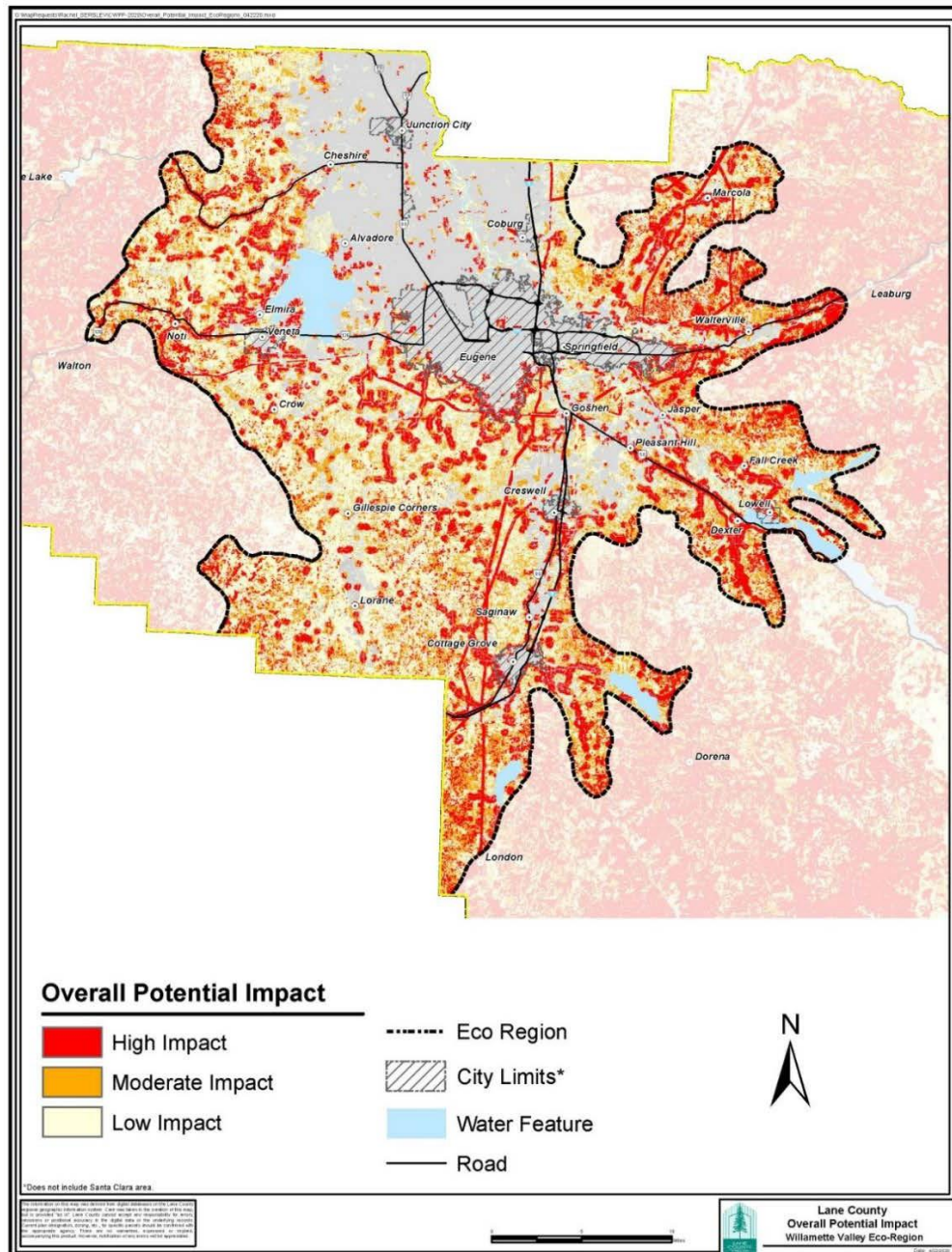
The Coast Range ecoregion is primarily characterized by high potential impact from wildfire. The reason for such a high potential impact in this ecoregion is the existence of valuable timber resources within an ecosystem that historically experiences infrequent fires and results in high fuel loading.

Figure 2.11: Wildfire Potential Impact - Coast Range Ecoregion

Wildfire Potential Impact – Willamette Valley Ecoregion Map

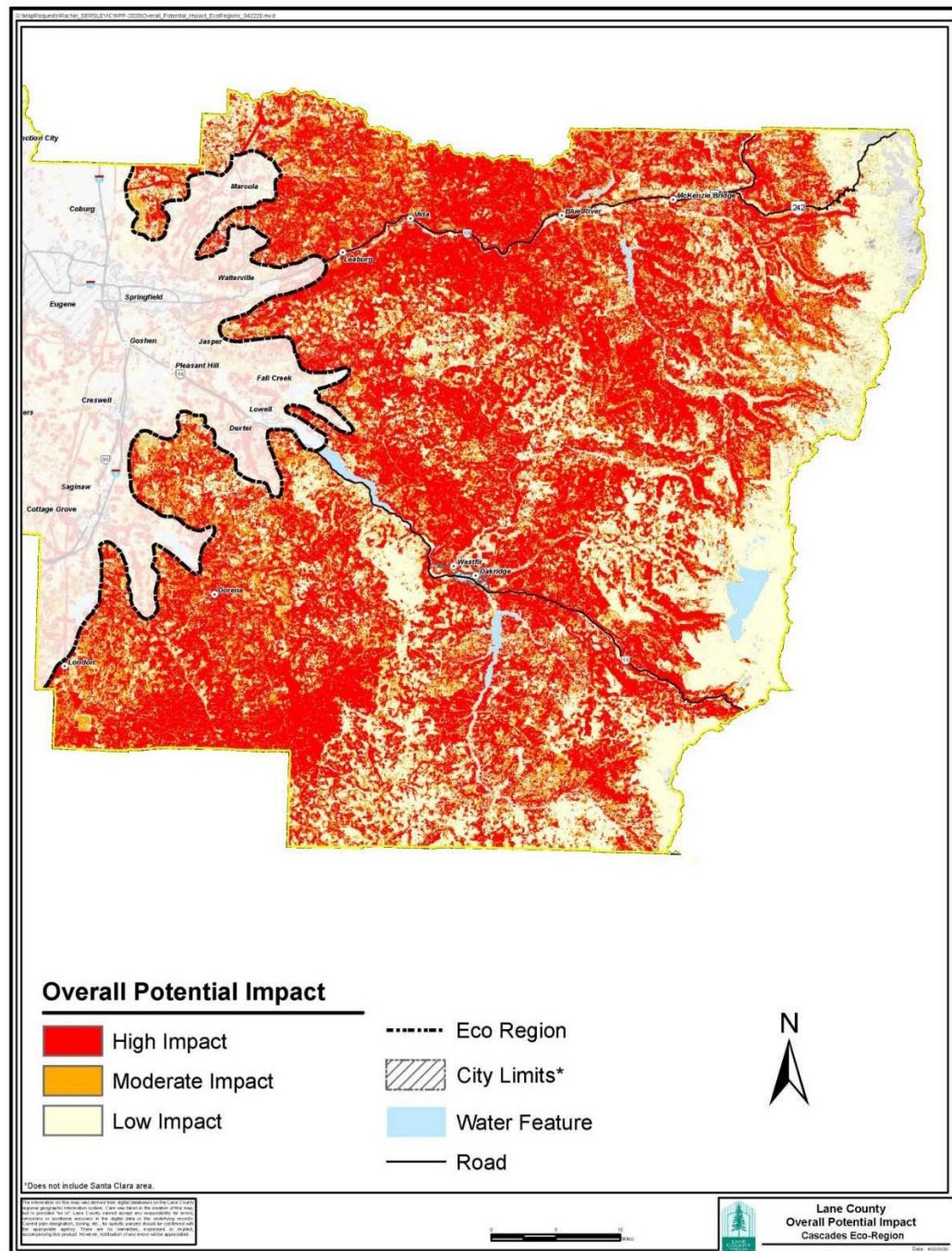
The potential impact from wildfire in the Willamette Valley Ecoregion varies greatly from the Coast Range to the Cascades because there are fewer timber resources in the valley. However, there are still sporadic areas of high potential impact due to other types of assets found in this ecoregion. The main assets in this area are infrastructure, housing, and recreation. These assets are clustered around larger cities and developed corridors, such as Eugene/Springfield, Cottage Grove and Veneta, given the housing density associated with these areas.

Figure 2.12: Wildfire Potential Impact – Willamette Valley Ecoregion



Wildfire Potential Impact – Cascades Ecoregion Map

The potential wildfire impact for the Cascades ecoregion is similar to that of the Coast Range due to the availability of timber resources and limited access for firefighting resources. These coupled with steep topography increase potential impacts.

Figure 2.13: Wildfire Potential Impact – Cascades Ecoregion

Rural Response: Priorities for Fuel Reduction Map

This map is a combination of the Potential Impact to Infrastructure layer from OWRE as well as concern areas identified by local fire response agencies. The Potential Impact to Infrastructure layer from the OWRE was simplified to display linear resources, such as roads, transmission lines and railways, without regard to level of risk. This map may be used in the future to refine concern areas, develop evacuation strategies, and/or inform countywide hazardous fuel priority treatment areas.

Areas of concern were identified by the following departments and agencies: United States Forest Service, Bureau of Land Management, Oregon Department of Forestry, and the Lane Fire Defense Board (Lane County Fire Departments and Districts). The listed agencies coordinated with local government and stakeholders to identify and map concern areas. Identified areas were selected using a range of categorical attributes with concerns categorized by fuel type and loading, community attributes, access, critical infrastructure, and cultural resources. See Appendix C for an expanded discussion of category descriptions. These categories are not displayed in the map, but are listed attributes in GIS Data.

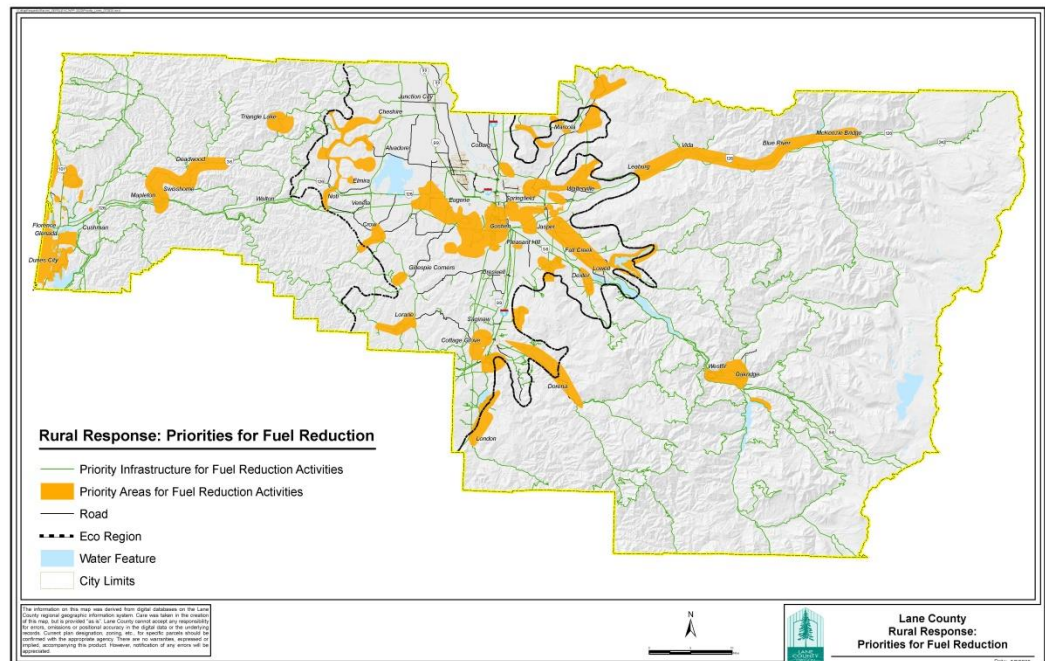


Figure 2.14: Rural Response: Priorities for Fuel Reduction

Communities At Risk Map

A key output of the risk assessment is an understanding of the hazards that wildfires pose to Lane County communities. For the purpose of this plan, Communities At Risk (CAR) have been identified using the 2020 Oregon Department of Forestry CAR Report that identifies communities at risk for all of Oregon.² The report identifies 508 CAR in Oregon, 29 of which are in Lane County. Communities are identified by community names by relying on the quantitative wildfire risk assessment and WUI data from the OWRE. The report

categorizes each community by its wildfire risk, which is based on number of structures, exposure, burn probability and hazard.

The 2005 Lane County risk assessment identified communities at risk exclusively by their fire protection district service boundaries, which was consistent with statewide methodologies at the time. However, the 2020 CAR report utilizes the Quantitative Wildfire Risk Assessment (USFS) community names to identify at-risk areas and a watershed model to identify community risk and WUI data. This methodology produces a more specific community format for identifying CAR.

- Pleasant Hill
- Cottage Grove
- Creswell
- Dexter
- Hazeldell
- Lowell
- Coburg
- Deadwood
- Dunes City
- Eugene
- Glenwood
- Goshen
- Junction City
- Lorane
- Mapleton
- Lower McKenzie
- Oakridge
- Upper McKenzie
- Walker
- Westfir
- McKenzie
- Mohawk
- Rainbow
- Santa Clara, Eugene
- Siuslaw
- Springfield
- Swisshome
- Veneta
- Willakenzie

The CAR map identifies communities at risk with points that represent the fire district or community, and displays the WUI boundary and priority areas for fuel reduction activities layer discussed above. The WUI and priority areas are included on this map to demonstrate areas within the CAR that may contain development that is near or located within forest lands or are areas of significance for fire districts.

It should be noted that the 2020 report in which these CAR were identified pertains to the entire state, meaning that data was collected and analyzed at the statewide level. The implication of this is that the ODF report does not capture smaller nuances of wildfire risk at the local level. The CAR data is highly valuable, but the WUI and Rural Response: Priorities for Fuel Reduction maps generated specifically for Lane County are useful when considering the identified communities at risk.

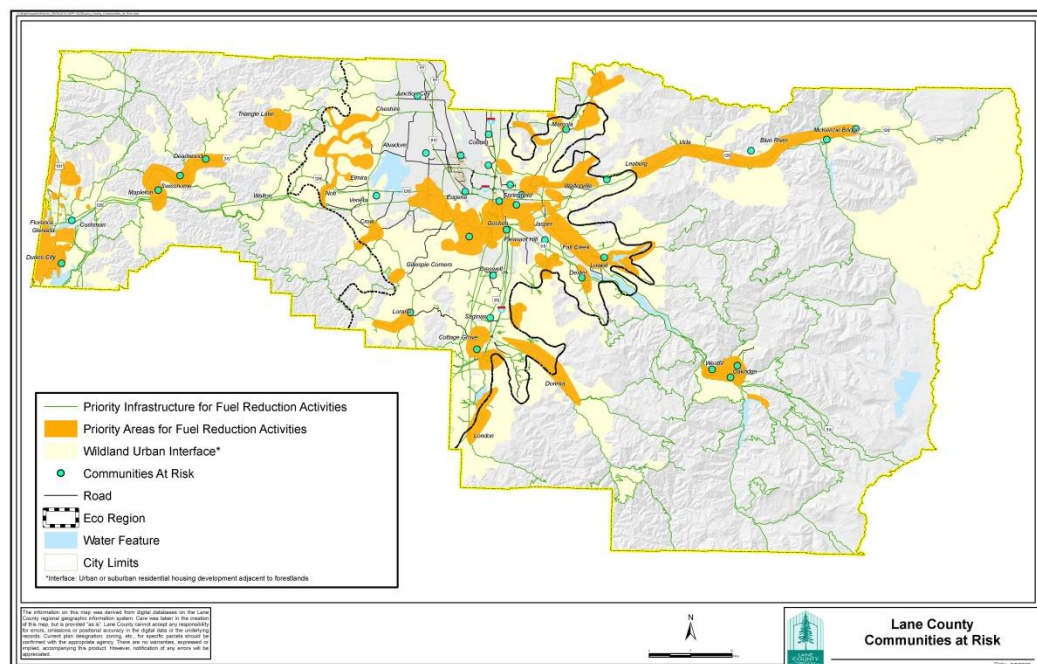


Figure 2.15: Communities At Risk

Risk Assessment Limitations

Wildland fires are complex events: their behavior and the potential damage they may cause are affected by several variables. The Steering Committee made every attempt to ensure the accuracy and completeness of the assessment. However, limitations in data and resources made it impossible to comprehensively assess every factor affecting wildland fires countywide. Ideally, periodic updates and data enhancements resulting from state and local community assessments can address these challenges. Future local community assessments can add value to the CWPP through performing more in-depth neighborhood or parcel-level risk evaluations for areas identified as high wildfire risk or WUI. These local community assessments may help further refine and update the countywide assessment.

Summary of Key Findings

Maintenance

The Lane County CWPP and its components, especially the risk assessment, require long term maintenance to continue to effectively support Lane County. Institutionalizing this long-term process and assigning maintenance responsibilities to oversee long term maintenance can help ensure that the plan continues to be a functional document.

Risk Assessment

Overall, Lane County has a moderate risk to wildland-urban interface fire, but high-risk areas do exist throughout Lane County. The risk assessment can be shared with local communities and used as a decision-making tool to help prioritize fuels reduction projects. However, to ensure long term viability, the risk assessment should be updated and enhanced with more precise data from the local community level.

Community Planning

Because of Lane County's scale, the countywide risk assessment could not assess the structural ignitability of every structure located in the wildland-urban interface. Local planning efforts in small communities and neighborhoods should collect more refined, site specific data required to address the structural ignitability component of the risk assessment. Local community planning efforts are vital because as site specific data is gathered at the micro level, it can be fed back into the countywide risk assessment. The incorporation of this refined local data into the countywide assessment will help to provide a better picture of overall risk in Lane County.

Collaboration

The risk assessment draws upon a wide variety of data sources. As a result, it will be important to maintain collaborative approaches to identifying, acquiring, and utilizing data layers among data users and providers. Because of the importance that local refined data play in community planning efforts, collaboration among the county and local communities will also be important.

¹ Environmental Protection Agency. (2018, December 26). *Level III and IV Ecoregions of the Continental United States*. <https://www.epa.gov/eco-research/level-iii-and-iv-ecoregions-continental-united-states>

² Oregon Department of Forestry. (2020, January 1). *Communities at Risk Report 2020*. <https://www.oregon.gov/odf/Documents/Fire/Communities-at-risk-report.pdf>

Section 3 Community Outreach and Collaboration

A key element in community fire planning is the meaningful discussion it promotes among community members. The success of the Lane County CWPP is dependent on the involvement and input of local stakeholders. A plan that accurately reflects the community's interests and priorities will have greater legitimacy and success in implementing the recommended actions. A Lane County Landowner Survey was done to identify these needs.

Purpose

To gather input on attitudes and opinions regarding wildfire, the CWPP Steering Committee developed and administered a mail and online outreach survey for rural landowners in Lane County. The purpose of the landowner survey was to gain information about how landowners in rural and wildland-urban interface areas of Lane County perceive the potential risk of wildfire and their attitudes towards risk reduction and preparedness strategies. The survey results may be used to focus public outreach activities aimed at wildfire risk reduction and loss prevention. Additional benefits of the survey include; educating and informing the public, incorporating public values into decision-making, improving the quality of decisions, and building trust in this planning process.

Methodology

The survey questions included five main themes:

- **Characteristics of Survey Respondents:** This section reports information about respondent characteristics including: educational attainment, home ownership, age, and household income.
- **Wildland Fire Risk Awareness and Communication:** This section presents information about respondents' understanding of personal property, neighborhood, and community risk awareness. The survey also asked questions about how respondents receive information pertaining to wildland fire.
- **Fire Protection and Preparedness:** This section presents the results of questions about fire protection services and level of preparedness for a wildland fire emergency.
- **Reducing Property Risk to Wildland Fire:** This section identifies actions landowners would be willing to take in the future to protect their property from wildland fire.
- **Reducing Community Risk to Wildland Fire:** This section presents landowners' opinions about protecting the greater community from wildland fire.

Survey questions were mostly repeated from the 2005 Landowner Survey questions which were developed from two primary sources: social science research studies supported by the National Fire Plan, and all hazard risk perception household survey administered by the Oregon Natural Hazards Workgroup in 2002.

The survey was mailed to a random sample of landowners selected from the Regional Land Information Database.

The sample frame (e.g., the list that the sample was drawn from) included landowners with property in the Impacted Forest Lands and Rural Residential zones. The sample frame also included lands, regardless of zone designation, determined to be in wildland-urban interface areas using the wildland-urban interface map on page 32. Public lands, low risk inner city lands under 5 acres, and industrial and commercial zoned lands were not included in the sample frame.

The survey was administered to 5,125 randomly selected landowners during July and August of 2019. The process included the mailing of a postcard telling landowners to expect the paper survey via mail and where to take it online. About one week later, the survey packet was mailed. The survey packet included: a cover letter explaining the purpose of the survey, a paper survey, a postage paid return envelope, and information regarding the Firewise program, in which Lane County is a participating community (see Appendix F under Firewise USA Communities and Firewise USA Communities, Lane County for a link to more information).

The survey was also advertised through Lane County's social media channels, such as Facebook and with a press release.

The CWPP Steering Committee received 1,550 valid survey responses yielding a 23% response rate.

Limitations of Sampling Methodology

A key limitation of any random sample survey is non-response bias. If one were to assume that the sample was perfectly random and that there was no response bias, then this survey would have a margin of error of $\pm 3\%$ at the 95% confidence level based on the sample size relative to the sample population. This means that if the survey were conducted 100 times, the results would end up within three percent of those presented in this report.

Non-response bias is an issue in all surveys, but is particularly important in mailed surveys due to response rates. The landowner survey received a 23% response rate which is average for mailed surveys. The 23% includes those that responded via paper and online. The Steering Committee was unable to calculate a response rate for those that responded as a result of the social media outreach. The survey results should not be considered representative of all Lane County residents, nor was it intended to be. The survey was intended to identify attitudes and opinions of landowners in the rural and wildland-urban interface areas. Thus, the scope of the survey was intentionally limited. The unique nature of the sample and a lack of phone numbers (to complete a non-response bias analysis) makes it difficult to determine areas of potential response bias. Despite

the potential for response bias, our assessment is that the results provide an accurate representation of the attitudes and opinions of landowners in wildland-urban interface areas of Lane County in 2019. It is also important to note that the following responses were given by rural and wildland-urban interface residents and it should not be assumed landowners are fire professionals.

Organization of Results

The survey results are organized into sections following the five survey themes listed above.

Tables and figures are used to display the data when possible. Tables and figures are titled and linked to the corresponding question number from the survey. If there was a noticeable change in response from the 2005 survey, it is noted in the description.

See Appendix E to view the 2019 paper surveys which includes the questions asked in the survey and the responses completed by landowners. See Appendix H for 2005 survey information. The response percentages are documented in the survey attachment. This section also documents written comments provided by respondents of the survey.

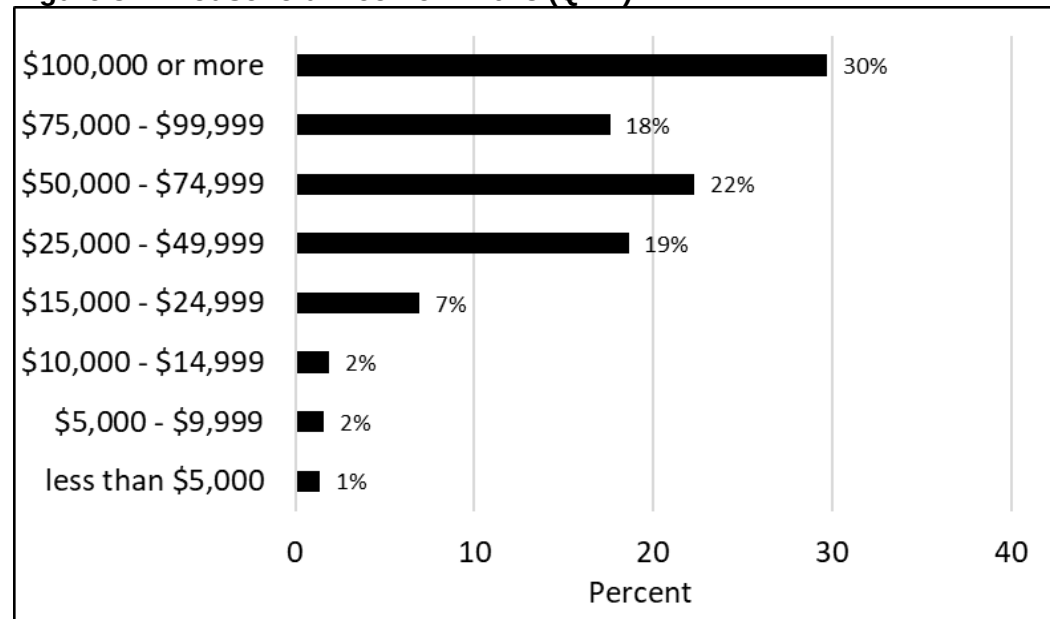
Findings

Characteristics of Survey Respondents

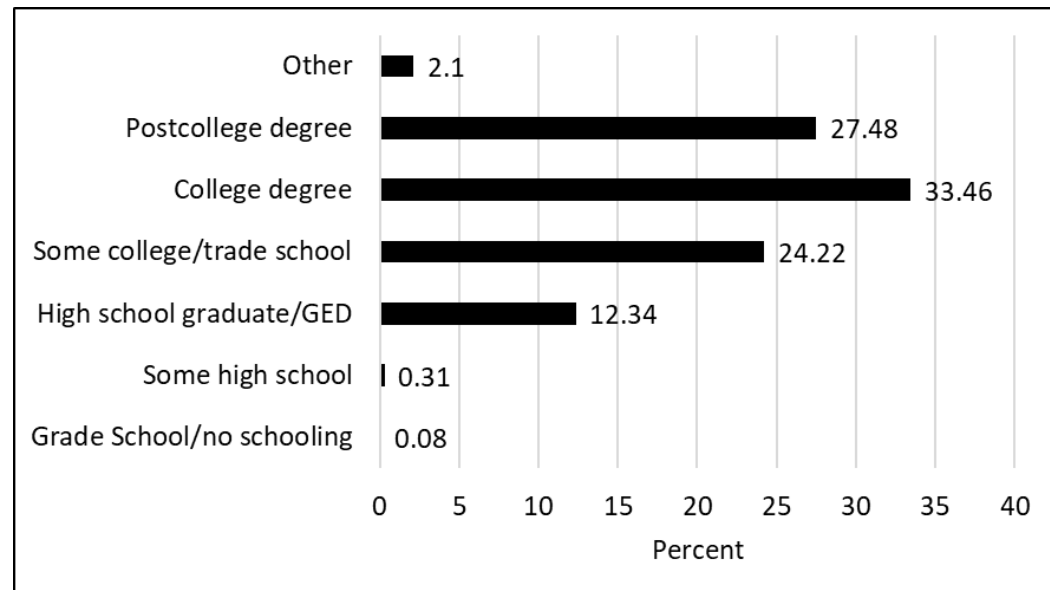
The survey instrument asked landowners to answer key demographic questions in order to help define the characteristics of the respondents. Specifically, the questions asked about age, educational attainment, household income, and information about the respondents' property and household. Because this survey targeted a unique population, landowners in the wildland-urban interface, it was not possible to obtain comparative census data.

The average age of respondents was 62 years old; respondents ranged from 20 to 94 years of age.

Seventy percent of the respondents had an average household income above \$50,000 in 2018 (Figure 3.1).

Figure 3.1: Household Income in 2018 (Q-22)

Source: OSU/Landowner Survey 2020

Figure 3.2: Level of Educational Attainment (Q-23)

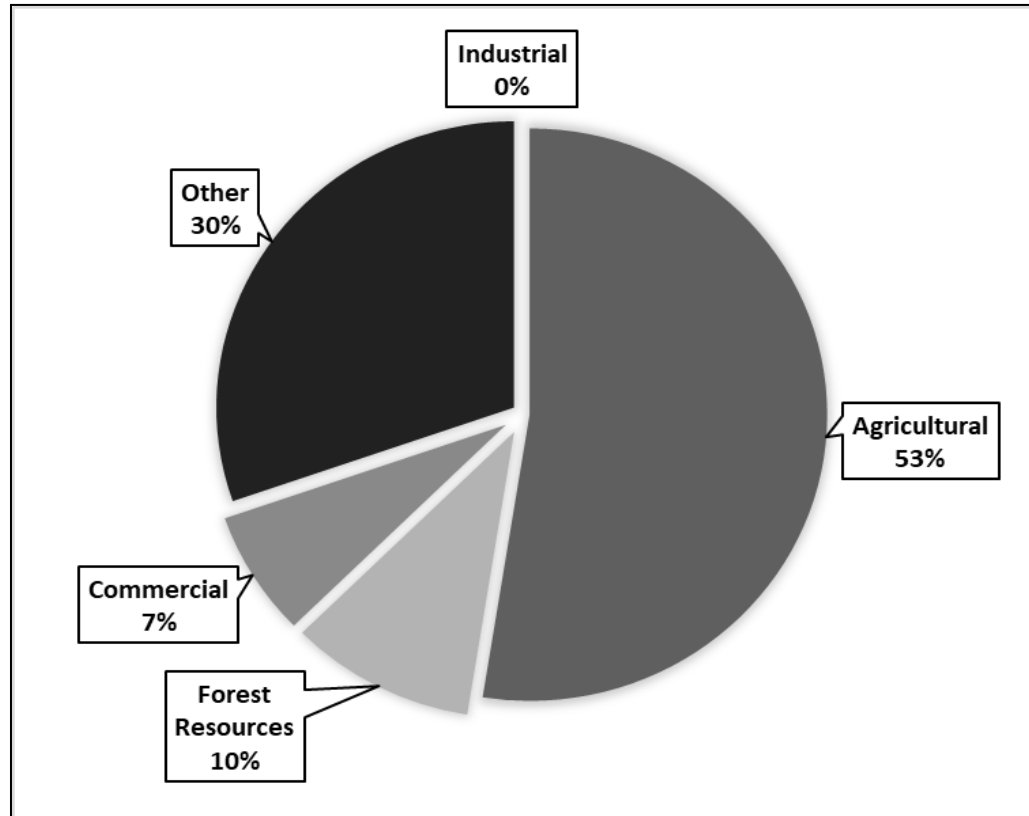
Source: OSU/Landowner Survey 2020

Figure 3.2 illustrates the educational attainment of respondents. Eighty-five percent have attained some college education, a college degree, or a post-college degree. Persons with a high school degree or less are underrepresented among survey respondents.

The survey asked general questions about respondents' properties, including ownership and use of property. The majority of respondents indicate they owned their home (94%) and were year-round residents of Lane County (95%). The average length of landownership was 19 years; length of ownership ranged from

2 months to 114 years (inferred to be a result of multigenerational ownership). Five percent of the respondents primarily used their property for business purposes; of these respondents, 62% indicated that they used the property for agricultural and forest industries. Figure 3.3 shows the types of businesses located on the property if the property was used primarily as a business. To see a list of the business identified in the “other” category visit Appendix H.

Figure 3.3: Types of Business Use of Property (Q-18.1)



Source: OSU/Landowner Survey 2020

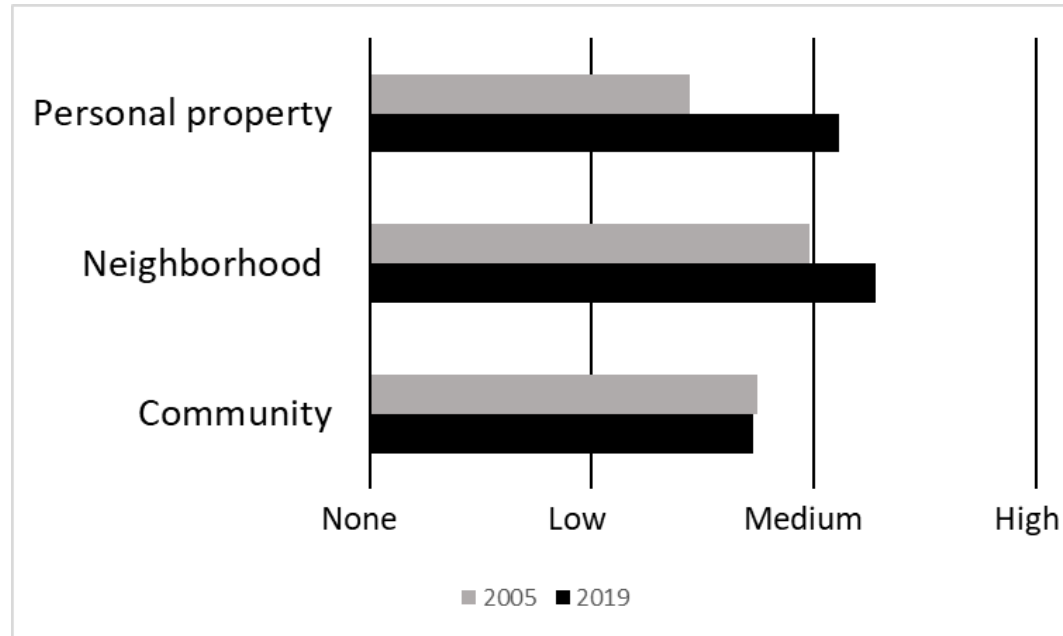
Wildland Fire Risk Awareness and Communication

To better understand perceptions of risk, the survey included several questions about wildland fire risk on respondents' property, in their neighborhoods and around their communities. Figure 3.4 shows respondents' perceptions of wildfire risk. Over half (77%) of respondents perceived their property as medium to high risk for wildland fires. This is consistent with local wildfire risk data that describes approximately half of Lane County residents live in medium to high risk areas. However, when compared to national wildfire risk data, overall Lane County residents live in medium-low to low risk areas.

Respondents perceived their neighbors' properties to have a slightly higher risk than their own (85%) and their communities to have a medium to low risk compared to their personal property (59%).

The perception of risk identified by landowners in 2019 was notably different than those in 2005. In 2005, 80% of landowners perceived their property and neighborhoods to be low to medium risk for wildfire.

Figure 3.4: 2005 and 2019 Perceptions of Wildland Fire Risk (Q-1)



Source: OSU/Landowner Survey 2020

Personal Experience with Wildland Fire

The survey asked landowners about their personal experiences with wildland fire. Figure Table 3.1 shows the types of experience respondents have had with wildland fire. Thirty-six percent reported that they had no previous experience with wildland fire. Just above half (63%), reported that they had witnessed a wildfire, smoke and other effects of wildfire, but few (10%) had actually evacuated their home or sustained property damage.

Table 3.1: Personal Experience with Wildland Fire (Q-2)

Type of Experience	Percentage of respondents with wildfire experience
Witnesses wildfire or observed smoke or other effects	63%
No experience with wildfire	36%
Suffered property damage from a wildfire	3%
Evacuated home due to a wildfire	7%

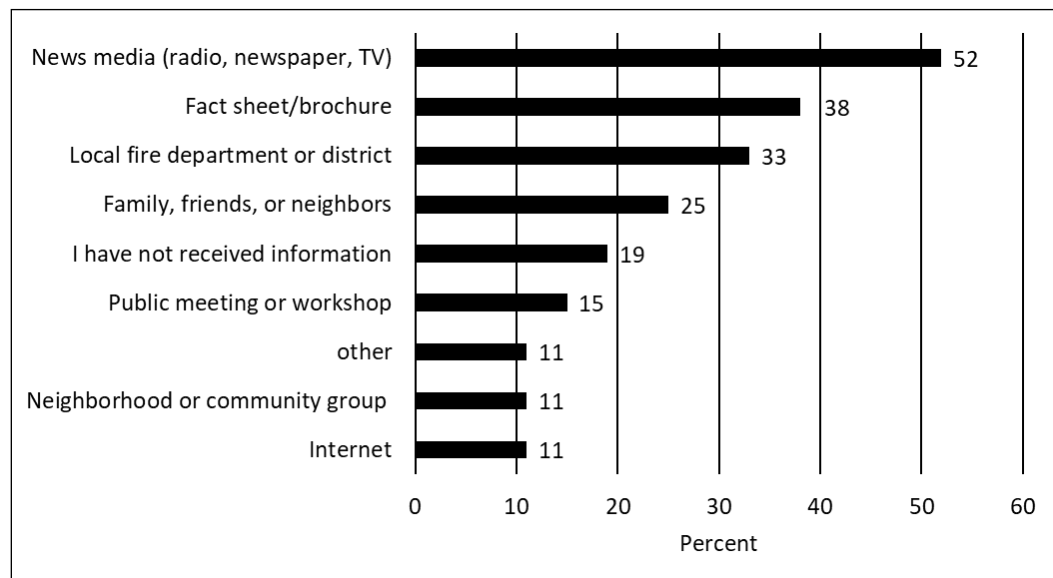
Source: OSU/Landowner Survey 2020

Sources of Information About Protecting Property

An important component of the landowner survey was gathering data on effective means of wildland fire information dispersal. The survey asked respondents how they received information about property protection in the past, as well as preferences for receiving information in the future.

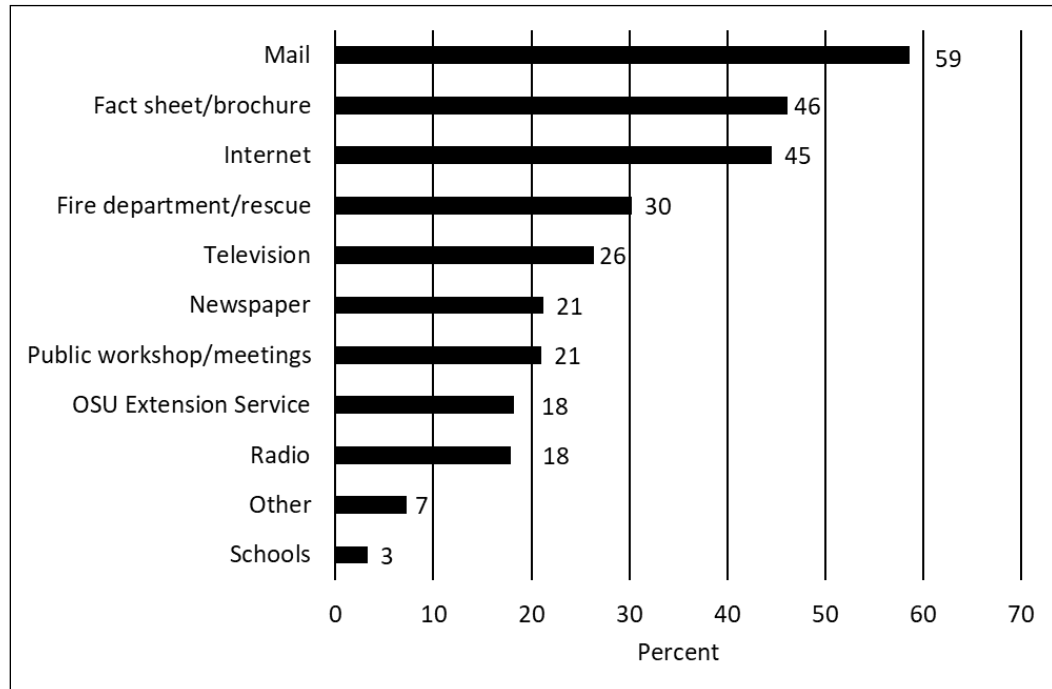
Figure 3.5 shows how respondents received information in the past about protecting their property against losses from wildland fire. The top resources included the news media (52%), fact sheets/brochures (38%), and local fire departments or districts (33%). Survey respondents reported that they did not widely use neighborhood/community groups or the Internet to gather information about protecting property from wildland fire. Information availability for protecting property from wildland fire is increasing in Lane County. The 2005 survey revealed that 27% of participants had not received any information, but that number decreased to 19% for the 2019 survey.

Figure 3.5: Past Sources of Information About Protecting Property from Wildland Fire (Q-3)



Source: OSU/Landowner Survey 2020

The survey gathered information about effective means of future correspondence relating to wildland fire property protection (Figure 3.6). Respondents' identified mail (59%), fact sheets/brochures (46%), internet (45%), and fire departments (30%) as the top four preferred methods to receive information. Internet and fire departments moving ahead of newspaper and television which were identified in the top four preferred methods in 2005.

Figure 3.6: Preferred Sources of Receiving Information About Protecting Property from Wildland Fire (Q-4)

Source: OSU/Landowner Survey 2020 OSU/CPW 2020

Fire Protection Services and Wildland Fire Preparation

The survey gathered information about landowners' knowledge of their fire protection service providers. The survey also asked landowners about emergency preparedness, including evacuation procedures and insurance coverage.

Table 3.2 shows that 53% of respondents receive fire protection services from a rural fire district. Seven percent of respondents reported that they did not know if their property was protected by a fire protection service.

Table 3.2: Fire Protection Services (Q-5)

Fire Protection Service Provider	% Respondents
Rural Fire Protection District	53%
Fire Department	38%
Don't Know	7%
Not Serviced by a Fire Department or District	2%

Source: OSU/Landowner Survey 2020

Figure Table 3.3 illustrates respondents' answers to questions about wildland fire preparedness and insurance coverage. The majority (88%) of the respondents did not know, or had not received information about community evacuation procedures. Fifty-nine percent of respondents indicated that they did not have personal household evacuation procedures in the case of a wildland fire emergency. While fifty-nine percent is a significant amount of respondents not having an evacuation plan, this is an eight percent decrease from the 2005 survey results.

One half (51%) of survey respondents reported that their insurance policies covered losses or structural damage incurred from wildland fire. However, 45% did not know if their insurance policies would protect their properties from damages or losses from wildland fire.

Table 3.3: Wildland Fire Evacuation Procedures and Insurance Coverage (Q-6)

Question	Yes	No	Don't Know
Has your community informed you of their wildland fire evacuation procedures?	12%	81%	7%
Does your household have a wildland fire evacuation plan?	38%	59%	3%
Does your homeowners or business insurance policy include coverage in the event of structural damage or loss due to wildland fire?	51%	4%	45%

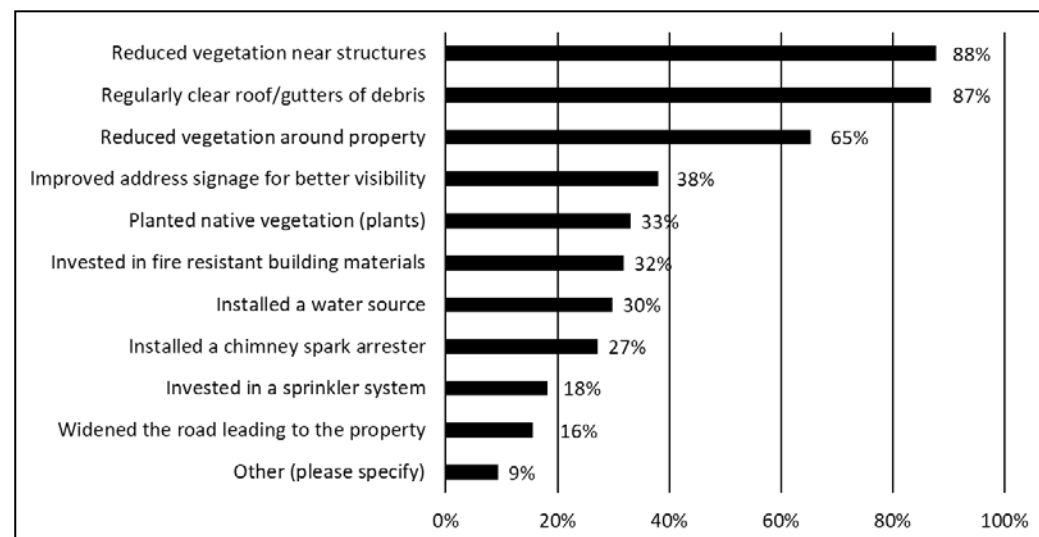
Source: OSU/Landowner Survey 2020

Reducing Property Risk to Wildland Fire

The survey gathered information from landowners about measures they have implemented to reduce the risk of wildland fire on their property. This section asked about specific risk reduction strategies.

The majority (89%) of respondents indicated that they have taken measures to reduce losses associated with wildland fire. Figure 3.7 shows the types of risk reduction measures taken by respondents. The most frequently reported measures were reducing vegetation near structures and clearing roof/gutters of debris. Fewer landowners reported implementing the measures that required higher financial investment.

Figure 3.7: Actions Taken to Reduce the Potential Losses from Wildland Fire (Q-7)



Source: OSU/Landowner Survey 2020

Preferred Risk Reduction Actions and Incentives

The survey asked landowners about their willingness to take specific actions to reduce the potential impacts of wildland fire on their property. Table 3.4 shows the likelihood of respondents to take different risk reduction actions. The majority of respondents indicated they are very likely to reduce vegetation and debris (79%) and create defensible zones around structures (65%). Respondents were less likely to improve emergency access or use fire-resistant building materials.

Table 3.4: Risk Reduction Actions Most Likely to Take (Q-8)

Risk Reduction Action	Very Likely	Somewhat Likely	Not Likely
Reduce debris and vegetation on property	79%	18%	3%
Clear a defensible zone around the property	65%	28%	7%
Improve emergency access to property	41%	23%	37%
Use fire resistant building materials	42%	32%	26%

Source: OSU/Landowner Survey 2020

The survey asked landowners which incentives, if any, would motivate them to take additional steps to protect their properties from wildland fire (Table 3.5). The highest percentage of respondents indicated that insurance discounts (70%) or tax breaks/incentives (69%) would motivate them to implement risk reduction steps. About half of respondents indicated that grant programs would encourage better protection measures, double the numbers from the 2005 survey.

Table 3.5: Preferred Incentives to Better Protect Property (Q-9)

Type of Incentive	Percent of Respondents
Insurance Discounts	70%
Tax Break or Incentive	69%
Grant Program	54%
None of the Above	9%
Other	12%

Source: OSU/Landowner Survey 2020

Local government and federal agencies provide a number of landowner assistance and recognition programs. The survey asked respondents to describe their familiarity with these programs (Table 3.6). Landowners were overwhelmingly unfamiliar with all available programs. Of the five programs respondents were least familiar with the fuels reduction cost share grants through Natural Resource Conservation Service (90%), Fire adaptive communities (89%), and Lane County Firewise Grant Program (84%). Nearly three and a half percent of landowners have participated in the Lane County Grant Program (3.4%), Firewise Communities (3.3%), and Oregon Department of Forestry Fuels Reduction Program (3.2%).

Table 3.6: Familiarity with Existing Incentive and Recognition Programs. (Q-10)

Type of Incentive	Percent participation in program	Percent Familiar	Percent Unfamiliar
Fuels Reduction Cost Share Grants Through the Natural Resources Conservation Service (NRCS)	1%	9%	90%
Firewise Communities	3%	21%	76%
Fire Adaptive Communities	1%	10%	89%
Oregon Department of Forestry Fuels Reduction Program	3%	17%	79%
Lane County Firewise Grant Program	3%	13%	84%

Source: OSU/Landowner Survey 2020

Reducing Community Risk to Wildland Fire

The survey asked respondents their opinions and preferences for different strategies to reduce community risk to wildfire. Communities may take a variety of approaches to wildland fire mitigation. The questions in this section help to inform policy decisions by providing better understanding of the level of landowner support for different approaches.

Hazardous Fuels Treatment

Respondents indicated their levels of support for four methods of hazardous fuels treatments in their communities (Table 3.7). The treatments included: no action, chemical treatment, prescribed burning, and mechanical thinning. Of the four, the two preferred methods were mechanical thinning (93%) and prescribed burning (73%). Respondents were divided over chemical treatment, with a 32% response in support of chemical treatment.

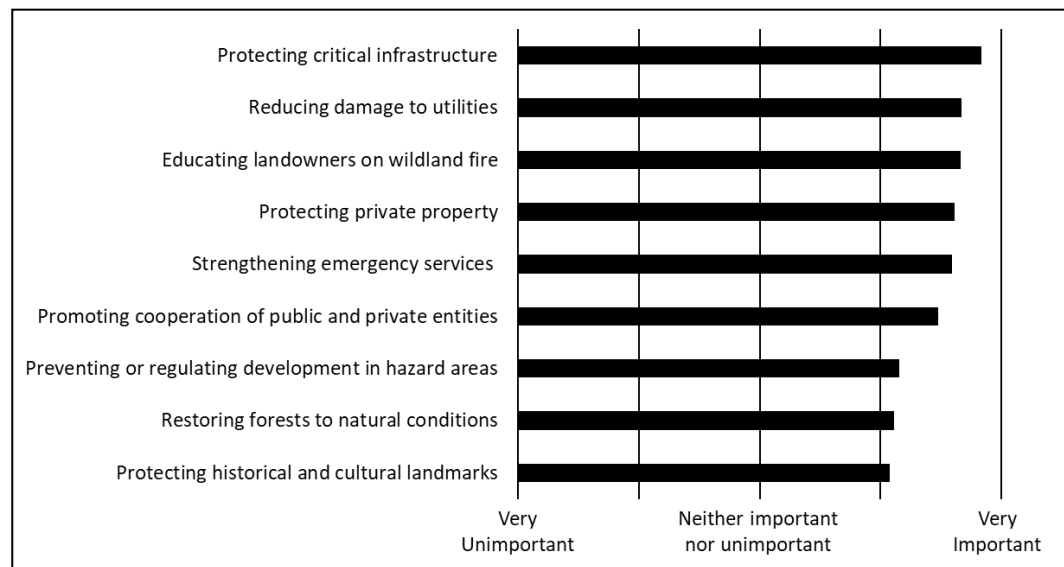
Table 3.7: Support for Hazardous Fuels Treatments (Q-11)

Type of Treatment	Supportive	Neither supportive nor unsupportive	Unsupportive
No Action	9%	13%	79%
Chemical Treatment	32%	13%	55%
Prescribed Burning	73%	13%	14%
Mechanical Thinning	93%	5%	2%

Source: OSU/Landowner Survey 2020

Landowner Priorities for Future Wildland Fire Planning

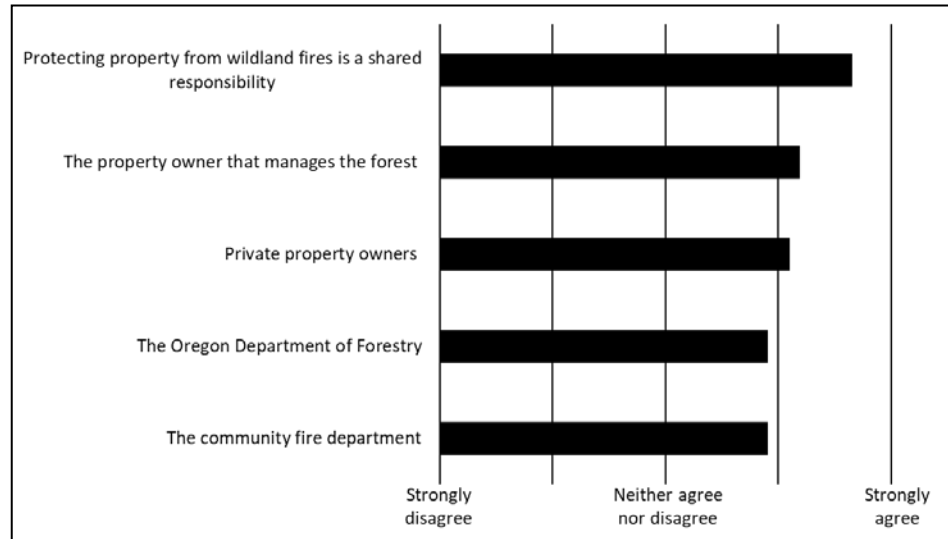
The survey asked landowners about their opinions on the importance of different planning priorities for wildland fire. Figure 3.8 shows the level of importance placed on different planning priorities by respondents. The majority of respondents indicated that each of the planning priorities listed were very or somewhat important. Protecting critical infrastructure, reducing damage to utilities, educating landowners, and protecting private property were the priorities ranked with highest importance. Of the priorities listed, respondents indicated that restoring forests to natural conditions and protecting historical and cultural landmarks were the least important.

Figure 3.8: Priorities for Wildland Fire Planning (Q-12)

Source: OSU/Landowner Survey 2020

Figure 3.9 shows respondents' opinions on responsibility for protecting property against wildland fire. The majority (96%) of respondents agreed or strongly agreed that the responsibility for protecting property is shared between private landowners, local, state and federal agencies. Eighty-five percent of respondents agreed or strongly agreed that landowners who manage the forest are responsible for wildland fire protection. Fewer respondents agreed that the Oregon Department of Forestry or the community fire department is solely responsible.

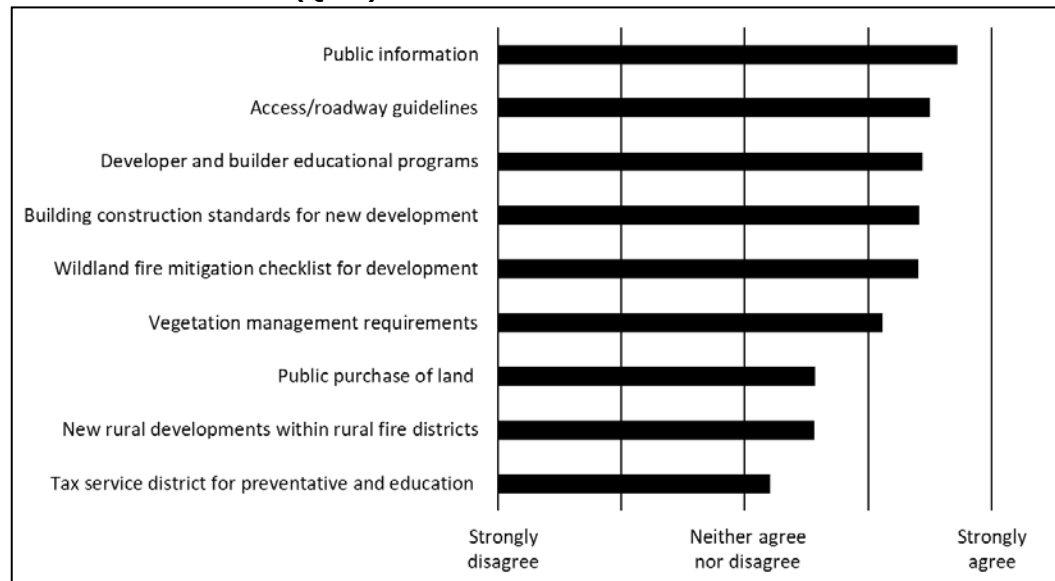
Figure 3.9: Responsibility for Protecting Private Property from Wildland Fire (Q-13)



Source: OSU/Landowner Survey 2020

There are a number of regulatory and non-regulatory activities that communities can implement to reduce wildland fire risk. Figure 3.10 shows respondents' levels of support for different risk reduction strategies. Respondents indicated the highest level of support for a public information strategy; 95% were very or somewhat supportive. Eighty-two percent or more of respondents were very or somewhat supportive of four out of five of the regulatory strategies listed. These four include access/roadway guidelines (92%) and access/roadway guidelines for new development in high hazards areas (89%). Of the risk reduction strategies listed in the survey, respondents indicated the least support for requiring that new rural residential developments be within rural fire protection district boundaries (60%), public acquisition of land in high hazard areas for open space (58%), and development of a tax service district to fund preventative wildfire reduction work and education (50%).

Figure 3.10: Regulatory and Non-Regulatory Strategies for Wildland Fire Risk Reduction (Q-14)



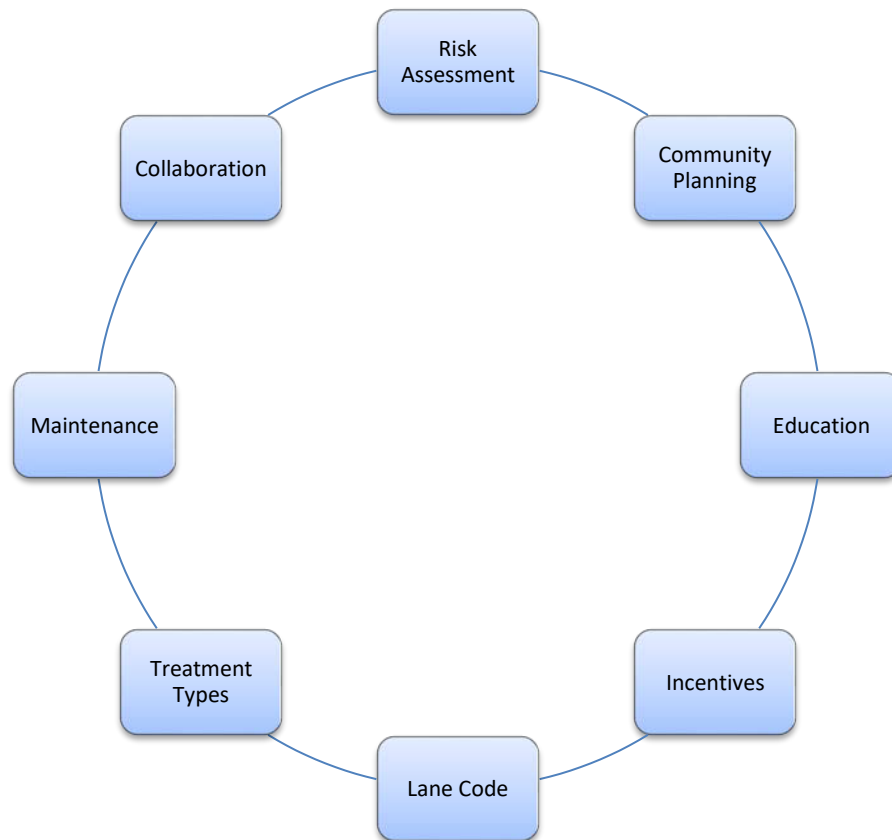
Source: OSU/Landowner Survey 2020

Conclusions drawn from the landowner survey have been synthesized with the other outreach activities that were conducted in 2005 including the Stakeholder interviews detailed in Appendix H.

Summary of Key Findings

Several common themes emerged from the landowner survey, the stakeholder interviews, and the Firewise Workshop. The section below summarizes these common themes into eight key findings, which are depicted in Figure 3.11.

Figure 3.11. Lane County CWPP Key Findings



Source: OSU/ Landowner Survey 2020

Risk Assessment

Overall, Lane County has a moderate risk to wildland-urban interface fire, but high-risk areas exist throughout the county. The wildfire risk assessment should be used as a decision-making tool to help prioritize fuels reduction projects.

Information in the risk assessment should be shared with local communities and updated and enhanced over time with local data.

Community Planning

Information sharing with local communities is especially important due to the large scale of Lane County. The ability of the CWPP to address structural ignitability issues is limited at the countywide level due to the lack of site-specific data. The Lane County CWPP should encourage the development of more refined community fire plans in local communities and neighborhoods through the development of partnerships and resource sharing.

Education

Although fire prevention education programs exist, one-fifth of landowners surveyed indicated that they are not receiving any information. Community outreach results identified a need for improved coordination and dissemination of educational activities regarding wildland fire risk. Educational messages should come from trusted sources, such as Oregon State University Extension, fire protection districts, and Oregon Department of Forestry. Information should be distributed through the preferred methods identified in the landowner survey, including mail, fact sheets/brochures, internet, and television.

Incentives

Many stakeholders expressed support for incentive programs, such as tax breaks and insurance benefits, as effective non-regulatory approaches to increasing participation in wildfire mitigation activities. Two-thirds of landowner survey respondents indicated that tax and/or insurance incentives would motivate them to take additional steps towards reducing risk to their property.

Lane Code

Multiple sources in the stakeholder interviews and Firewise Workshop identified the need to update the Lane Code to require wildfire safety measures in rural residential zones similar to those required in areas zoned as forestlands. Most new development occurs in rural residential areas. The landowner survey results indicate that the majority of landowners are supportive of requiring standards for building materials, emergency access, and vegetation management for new development in wildfire hazard areas. To this end, the CWPP committee conducted a review and suggested revisions to Lane County's fuel break standards. The fuel break standards require vegetation management surrounding homes in areas zoned as forestland. See Appendix F which includes a letter of support to update vegetative management strategies in Lane County.

Treatment Types

Community outreach results indicate high levels of support for reducing hazardous vegetative fuels in Lane County. Which treatment methods are most appropriate vary based on environmental and health concerns, the range of forest types and topography and the treatment objectives. See Appendix D, Fuel Treatment Types for a list of possible hazardous vegetative fuel treatments. See Appendix F for a literature review of defensible space treatments most likely to reduce wildfire impacts to homes in Lane County and fire modeling results.

Maintenance

The Lane County CWPP and its components require long-term maintenance to continue to effectively support efforts to protect people and property from wildfire. See Appendix B, Plan Implementation and Maintenance for further details. Stakeholders identified the need to institutionalize a process and establish a coordinator position to facilitate ongoing planning and coordination of wildfire mitigation activities in Lane County. This will help to ensure that the CWPP remains a functional document.

Collaboration

Stakeholders and community members within Lane County recognize that reducing risk to wildfire is a shared responsibility and requires collaboration between citizens, non-profit organizations, agencies, and the business community. Collaboration creates opportunities to develop better solutions, share resources, and more efficiently utilize limited funding. The Lane County CWPP can help initiate improved coordination and establish a process for ongoing collaboration.

Section 4 Action Plan

Action Plan Framework

Action Plan Methods

This section includes two subsections Goals and Objectives, and Action Items. The previous 2005 Action Plan was developed through an analysis of the issues identified in the risk assessment, the landowner survey, stakeholder interviews and the Firewise Workshop. In 2020, background research on community wildfire planning, including a review of other community wildfire protection plans was conducted. The 2020 risk assessment and landowner survey data informed a systematic review of 2005 Action Items. The Steering Committee updated Action Items and reaffirmed standing Goals and Objectives. Committee members were assigned responsibility for the coordination of individual Action Items.

Goals and Objectives

The Goals and Objectives link the Action Items to one or more of the Healthy Forest Restoration Act (HFRA) requirements addressed: collaboration, prioritized fuel reduction, and/or treatment of structural ignitability. Each Action Item has a corresponding Action Item worksheet, located in Appendix A – Action Item Worksheets.

Goals

The plan goals help to guide the direction of future activities aimed at reducing risk and preventing losses from wildfire. The goals serve as guiding principles for agencies and organizations regarding the implementation of Action Items.

GOAL 1: Provide countywide leadership through partnerships to implement wildland-urban interface fire mitigation strategies in Lane County.

GOAL 2: Improve community strategies for reducing the impacts of wildland-urban interface fires.

GOAL 3: Promote wildfire risk reduction activities for private and public lands in Lane County.

Objectives

The objectives connect the goals and Action Items and help organize the action plan for efficient implementation and evaluation.

OBJECTIVE 1.1: Establish and maintain a structure and methods for coordinating the implementation of the Lane County CWPP.

OBJECTIVE 1.2: Strengthen communication and coordination among local districts, county, state, and federal agencies to effectively deliver wildland-urban interface risk reduction programs and messages.

OBJECTIVE 2.1: Review existing policies and regulations to reduce the impact of wildland-urban interface fires.

OBJECTIVE 2.2: Enhance the Lane County Wildland-Urban Interface Risk Assessment.

OBJECTIVE 2.3: Support and prioritize fuels reduction projects by watershed.

OBJECTIVE 3.1: Increase individual awareness and promote risk reduction activities through education and outreach.

OBJECTIVE 3.2: Promote the use of non-regulatory incentives to reduce structural ignitability.

Action Items

Action Items have been identified through a collaborative process and a variety of mechanisms. Action Items were informed by and tied directly to issues or needs identified throughout the planning process. Action Items were developed from several sources including but not limited to: participants of the planning process, noted deficiencies in local capability, and/or issues identified through the risk assessment. To facilitate implementation, Action Items include information on key issues addressed, coordinating organizations, potential partners, and target timeframes.

Action Items carried forward from 2005 received committee review, including accomplishments, suggestions moving forward, lessons learned and target timeframes. This information is housed within Action Item Review Forms, see Table 4.1 for the form template. Review forms for each Action Item listed in the matrix are also located in Appendix A. For a complete list of 2020 Action Items, see Table 4.2, the Lane County Community Wildfire Protection Plan Matrix.

Priority Action Items

The 2020 Steering Committee identified five priority Action Items for the next implementation term. The five priority actions are intended to guide highest need actions and be updated periodically as needed and during plan updates. The Top five priority actions are as follows:

Action Item 2.1.1 Review and develop recommendations to the Lane County Board of Commissioners for revisions to land use regulations, such as: Implementation of fire safety standards within rural residential zoning districts; Distribution of educational materials at the outset of the building permit review process; and Outreach services with neighborhood organizations and special interest groups. **Purpose/Rational:** HFRA, Stakeholder Phone Interviews, Firewise Workshop Feedback- Identified the use of regulatory policies to reduce WUI wildfire risk.

Coordinating Organization: Lane County Land Management Division

Target Time Frame: Target Completion 2022.

Action Item 2.1.3 Identify and prioritize areas for local evacuation plan development across Lane County's Rural Fire Protection District, potentially including data from the CWPP Rural Response: Priorities for Fuel Reduction Map. **Purpose/Rational:** Assess, evaluate, test, and deploy area specific emergency evacuation plans (including shelter in place options) for priority areas in Lane County. Secondary benefits of this project will include informing local stakeholders (in every Fire District) about mitigation efforts (e.g. fuels reduction projects), critical infrastructure impacts, and emergency and evacuation preparedness steps.

Coordinating Organization: Lane County Emergency Management
Status/Target Time Frame: Ongoing

Action Item 2.3.1 Utilize maps in the CWPP risk assessment to guide and identify new partners and opportunities for cross-boundary collaboration. Coordinate the implementation of landscape scale hazardous fuel projects.

Purpose/Rational: HFRA- collaboration and reduction of hazardous fuels, Stakeholder Phone Interviews and the Landowner Survey- Identified a need for the prioritization of fuels reduction.

Coordinating Organization: Hazardous Fuel Subcommittee
Target Time Frame: Ongoing

Action Item 3.1.1 Develop a coordinated multi-agency seasonal outreach campaign that includes county-specific educational materials to promote effective risk reduction practices and communicate landowner assistance programs in the wildland/urban interface.

Purpose/Rational: HFRA- collaboration, reduction of hazardous fuels, and reduction of structural ignitability.

Coordinating Organization: Lane County Emergency Management with support from the Lane County Fire Prevention Co-Op

Target Time Frame: Target Completion 2022.

Action Item 3.2.1 Implement landowner assistance for fuel reduction projects including cost-share incentives. Increase local capacity, establish incentive programs to support yard debris disposal to assist landowners with hazardous fuels removal. Create disposal opportunities using alternative methods to burning.

Purpose/Rational: Landowner Survey Results and Stakeholder Phone Interviews Identified a need for the prioritization of fuels reduction.

Coordinating Organization: Oregon Department of Forestry
Target Time Frame: Ongoing

New Action Items

Notable changes made from the 2005 Action Items during the 2020 review process include three additional Action Items which are listed below. For a complete list of Action Items see Table 4.2.

2.1.3: Identify and prioritize areas for local evacuation plan development across Lane County's Rural Fire Protection District, potentially including data from the CWPP Rural Response: Priorities for Fuel Reduction Map.

2.1.4: Develop Community Response Plans for dealing with wildfire and prescribed fire smoke impacts in Lane County.

2.3.3: Prescribed Fire: Increase local capacity, coordination and explore policy improvements to increase the pace and scale of prescribed fire as a cross-boundary tool to reduce wildfire risk on tribal, public and private properties.

Removed Action Items

Three Action Items were removed from the 2005 CWPP. These Action Items are displayed in red in the Action Item Matrix. Removed Action Items are listed below with justifications for their removal.

1.2.1: Develop formal agreements with municipalities and special districts.

Justification: Formal agreements for coordination and communication continue to occur between ODF the Fire Defense Board, USFS, BLM, OSFM and OEM. These agreements are typically formalized at state and regional levels.

2.2.6: Obtain LiDAR data for high risk areas to enhance Lane County's Wildland-Urban Interface Risk Assessment.

Justification: No longer applicable. New wildfire risk data available since the last update includes WUI data. This data has been included in this update and can be found in the Risk Assessment, Section 2. Collecting local data including community assessments of structural ignitability is a listed Action Item (2.2.4) and can be used to inform finer scale analysis of existing WUI data.

2.3.2: Review fuels treatment method matrix for future Lane County fuel reduction projects.

Justification: This matrix provides high level guidance for partners exploring methods for fuel reduction projects. More detailed analysis should be conducted on a project basis to inform individual projects.

Table 4.1

Action Item	
ID#	Action Item Title/Description
Purpose/Rational	
Priority	Status/Target timeframe
Coordinating Organization:	
Partners Involved	
Action Item Review Form	
Action(s) Taken/Accomplishments	
What Went Well	
Lessons learned	
Suggestions for moving forward	
Dates of action	Funding Source(s) used

Table 4.2: Action Item Matrix Goal 1

GOAL 1: Provide countywide leadership through partnerships to implement wildland-urban interface fire mitigation strategies in Lane County			
Objective 1.1. Establish and maintain a structure and methods for coordinating the implementation of the Lane County Community Wildfire Protection Plan.			
Target Timeframe	Action Item	Coordinating Organization	Priority Level
Complete, review during next update (2023)	Action 1.1.1. Maintain a Lane County CWPP Advisory Committee to oversee implementation, identify and coordinate funding opportunities, and sustain the Lane County Community Wildfire Protection Plan.	Lane County Emergency Management	High
Ongoing	Action 1.1.2. Maintain a sub-committee to coordinate with the CWPP Core Committee to sustain effective countywide public education and outreach activities through the support of the Lane Fire Prevention Co-op and other programs.	Lane Fire Prevention Cooperative	Medium
Complete, review during next update (2023)	Action 1.1.3. Maintain the Hazardous Fuel Subcommittee to address fuel reduction and countywide coordination among agencies, programs and partnerships.	Oregon Department of Forestry	High
Objective 1.2. Strengthen communication and coordination among Local Fire Districts, County, State, and Federal agencies to effectively deliver wildland-urban interface risk reduction programs and messages.			
Removed	Action 1.2.1. Develop formal agreements with municipalities and special districts.	Lane County Land Management	High
Ongoing	Action 1.2.2. Establish a consistent communication strategy among intergovernmental partners using appropriate conduits and delivery mechanisms.	Oregon Department of Forestry	High

Table 4.3: Action Item Matrix Goal 2

GOAL 2: Improve community strategies for reducing the impacts of wildland-urban interface fires			
Objective 2.1. Review existing policies and regulations to reduce the impact of wildland-urban interface fires.			
Target Timeframe	Action Item	Coordinating Organization	Priority Level
Ongoing, Target Completion 2023	Action 2.1.1. Review and develop recommendations for the Lane County Board of Commissioners for revisions to land use regulations, such as: Implementation of fire safety standards within rural residential zoning districts; Distribution of educational materials at the outset of the building permit review process; and Outreach services with neighborhood organizations and special interest groups.	Lane County Land Management	Top 5
Ongoing	Action 2.1.2 Review and enhance the Lane County building permit process within the wildland-urban interface.	Lane County Land Management	High
Ongoing, Target Completion 2023	Action 2.1.3 Identify and prioritize areas for local evacuation plan development across Lane County's Rural Fire Protection District, potentially including data from the CWPP Rural Response: Priorities for Fuel Reduction Map.	Lane County Emergency Management	Top 5
Ongoing, Target Completion 2023	Action 2.1.4 Develop Community Response Plans for dealing with wildfire and prescribed fire smoke impacts in Lane County.	Hazardous Fuel Subcommittee	Medium
Objective 2.2. Enhance the Lane County Wildland-Urban Interface Risk Assessment.			
Complete, review during next update (2023)	Action 2.2.1. Incorporate BLM/USFS critical road and response infrastructure into the Lane County Wildland-Urban Interface Risk Assessment. See "Rural Response: Priorities for Fuel Reduction" Map in Section 2, Risk Assessment.	Hazardous Fuel Subcommittee	Medium
Complete, review during next update (2023)	Action 2.2.2. Maintain and update fire district boundary data.	Lane County Land Management	Medium

Table 4.3: Action Item Matrix Goal 2 (Continued)

Objective 2.2. Enhance the Lane County Wildland-Urban Interface Risk Assessment.			
Target Timeframe	Action Item	Coordinating Organization	Priority Level
Complete, review during next update (2023)	Action 2.2.3. Incorporate, maintain, and update Lane County's Wildland-Urban Interface Risk Assessment GIS data elements as new data becomes available.	Lane County Land Management	Medium
Ongoing, Target Completion 2023	Action 2.2.4. Expand "Rural Response: Priorities for Fuel Reduction" Map to include additional local information, structural vulnerability assessments and updated hazardous fuel treatment maps for example.	Fire Defense Board & Hazardous Fuel Subcommittee	Medium
Ongoing	Action 2.2.5. Update rural addressing data collection project for county.	Lane County Land Management	Medium
Removed	Action 2.2.6. Obtain LiDAR data for high risk areas to enhance Lane County's Wildland-Urban Interface Risk Assessment.	Lane County Public Works GIS	High
Objective 2.3. Support and prioritize fuels reduction projects by watershed.			
Ongoing	Action 2.3.1. Utilize maps in the CWPP risk assessment to guide and identify new partners and opportunities for cross-boundary collaboration. Coordinate the implementation of landscape scale hazardous fuel projects.	Hazardous Fuel Subcommittee	Top 5
Removed	Action 2.3.2. Review fuels treatment method matrix for future Lane County fuel reduction projects.	Lane County Land Management	High
Ongoing	Action 2.3.3. Prescribed Fire: Increase local capacity, coordination and explore policy improvements to increase the pace and scale of prescribed fire as a cross-boundary tool to reduce wildfire risk on tribal, public and private properties.	Hazardous Fuel Subcommittee	Medium
Ongoing, Target Completion 2022	Action 2.3.4. Complete 2 cross-boundary fuels reduction projects that leverage partners and programs identified from Action Item 2.3.1.	Hazardous Fuel Subcommittee	High

Table 4.4: Action Item Matrix Goal 3

GOAL 3: Promote wildfire risk reduction activities for private and public lands in Lane County			
Objective 3.1. Increase individual awareness and promote risk reduction activities through education and outreach.			
Target Timeframe	Action Item	Coordinating Organization	Priority Level
Ongoing, Target Completion 2022	Action 3.1.1 Develop a coordinated multi- agency seasonal outreach campaign that includes county-specific educational materials to promote effective risk reduction practices and communicate landowner assistance programs in the wildland/urban interface.	Lane Fire Prevention Cooperative & Lane County Emergency Management	Top 5
Ongoing, Target Completion 2022	Action 3.1.2 Establish a communication strategy that utilizes existing stakeholder channels to disseminate risk reduction messages.	Lane County Emergency Management	High
Ongoing, Target Completion 2020	Action 3.1.3. Create and maintain a website including county specific wildfire risk reduction and preparedness resources for residents and stakeholders.	Lane County Land & Emergency Management Divisions	High
Objective 3.2. Promote the use of non-regulatory incentives to reduce structural ignitability.			
Ongoing	Action 3.2.1. Implement landowner assistance for fuel reduction projects including cost-share incentives. Increase local capacity, establish incentive programs to support yard debris disposal to assist landowners with hazardous fuels removal. Create disposal opportunities using alternative methods to burning.	Oregon Department of Forestry	Top 5
Ongoing, Target Completion 2023	Action 3.2.2. Use the 2019 Governor's Council on Wildfire Response to guide future CWPP projects.	Office of State Fire Marshal & Oregon Department of Forestry	High

Section 5 Plan Implementation and Maintenance

Overview

The plan Implementation and Maintenance Section strives to ensure that the Lane County Community Wildfire Protection Plan (CWPP) remains an active and relevant document. This section provides the foundation for the formation of the Lane County CWPP Advisory Committee, hereby referred to as the Committee. This section outlines suggestions for how the Committee should prioritize community wildfire protection projects and includes a schedule for maintaining and updating the plan.

The plan's format allows the Committee to review and update sections as new data becomes available. New data can be easily incorporated, resulting in a CWPP that remains current and relevant to Lane County and all of its respective partners. The benefits of a current and relevant CWPP include:

- Allowing communities to identify local priorities and shape management decisions on surrounding public lands;
- Building community partnerships and collaboration between fire districts, fire departments, local/state/federal governments, and private landowners;
- Making available a variety of funding sources and opportunities to communities;
- Facilitating fuel reduction projects and forest health treatments across the landscapes, in accordance with the Healthy Forest Restoration Act (HFRA) and Healthy Forests Initiative goals.¹

Plan Implementation

HFRA requires that three entities must mutually agree to the final contents of a CWPP:

- Lane County Board of Commissioners
- Lane County Fire Defense Board
- Oregon Department of Forestry

The Lane County CWPP is a shared plan that was developed and implemented based upon a collaborative process. The plan will be adopted by order and resolution by the Lane County Board of Commissioners and acknowledged by the Lane County Fire Defense Board and Oregon Department of Forestry in order to meet HFRA and Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation requirements. The CWPP is non-regulatory in nature, so the effectiveness of the plan will be contingent upon the implementation of the Action

Items identified therein. The Action Items provide a framework for building and sustaining partnerships to support wildfire risk reduction projects.

Advisory Committee

In accordance with Action Item 1.1.1, the plan development Steering Committee should become the advisory committee (the Committee), and should: oversee implementation, identify and coordinate funding opportunities, and sustain the CWPP. The Committee should act as the coordinating body and serve as a centralized resource for wildfire risk reduction and wildland-urban interface issues in Lane County. Additional roles and responsibilities of the Committee include:

- Serving as the local committee to coordinate projects to be submitted for wildfire funding programs such as National Fire Plan grants, Senate Bill 360, and the Pre-Disaster Mitigation program;
- Developing and coordinating ad hoc and/or standing subcommittees as needed;
- Prioritizing and recommending funding for wildfire risk reduction projects;
- Documenting successes and lessons learned;
- Evaluating and updating the CWPP in accordance with the prescribed maintenance schedule.

Co-Conveners

Lane County Emergency Management and Oregon Department of Forestry should serve as co-conveners to oversee the plan's implementation and maintenance. They should co-chair the CWPP advisory committee and fulfill the chair responsibilities. These two entities should be responsible for calling meetings to order at scheduled times or when issues arise (e.g., when funding becomes available or following a major wildfire event).

Members

The following organizations were represented and served on committees during the development of the CWPP. These groups should continue to be members of the Committee in the implementation and maintenance phases of the CWPP.

- Lane County Emergency Management
- Lane County Land Management
- Oregon Department of Forestry - Eastern Lane and Western Lane
- Lane County Fire Defense Board
- United States Forest Service
- Bureau of Land Management
- Oregon State University Extension Service - Lane County

Wildfire mitigation is a shared responsibility among numerous diverse stakeholders. For this reason, it is important that the CWPP planning process be collaborative in nature. The Committee may look to expand the current membership in to include other organizations such as:

- Upper Willamette Soil and Water Conservation District
- Siuslaw, Long Tom, McKenzie, Coast Fork Willamette and Middle Fork Willamette Watershed Councils
- Eugene Water and Electric Board, as well as other utilities
- Home Builders Association
- Local elected officials
- Oregon Small Woodlands Association (non-industrial forest landowners) and Lane County Tax Equalization Group (industrial forest landowners)

Plan Maintenance

Plan maintenance is a critical component of the CWPP. Proper maintenance should ensure that this plan will benefit Lane County's efforts to reduce risk in the wildland-urban interface. Lane County and CWPP partners have developed a method to ensure that a regular review and update of the CWPP occurs. The Committee is responsible for maintaining and updating the CWPP through a series of meetings outlined in the maintenance schedule below. Periodic annual meetings may be called as needs arise.

Table 5.1: Plan Maintenance Meeting Schedule

Semi-Annual Meeting	Annual Meeting	Five-Year Review
Review current actions	Update risk assessment data and findings	Evaluate and update CWPP and integrate it into the Lane County Natural Hazard Mitigation Plan Wildfire Annex
Identify new issues and needs	Update on local planning efforts	
Prioritize potential projects	Discussion of continued public involvement methods	
	Documenting success and lessons learned	

The process the Committee should use to prioritize all projects, including fuel reduction projects, is detailed in the section below.

Project Prioritization Process

The requirements of HFRA state that the CWPP Advisory Committee will establish community hazard reduction priorities for projects. In accordance with Objective 2.3, the CWPP Advisory Committee should support and prioritize wildfire risk reduction projects within Lane County.

The 2020 Committee reviewed all 2005 Action Items and provided completed review forms for each Action Item listed in the Action Item Matrix. The Committee also identified a list of “Top 5 Actions”, reviewed and adjusted all Action Items priority levels, as well as assigned target completion dates to many high priority Actions. This review and ranking process was based on the Risk Assessment (Section 2), Community Outreach results (Section 3), known gaps in wildfire planning and prevention at the county level, a review of best practices for reducing wildfire risk at the community level as well as incorporating planned actions at the county level. Pairing existing capacity with identified Action Items is an effective method to ensure the CWPP is a “living document” and increases partner participation and buy in at the local level.

Depending on the intent of a potential project and its implementation methods, several funding sources may be appropriate. Examples of wildfire mitigation funding sources include: National Fire Plan, Title II funds, Title III funds and Pre-Disaster Mitigation grants. To ensure limited funding for wildfire risk mitigation and planning projects is spent efficiently, grant applications in Lane County aimed at mitigating wildfire risk and improving community resilience should address one of the listed Action Items and specify how their project addresses Plan Goals and Objectives.

Existing and future projects which address one or more of the listed Goals, Objectives and/or Action Items need not be confirmed by the committee, but should be tracked by the committee during plan maintenance. The CWPP Committee should provide support and guidance to internal and external partners as requested to increase an all hands, all lands approach to wildfire mitigation.

Projects that are presented to the CWPP Advisory Committee will often come from a variety of sources; therefore, the project prioritization processes should be flexible. If a wildfire risk mitigation project requesting federal funding does not address a listed Action Item, the applicant should contact the CWPP Steering Committee early in the application process. Semi-Annual Committee meetings provide an opportunity to review current actions and identify new projects. The applicant should be ready to demonstrate how their potential project will help reduce wildfire risk in Lane County.

Annual Meeting

The Committee should meet annually to review updates of the Risk Assessment data and findings, get updates on local CWPP planning efforts, discuss methods of continued public involvement, and document successes and lessons learned from the past year.

On an annual basis, Lane County Emergency Management (EM) and Oregon Department of Forestry (ODF) may complete the following tasks in an effort to

incorporate, maintain, and update Lane County's Wildland-Urban Interface Risk Assessment GIS data elements (Action 2.2.3).

- Update the Risk Assessment GIS data layers on a timely basis as new Oregon Department of Forestry, U.S. Forest Service and Bureau of Land Management studies or assessments are available.
- Create a standardized format for local communities to use in submitting risk assessment data to supplement the CWPP GIS layers.
- Integrate local CWPP assessments and mapping when available into the Lane County CWPP.
- Update local and regional CWPP websites with information provided by the Lane County Fire Cooperative and Fire Defense Board.
- Support community efforts in the drafting of local CWPPs by providing access to the Risk Assessment GIS data.
- Assist local community efforts in identifying potential fuels reduction projects and drafting of Title II Secure Rural Schools, Resource Advisory Committee grant applications.
- Coordinate with local community partners, to include/involve in local fuels reduction projects.

EM will be responsible for documenting the outcomes of the annual meetings in *Appendix B: Implementation and Maintenance Documentation*.

Five-Year Review of Plan

For the 2023 Plan Update, the intent is for the CWPP to become a wildfire annex to the Lane County Natural Hazard Mitigation Plan. Complete plan updates should be set for five-year intervals to meet the requirements of the Disaster Mitigation Act of 2000. Lane County Emergency Management should be responsible for documenting the outcomes of the five-year plan review in the *Appendix B: Implementation and Maintenance Documentation*. Figure 5.2 provides a list of questions that can be used by the Committee to update the CWPP

Table 5.2: Five-Year Plan Review Questions

5-Year Plan Review Questions	
Background Data – Section 1	
1.	Has the wildfire protection framework at the local, state, or federal level changed?
2.	Have the responsibilities of partner organizations changed?
3.	Has recent fire occurrence been accurately reflected in the plan?
Risk Assessment Data – Section 2	
1.	Has the wildfire risk across the county changed?
2.	Have new tools emerged to better evaluate the wildfire hazard?
3.	Have local communities developed plans and implemented activities that might change the county's overall risk?
Outreach Data – Section 3	
1.	Are there new players that should be brought to the table?
Action Plan Data – Section 4	
1.	Do the CWPP goals, objectives, and actions address current or expected conditions?
2.	Have identified Action Items been effectively implemented?
3.	Are there new funding sources available for the mitigation of wildfire hazards?
4.	Are there new Action Items that should be added to the Action Item Matrix?
Plan Implementation Data – Section 5	
1.	Are the structures and methods established for implementing the plan still relevant?
2.	Have there been any lessons learned documented from significant wildfires in other parts of the state may be applicable to Lane County?
3.	Has implementation occurred as anticipated?
4.	Are there obstacles and challenges that have arisen that may have prevented or delayed implementation?

Source: ONHW/CPW, 2005

¹ Tucker, Lena. 2005. Testimony for the House Resource Committee, Subcommittee on Forests and Forest Health. *Development and Implementation of Community Wildfire Protection Plans in Oregon*.

Appendix A Action Item Worksheets & Matrix

This appendix includes the Action Item Matrix, and completed Action Item Worksheets describing each Action Item identified during the CWPP update process. The Action Item Matrix houses all active action and removed Action Items, organized by plan goals and objectives. The plan identifies Action Items developed through various plan inputs, data collection and research. CWPP Action Items and associated activities may be considered for funding through state and federal grant programs, including the National Fire Plan or Title II/Title III funding, see Appendix B Plan Implementation and Maintenance for more information.

To facilitate implementation, each Action Item was described in a worksheet, which includes a purpose/rational, priority level, status/timeline, a coordinating organization and partners involved. In addition, a 2020 Review Form includes actions taken, what went well, lessons learned, suggestions moving forward, estimated cost, and funding source(s) used.

Action Item Worksheets

Purpose/Rational

Each Action Item includes a listed purpose or rational for why the action was selected. Action Items are fact based and tied directly to issues or needs identified throughout the planning process. Action Items were developed from a number of sources including participants of the planning process, noted deficiencies in local capability, or issues identified through the risk assessment.

Coordinating Organization

The coordinating organization is the organization that is willing and able to organize resources, find appropriate funding and oversee activity implementation, monitoring and evaluation.

Partners Involved

Listed partners can be either potential partners identified since the last update, or existing partners utilized since the last update. The coordinating organization should serve as a central contact point for identified and/or interested partner organizations to see if they are capable of and interested in participation. This initial contact is also to gain a commitment of time and or resources towards completion of the Action Items.

Actions Taken/Accomplishments

This content details a high-level overview of the status and/or accomplishments to date. It may include an example project, program or process developed since the last plan update in 2005. These accomplishments should be examples of successful approaches taken within Lane County and need not be taken by the listed coordinating organization.

What Went Well

This content is meant to showcase positive outcomes in process, project and/or program that may be beneficial for future use. The intent is to showcase successful strategies that may be beneficial to continue in further efforts.

Lessons Learned

This content should showcase ideas for positive growth based on noted struggles in process, project and/or program. It is an opportunity to bring forward ideas for improvement.

Suggestions Moving Forward

Each Action Item includes ideas for implementation and potential resources. These suggestions serve as a continuation point for Action Items. This component of the Action Items is dynamic as some ideas may be not feasible and new ideas can be added during the plan maintenance process. For more information on how this plan will be implemented and evaluated, refer to Section 5 of the CWPP.

Status/Timeline

This cell includes one of three designations: Ongoing, Target Completion, and Complete with an anticipated review date. Ongoing Action Items are activities that receive continual improvements and those which are not intended to stop. For example, reducing hazardous fuel is an ongoing effort. Target Completion dates are an intended completion date set by the CWPP Committee. These dates are goals and are intended to both add additional prioritization metrics and improve progress towards Action Items. Target Completion dates were identified by reviewing current and planned activities identified during the review process. Complete with anticipated review were applied to Action Items which are currently complete but will benefit from periodic review.

The following pages include Action Item Worksheets for 2020 Action Items which include information for each of the subsections listed above.

Table A1: Worksheet 1.1.1

Action Item	
ID#	Action Item Title/Description
1.1.1	Maintain a Lane County CWPP Advisory Committee to oversee implementation, identify and coordinate funding opportunities, and sustain the Lane County Community Wildfire Protection Plan.
Purpose/Rational	
The 2005 CWPP, was put into place without a formal Steering Committee to oversee the implementation and coordination of the plan goals. The 2020 CWPP Committee will be responsible for overseeing this plan, convening to report updates/progress toward completing Action Items, and preparing for plan updates.	
Priority	Status/Target timeframe
High	Complete, review during next update (2023)
Coordinating Organization:	
Lane County Emergency Management	
Partners Involved	
ODF, OSFM, FDB, LMD, USFS, BLM	
Review Form	
Action(s) Taken/Accomplishments	
Updated Section 5 and Appendix B in the 2020 CWPP to provide a framework for CWPP plan maintenance and implementation.	
What Went Well	
Support from ODF.	
Lessons learned	
Emerging incidents can strain partner involvement, COVID 19 for example.	
Suggestions for moving forward	
See Section 5 and Appendix B, Implementation and Maintenance	
Dates of action	Funding Source(s) used
2020	

Table A.2: Worksheet 1.1.2

Action Item	
ID#	Action Item Title/Description
1.1.2	Maintain sub-committee to coordinate with CWPP Committee and sustain effective countywide public education and outreach activities.
Purpose/Rational	
Stakeholder Phone Interviews, Firewise Workshop - Identified an opportunity to increase education and wildland-urban interface fire awareness of residents of Lane County to increase public involvement in wildfire risk reduction activities.	
Priority	Status/Target timeframe
Medium	Complete, review during next update (2023)
Coordinating Organization:	
Lane Fire Prevention Cooperative	
Partners Involved	
ODF, OSFM, USFS, BLM, Keep Oregon Green, Lane County Fire Defense Board	
Review Form	
Action(s) Taken/Accomplishments	
Staffing a booth at the Lane County Home and Garden Show, local parades, fairs and other community events to deliver wildfire prevention and preparedness material. Working with partners to deliver a wildfire preparedness campaign.	
What Went Well	
With the cooperation of all of the partners we have been able to maintain an ongoing prevention campaign since 2005	
Lessons learned	
Based on 2020 survey results 19.3% of landowners have not received information on protecting their home from wildfire.	
Suggestions for moving forward	
Develop new methods for delivery of educational materials to expand outreach to more landowners. An example would be creating a one page brochure and giving to rural fire departments for dissemination. Brochures and rural fire departments are a preferred conduit for educational material based on the landowner survey.	
Dates of action	Funding Source(s) used
2005-2020	Lane County Fire Defense Board, National Fire Plan, Title III

Table A.3: Worksheet 1.1.3

Action Item	
ID#	Action Item Title/Description
1.1.3	Maintain the Hazardous Fuel Subcommittee to address fuel reduction and countywide coordination among agencies, programs and partnerships.
Purpose/Rational	
Stakeholder Phone Interviews, Firewise Workshop – A committee is needed to prioritize and set guidelines for the implementation of prioritized fuel reduction projects. A committee is also needed to collaboratively decide the best method of treatment to be used during fuel reduction projects.	
Priority	Status/Target timeframe
High	Complete, review during next update (2023)
Coordinating Organization:	
Oregon Department of Forestry	
Partners Involved	
USFS, BLM, OSFM, OSU Extension Services, TNC, Friends of Buford Park, Lane County Parks and Lane County Fire Defense Board.	
Review Form	
Action(s) Taken/Accomplishments	
Hazardous fuels sub-committee formed to make recommendations to Lane County fire siting standards.	
What Went Well	
The committee worked together to develop new siting standards using the latest science and knowledge of local fire behavior.	
Lessons learned	
There is a need for an update county wide hazardous fuels treatment map that includes fire organizations and restoration group accomplishments.	
Suggestions for moving forward	
The siting standards will need to be updated as the environment and latest scientific findings change.	
Dates of action	Funding Source(s) used
2018-2020	BLM Community Assistance Funding

Table A.4: Worksheet 1.2.2

Action Item	
ID#	Action Item Title/Description
1.2.2	Establish a consistent communication strategy among intergovernmental partners using appropriate conduits and delivery mechanisms.
Purpose/Rational	
Stakeholder Phone Interviews, Firewise Workshop Feedback - Identified a lack of communication of information and a need to compile and consolidate information regarding wildland-urban interface issues.	
Priority	Status/Target timeframe
High	Ongoing
Coordinating Organization:	
Oregon Department of Forestry	
Partners Involved	
USFS, BLM, Lane County Fire Defense Board, EM & Lane County Fire Prevention Coop.	
Review Form	
Action(s) Taken/Accomplishments	
The communication plan provides a list of the agencies that would be involved in the event of a wildland urban interface fire. Additionally, ODF has an annual mobilization guide with updated contacts and radio frequencies that are distributed among intergovernmental partners before fire season each year.	
What Went Well	
The communication plan allows for initial attack personnel to reach the other agencies or districts it would potentially interact with.	
Lessons learned	
Technology constantly changes and with that there can be communication hurdles, especially when multiple agencies are responding to wildland fires. That is why it is imperative that there is good communication between agencies when changes are made to protocols or equipment. Interagency preseason trainings are also very important.	
Suggestions for moving forward	
Annual updates to the communication plan are needed to ensure all changes across agencies have been communicated.	
Dates of action	Funding Source(s) used
Ongoing since 2005	Title III & National Fire Plan

Table A.5: Worksheet 2.1.1

Action Item	
ID#	Action Item Title/Description
Action 2.1.1.	Review and develop recommendations to the Lane County Board of Commissioners for revisions to land use regulations, such as: Implementation of fire safety standards within rural residential zoning districts; Distribution of educational materials at the outset of the building permit review process; and outreach services with neighborhood organizations and special interest groups.
Purpose/Rational	
Stakeholder Phone Interviews, Firewise Workshop Feedback- Identified the use of regulatory policies to reduce WUI wildfire risk. Example Programs: <ul style="list-style-type: none"> - Ashland, Oregon Fire Plan- Has building codes that require development standards regarding the reduction of structural ignitability and vegetation management - Florida Wildfire Mitigation Handbook- Discusses the use of land development regulations to reduce WUI wildfire risk. 	
Priority	Status/Target timeframe
Top 5	Ongoing, Target Completion 2023
Coordinating Organization:	
Lane County Land Management Division	
Partners Involved	
ODF / Rural Fire Protection Districts	
Review Form	
Action(s) Taken/Accomplishments	
Recommendation from fire professionals via the Hazardous Fuels Subcommittee regarding fuel break standards to be adopted into Lane Code.	
What Went Well	
The hazardous fuels subcommittee created a new recommended set of fire siting standard for Lane County. The new standards take in local risk analysis and are believed to be both more effective and flexible than the previous standards. Fire managers and a member of the Lane County Planning Commission were involved in the development of these standards to ensure they are both effective and implementable, and will be proposed for adoption in June of 2020.	
Lessons learned	
While progress is being made on siting standards, and additional work remains to be done in the area of general public outreach and information sharing.	
Suggestions for moving forward	
Continue to develop recommendations for updating land use regulations for better protection of life and property from wildland fire.	
Dates of action	Funding Source(s) used
March 2020	

Table A.6: Worksheet 2.1.2

Action Item	
ID#	Action Item Title/Description
2.1.2	Review and enhance the Lane County building permit process within the wildland urban interface.
Purpose/Rational	
Firewise Workshop Feedback- Identified a need to streamline the permit process to remove inefficiencies. 2020 Landowner Survey – Identified an interest in incentives for wildfire mitigation strategies and in land use regulations pertaining to wildfire safety measures.	
Priority	Status/Target timeframe
High	Ongoing
Coordinating Organization:	
Lane County Land Management Division	
Partners Involved	
LMD Building Program; Rural Fire Protection Districts; ODF	
Review Form	
Action(s) Taken/Accomplishments	
There is a process in place for fire district review of access to vacant properties proposed for development. The permit review process for forestland development includes review of fuel breaks.	
What Went Well	
Forms and informational materials for property owners were developed. Lane County adopted R327 of Oregon Residential Specialty Code 2017 for wildfire hazard.	
Lessons learned	
Can do more to promote voluntary wildfire safety measures.	
Suggestions for moving forward	
Continue to work on providing the public with wildfire safety information; promote wildfire safety incentive programs and work to update land use regulations pertaining to wildfire.	
Dates of action	Funding Source(s) used
2005-2020	Permit fees; LMD long range planning funds

Table A.7: Worksheet 2.1.3

Action Item	
ID#	Action Item Title/Description
2.1.3	Identify and prioritize areas for local evacuation plan development across Lane County's Rural Fire Protection District potentially including data from the CWPP Rural Response: Priorities for Fuel Reduction map.
Purpose/Rational	
Assess, evaluate, test, and deploy area specific emergency evacuation plans (including shelter in place options) for priority areas in Lane County. Secondary benefits of this project will include informing local stakeholders (in every Fire District) about mitigation efforts (e.g. fuels reduction projects), critical infrastructure impacts, and emergency and evacuation preparedness steps.	
Priority	Status/Target timeframe
Top 5	2-3 Years
Coordinating Organization:	
Lane County- Emergency Management; Search and Rescue; GIS Staff	
Partners Involved	
ODF, Lane Fire Defense Board, Lane County Search & Rescue, Lane County GIS, University of Oregon, State of Oregon Hazard Mitigation Office	
Action Item Review Form	
Action(s) Taken/Accomplishments	
Applied for Hazard Mitigation Assistance Funding, to fund planning project. Application being submitted 7/1, project scope will include producing final product for emergency evacuation plans in high hazard areas. Completed a pilot planning project with local Fire District on evacuation area, potentially high risk with limited egress options, determining solid base plan to utilize in future planning efforts with additional Fire Districts.	
What Went Well	
Lessons learned	
Suggestions for moving forward	
Dates of action	Funding Source(s) used
2020	Hazard Mitigation Assistance

Table A.8: Worksheet 2.1.4

Action Item	
ID#	Action Item Title/Description
2.1.4	Develop Community Response Plans for dealing with wildfire and prescribed fire smoke impacts in Lane County.
Purpose/Rational	
Having a response plan for reducing harm to landowners from smoke impacts in a community will allow more prescribed fire treatments and reduce negative impacts when wildfire smoke is present. The increase in treatments will lower fire danger in and adjacent to the WUI in Lane County.	
Priority	Status/Target timeframe
Medium	Ongoing, Target Completion by 2023
Coordinating Organization:	
Hazardous Fuels Subcommittee	
Partners Involved	
ODF, USFS, LRAPA, DEQ, Lane Fire Defense Board, Lane County EM, Lane County Public Health, University of Oregon Partnership for Disaster Resilience, Southern Willamette Forest Collaborative	
Action Item Review Form	
Action(s) Taken/Accomplishments	
What Went Well	
Lessons learned	
Suggestions for moving forward	
Track the 2020 Oakridge smoke mitigation project closely for lessons learned and possibly use as template for countywide strategies and plan(s)	
Dates of action	Funding Source(s) used
TBA	

Table A.9: Worksheet 2.2.1

Action Item	
ID#	Action Item Title/Description
Action 2.2.1	Incorporate BLM/USFS critical road and response infrastructure into the Lane County Wildland-Urban Interface Risk Assessment. See "Rural Response: Priorities for Fuel Reduction" Map in Section 2, Risk Assessment.
Purpose/Rational	
Landowner Survey — Protecting critical infrastructure was a top priority for wildfire planning from survey respondents, with the majority of landowners indicating it was very important.	
Priority	Status/Target timeframe
Medium	Complete, review during next update (2023)
Coordinating Organization:	
Hazardous Fuel Subcommittee	
Partners Involved	
LMD & LC Parks and Recreation; USFS/BLM, ODF, Friends of Buford Park and Mt. Pisgah, OSFM	
Review Form	
Action(s) Taken/Accomplishments	
Between the fall of 2019 and the spring of 2020 representatives from fire response agencies including USFS, BLM, ODF, and the Lane Fire Defense board identified priorities for fuel reduction along roads and in communities. Over 400 miles of roads were identified on USFS or BLM lands as a priority for evacuation and response. This data is displayed as Figure 2.14 in Section 2 of the CWPP.	
What Went Well	
Representatives were established fire response personnel with decades of local knowledge of their districts. This allow for rapid identification of concern areas.	
Lessons learned	
Coordinating with over 20 districts and digitizing hard copy map data was a time-consuming process. Starting the process at least 6-8 months in advance would have provided more time for a detailed review from partners.	
Suggestions for moving forward	
Start the process 6-8 months in advance. Use existing maps to make refinements. The current map does not display categorical data describing the concern area. Consider performing this function to better display and distinguish roads of concern and safety/evacuation routes.	
Dates of action	Funding Source(s) used
11/12/2019	ODF and partner staff time

Table A.10: Worksheet 2.2.2

Action Item	
ID#	Action Item Title/Description
Action 2.2.2	Maintain and update fire district boundary data.
Purpose/Rational	
<p>Risk assessment team request- The CWPP has value primarily as a shared information record utilized by all of the implementing partners on a weekly, monthly and annual basis as the need arises. Risk assessment information provided by fire districts is an essential part of that record. By digitizing district input the data is in a format that can be made widely available to all those who need it. Currently, there are discrepancies between fire district boundaries recorded by LCOG and the information provided by the fire protection districts surveys.</p> <p>2020 Update: This Action Item is being maintained as a best practice.</p>	
Priority	Status/Target timeframe
Medium	Review during next update (2023)
Coordinating Organization:	
Lane County Land Management	
Partners Involved	
Lane County Public Works GIS; Rural Fire Protection Districts (rural fire districts), Municipalities (City – Fire Districts), LCOG	
Review Form	
Action(s) Taken/Accomplishments	
LMD and LCOG Fire district boundary maps are consistent. LMD GIS has a fire district layer boundary.	
What Went Well	
There is a process in place for updating the map with properties annexed into the fire district service boundary.	
Lessons learned	
Ensure that there is a process for updating LMD and LCOG maps so that they are consistent with one another.	
Suggestions for moving forward	
Continue to update all fire district boundary maps with the most up to date boundary information. Stay up to date on fire district annexations.	
Dates of action	Funding Source(s) used
2005-2020	Title II funds and permit fees

Table A.11: Worksheet 2.2.3

Action Item	
ID#	Action Item Title/Description
Action 2.2.3	Incorporate, maintain, and update Lane County's Wildland-Urban Interface Risk Assessment GIS data elements as new data becomes available.
Purpose/Rational	
Stakeholder Phone Interviews- Identified the use of GIS and local communities' risk assessments to update the county's risk assessment Example Programs: <ul style="list-style-type: none"> - California State Fire Plan- Uses community information regarding GIS overlays of different wildfire factors to prioritize pre-fire management projects - Idaho State Fire Plan- Identified the use of GIS to develop "National Fire Plan related projects" - Josephine County Integrated Fire Plan- Uses GIS to develop and maintain Josephine County's risk assessment 2020 Update: This Action Item is being maintained as a best practice.	
Priority	Status/Target timeframe
Medium	Review during next update (2023)
Coordinating Organization:	
Lane County Land Management Division	
Partners Involved	
Lane County Public Works GIS; ODF, Rural Fire Protection Districts, Municipalities, Utilities	
Review Form	
Action(s) Taken/Accomplishments	
The WUI was updated with the 2020 CWPP update and is a useable GIS layer.	
What Went Well	
The map was updated with the most current available WUI data.	
Lessons learned	
Recognize the different scale in datasets used for updating the WUI layer.	
Suggestions for moving forward	
Keep this Action Item for maintenance of the layer with future plan updates.	
Dates of action	Funding Source(s) used
2005-2020	Title II and LMD long range planning

Table A.12: Worksheet 2.2.4

Action Item	
ID#	Action Item Title/Description
2.2.4	Expand "Rural Response: Priorities for Fuel Reduction" Map to include additional local information, structural vulnerability assessments and updated hazardous fuel treatment maps for example.
Purpose/Rational	
Landowner Survey <ul style="list-style-type: none"> Protecting Critical Infrastructure was the top priority for wildfire planning, with the majority of landowners indicating it was very important. Wildfire Mitigation Best Practices <ul style="list-style-type: none"> Understanding where past fuel reduction work has occurred, as well as community level information including structural vulnerability assessments improves efficient use of limited wildfire prevention and planning resources. 	
Priority	Status/Target timeframe
Medium	Ongoing, Target Completion 2023
Coordinating Organization:	
Fire Defense Board & Hazardous Fuel Subcommittee	
Partners Involved	
ODF, USFS, BLM, EM	
Review Form	
Action(s) Taken/Accomplishments	
Between the Fall of 2019 and the spring of 2020 representatives from fire response agencies including USFS, BLM, ODF, and the Lane Fire Defense board identified priorities areas for fuel reduction across Lane County. Some of these priority areas are based on qualitative community assessments.	
What Went Well	
Having a designated Fire Defense Board Representative to communicate needs aided coordination with structural protection districts.	
Lessons learned	
Begin the process early, preferably a year before the target completion date. Utilize existing cooperatives, boards and committees to disseminate data collection work. The Rivers to Ridges Partnership, Lane Fire Defense Board, and LCOG are likely participants which should be engaged early and often.	
Suggestions for moving forward	
Using Figure 2.14 as a base map, create local assessment area (coast, W. Valley, Cascades) maps including hazardous fuel treatment areas and structural vulnerability assessments by community. Use meta-data from Figure 2.14. Consider including restoration treatment areas to better understand where fuels reduction is occurring on a landscape level.	
Dates of action	Funding Source(s) used
Fall 2019	Staff Time, WSFM Grants

Table A.13: Worksheet 2.2.5

Action Item	
ID#	Action Item Title/Description
Action 2.2.5	Update rural addressing data collection project for county.
Purpose/Rational	
Lane County Public Works currently is developing the Rural Addressing Project. <ul style="list-style-type: none"> - The project would refine current information to a point layer for structural locations. - The project will improve emergency response times, providing benefits to multiple objectives - The information will improve the accuracy of the wildland-urban interface boundary by refining the density layer. - Public Works indicates that this project is only about 18% complete and that there are 44,000 addresses to map 2020 Update: This Action Item is being maintained as a best practice.	
Priority	Status/Target timeframe
Medium	Ongoing
Coordinating Organization:	
Lane County Land Management Division	
Partners Involved	
Lane County Public Works GIS	
Review Form	
Action(s) Taken/Accomplishments	
Current addresses have been mapped and a process is in place for mapping new addresses.	
What Went Well	
The project was completed with the mapping of 44,000 addresses.	
Lessons learned	
Good communication between LMD and GIS is essential to ensure new addresses get mapped.	
Suggestions for moving forward	
Continue the current process for tracking and mapping new addresses.	
Dates of action	Funding Source(s) used
2005-2020	Permit fees

Table A.14: Worksheet 2.3.1

Action Item	
ID#	Action Item Title/Description
Action 2.3.1	Utilize maps in the CWPP risk assessment to guide and identify new partners and opportunities for cross-boundary collaboration. Coordinate the implementation of landscape scale hazardous fuel projects.
Purpose/Rational	
HFRA Goals, Stakeholder Phone Interviews, Firewise Workshop Feedback- Identified a need for the prioritization of fuels reduction projects. This will also continue to help leverage funding sources from multiple agencies and land ownerships to complete work that is deemed high priority for Lane County.	
Priority	Status/Target timeframe
Top 5	Ongoing
Coordinating Organization:	
Hazardous Fuel Subcommittee	
Partners Involved	
Lane County Fire Chiefs, Lane County EM, Board of Commissioners, owners of sites identified for potential projects, ODF, USFS, BLM	
Review Form	
Action(s) Taken/Accomplishments	
Multiple projects have been accomplished within areas identified in the Lane County CWPP risk assessment to date with additional projects planned. Examples include: BLM Community Assistant Grant Projects- These projects have reduced hazardous fuels on City or Eugene, Lane County Parks, and Willamalane managed lands along strategic property boundaries. Oakridge Westfir Fuels Reduction Project- This project is reducing hazardous fuels on Forest Service managed lands adjacent to the communities of Oakridge and Westfir.	
What Went Well	
Numerous projects have been completed on multiple ownerships within Lane County's WUI areas. Project specifications have been tailored to the local ownership and community's needs, resulting in a range of implementation tools from prescribed under-burning to alternatives to burning such as chipping and mulching.	
Lessons learned	
Smoke management limitations are a challenge whenever burning adjacent to communities. Windows for conducting prescribed burns were hard to predict, and some units in the Oakridge Westfir project were modified from under burning to hand piling and burning to take advantage of more predictable opportunities to burn piles during the fall and winter.	
Suggestions for moving forward	
Land managers from all agencies within the county will need to continue the collaboration and communication that has already been established to take advantage of funding mechanisms, appropriate project design, new partners, and prescribed fire implementation opportunities.	
Dates of action	Funding Source(s) used
2007-2020	BLM Community Assistance Grants, US Forest Service Hazardous Fuels Funds, WSFM Grants

Table A.15: Worksheet 2.3.3

Action Item	
ID#	Action Item Title/Description
Action 2.3.3	Prescribed Fire: Increase local capacity, coordination and explore policy improvements to increase the pace and scale of prescribed fire as a cross-boundary tool to reduce wildfire risk on tribal, public and private properties.
Purpose/Rational	
Landowner Survey: –73% of residents indicated they were supportive of prescribed fire as a means to treat hazardous fuel. Success of the Rivers to Ridges Controlled Ecological Burn Program: –Over 30 years providing safe ecological burns in the southern Willamette Valley with various partners, resources and providing opportunities for training and capacity building. Predominantly in and around Eugene's West Eugene Wetlands and Fern Ridge Reservoir, as well as City of Eugene and Lane County parks.	
Priority	Status/Target timeframe
Medium	Ongoing
Coordinating Organization:	
Hazardous Fuels Subcommittee (with support from the Rivers to Ridges Partnership)	
Partners Involved	
USFWS, NRCS, TNC, Private Landowners, Long Tom Watershed Council, Municipal and Rural Fire Districts, BLM, ODF, ODA, USFS, National Weather Service, Friends of Buford Park and Mt. Pisgah, Willamalane.	
Review Form	
Action(s) Taken/Accomplishments	
<ul style="list-style-type: none"> • Average of 256 acres broadcast burning annually for a total of 139 units and 3988 acres since 2005 in Rivers to Ridges. • 13 coordinating and regulatory organizations listed as active participants in the Rivers to Ridges Ecological Burn Program. • Large percentage of burns in the WUI adjacent to private land, within Eugene Urban Growth Boundary and/or City Limits. • Opportunities for municipal firefighters to train in the wildland environment, and for all firefighters to experience and train with live fire. 	
What Went Well	
Coordinating before, during, and after fall burn season with partners to ensure that everyone was on the same page going in, knew what one another were doing on burn days, and were able to reflect on what happened to improve moving forward.	
Lessons learned	
Coordinate with LRAPA in advance and let them know if any issues with operating within their permit are encountered. Over communicate with partners and fire districts about plans to burn to ensure that all who need to know have been informed.	
Suggestions for moving forward	
Engage on the front end of projects with Grand Ronde and Siletz tribes. Support grant opportunities to fund work on private lands. Continue to engage with LRAPA and ODF collaboratively. Review and incorporate improvements from Action Item 2.1.4: community response plans for dealing with wildfire and prescribed fire smoke impacts in Lane County. Include prescribed fire treatments and opportunities in Figure 2.14.	
Dates of action	Funding Source(s) used
2005-2020	OWEB, USFWS Partners Program, City of Eugene,

Table A.16: Worksheet 2.3.4

Action Item Form	
ID#	Action Item Title/Description
2.3.4	Complete 2 cross-boundary fuels reduction projects that leverage opportunities identified from Action Item 2.3.1.
Purpose/Rational	
Stakeholder Phone Interviews, Firewise Workshop Feedback- Identified a need for the prioritization of fuels reduction Example Projects: <ul style="list-style-type: none"> – Eugene Wildfire Collaborative, https://www.eugene.or.gov/CivicAlerts.aspx?AID=4210. See review form below for more information. 	
Priority	Status/Target timeframe
High	Ongoing, Target Completion 2022
Coordinating Organization:	
Hazardous Fuels Subcommittee, Oregon Department of Forestry	
Partners Involved	
City of Eugene, The Northwest Youth Corps, Eugene Parks and Open Spaces, Eugene Springfield Fire Department, Lane County Public Works and the Long Tom Watershed Council	
Review Form	
Action(s) Taken/Accomplishments	
Dead-end roads have been prioritized for Firewise Community outreach and establishment. Non-federal hazardous fuel funding from the City of Eugene focused on treating 1) roadways in the South Hills of Eugene 2) dead-end Firewise communities and 3) public properties adjacent to private residence.	
What Went Well	
Interagency Collaboration, selecting and treating highly visible areas to demonstrate fuels reduction.	
Lessons learned	
Increased time and resources needed for planning. Inclusion of more non-governmental partners would be helpful. Including non-fire messaging and augmenting treatment prescriptions i.e. habitat restoration increased participation from private landowners.	
Suggestions for moving forward	
Included countywide organization to help replicate and organize these types of projects across the county. Ideas for future partners include the Fire Prevention Co-Op, the Upper Willamette Soil and Water Conservation District, Local Watershed Councils, Other Municipalities, USFS, BLM, Parks and Recreation Departments and Neighborhood Associations and Organizations.	
Dates of Action	Funding Source(s) used
2019	City of Eugene Wildfire Mitigation Funding, BLM WUI Assistance Funding.

Table A.17: Worksheet 3.1.1

Action Item	
ID#	Action Item Title/Description
3.1.1	Develop a coordinated multi-agency seasonal outreach campaign that includes county-specific educational materials to promote effective risk reduction practices and communicate landowner assistance programs in the wildland/urban interface.
Purpose/Rational	
<ul style="list-style-type: none"> ▪ HFRA Goals- collaboration, reduction of hazardous fuels, and reduction of structural ignitability. ▪ Stakeholder interviews, Firewise workshop- Identified an opportunity to develop a "model" home or property recognition program to encourage greater participation by homeowners in risk reduction projects. Identified an opportunity to educate the public and dispel negative perceptions about the aesthetics of fuel reduction and defensible space. Seasonal community events such as "free chipping or dump days" encourages public participation in fuels reduction projects as well as provides a venue for disseminating information about wildfire risk reduction. 	
Priority	Status/Target timeframe
Top 5	Ongoing, Target Completion 2022
Coordinating Organization:	
Lane County Emergency Management with support from the Lane County Fire Prevention Co-Op.	
Partners Involved	
ODF, OSFM,USFS,BLM, Keep Oregon Green & Lane County Fire Defense Board	
Review Form	
Action(s) Taken/Accomplishments	
Staffing of Lane County Home and Garden Show in the spring to distribute risk reduction material. Radio campaign starting in May with wildfire preparedness message.	
What Went Well	
The landowner survey showed that 51.6% of people had received info about protecting their property from wildland fire through: News media (radio, newspaper, TV)	
Lessons learned	
There is still a portion (19.3%) of landowners in the county that haven't received information on risk reduction strategies.	
Suggestions for moving forward	
There is a need to continue to develop new cost-effective ways to distribute risk reduction messaging in Lane County. Mail, Fact Sheet/Brochure and Internet are landowners preferred ways of delivery.	
Dates of action	Funding Source(s) used
Ongoing Since 2005	Lane County Fire Defense Board, National Fire Plan

Table A.18: Worksheet 3.1.2

Action Item	
ID#	Action Item Title/Description
3.1.2	Establish a communication strategy that utilizes existing stakeholder channels to disseminate risk reduction messages.
Purpose/Rational	
Stakeholders currently promote risk reduction information at an organizational level. By creating a more collaborative campaign, stakeholders can amplify the same message.	
Priority	Status/Target timeframe
High	Ongoing, Target Completion 2022
Coordinating Organization:	
Lane County Emergency Management	
Partners Involved	
ODF, LCFDB, LC Land Management	
Review Form	
Action(s) Taken/Accomplishments	
What Went Well	
Lessons learned	
Suggestions for moving forward	
Dates of action	Funding Source(s) used

Table A.19: Worksheet 3.1.3

Action Item	
ID#	Action Item Title/Description
Action 3.1.3	Create and maintain a website including county specific wildfire risk reduction and preparedness resources for residents and stakeholders.
Purpose/Rational	
<p>Stakeholder interviews, Firewise workshop- Identified a need to make information more accessible to the public. A website would be a good central place to promote educational efforts and provide tips on how to reduce wildfire risk.</p> <p>Example Programs-</p> <ul style="list-style-type: none"> - Douglas Forest Protective Association, OR- Has a website with information on their fire prevention programs - Spokane County, WA - "FireSafe Spokane" website contains information on how to create defensible space around a home and remove other hazards. The website gives an email address and a phone number where homeowners can sign-up for free inspections. <p>2020 Update: This Action Item is being maintained as a best practice.</p>	
Priority	Status/Target timeframe
High	Ongoing, Target completion 2020
Coordinating Organization:	
Lane County Land Management Division and Emergency Management	
Partners Involved	
US Forest Service, Rural Fire Protection Districts	
Review Form	
Action(s) Taken/Accomplishments	
CWPP has a webpage for downloading the plan. There is a project webpage for updating the CWPP, also containing information about wildfire protection measures.	
What Went Well	
The plan is published online and the plan update is advertised	
Lessons learned	
Should have a "one-stop-shop" for all things wildfire	
Suggestions for moving forward	
LMD and Emergency Management should collaborate to create an all-encompassing website for wildfire hazard, mitigation and response.	
Dates of action	Funding Source(s) used
2005-2020	Title III funds

Table A.20: Worksheet 3.2.1

Action Item Form	
ID#	Action Item Title/Description
3.2.1	Implement landowner assistance for fuel reduction projects including cost-share incentives. Increase local capacity, establish incentive programs to support yard debris disposal to assist landowners with hazardous fuels removal. Create disposal opportunities using alternative methods to burning.
Purpose/Rational	
Landowner Survey Results and Stakeholder Phone Interviews Identified a need for the prioritization of fuels reduction Example Projects: <ul style="list-style-type: none"> – Western States Fire Manager's Grant Program, BLM WUI Assistance. See review form below for more information. 	
Priority	Status/Target timeframe
Top 5	Ongoing
Coordinating Organization:	
Oregon Department of Forestry	
Partners Involved	
Private Landowners, Long Tom Watershed Council, County, Municipal and Rural Fire Districts	
Review Form	
Action(s) Taken/Accomplishments	
<ul style="list-style-type: none"> • Over 5 million in Federal Grant Funding for hazardous fuel treatment and planning has been awarded in Lane County since the early 2000's through 2 full-time Fire Planners and 2 seasonal ODF Fuels Reduction Crews. • ~50,000 landowners have received informational mailings regarding hazardous fuel treatments and risk reduction actions through these federal awards • ~20,000 landowners have received hazardous fuel inspections • ~5,000 private properties have been treated for hazardous fuels to improve defensible space and fire response access 	
What Went Well	
ODF Fuels Crews, Cost Share Programs, Identifying self-motivated communities to expand program impact through the establishment of Firewise Communities.	
Lessons learned	
Tax Incentives have not proceeded at the same pace or scale as cost-share incentives. Improvements to Oregon's Defensible Space law and the 2019 Governor's Council on Wildfire may offer improved tax incentive and policy pathways. Disposal of cut fuel remains a challenge for private property owners. Consider using this as a tax-incentive or rebate program for county refuse as well as exploring alternative methods of disposal.	
Suggestions for moving forward	
Continue prioritizing federal risk reduction funding and cost-share incentives for private properties. Partner with watershed enhancement organizations including local Watershed Councils to further increase pace and scale of private property hazardous fuel removal and disposal. Equipment purchase remains a challenge, consider alternative sources to purchase large equipment, industrial chippers for example, to improve program efficiency.	
Dates of action	Funding Source(s) used
2003-2020	National Fire Plan primarily through Western States Fire Managers and BLM WUI Assistance Grant funding.

Table A.21: Worksheet 3.2.2

Action Item	
ID#	Action Item Title/Description
3.2.2	Use the 2019 Governor's Council on Wildfire Response to guide future CWPP projects.
Purpose/Rational	
Ensures the Lane County CWPP incorporates and aligns with state directed policies, funding opportunities, and a cohesive wildfire response framework in Oregon	
Priority	Status/Target timeframe
High	Ongoing
Coordinating Organization:	
Office of the State Fire Marshal and Oregon Department of Forestry	
Partners Involved	
ODF, LMD, EM, OEM	
Review Form	
Action(s) Taken/Accomplishments	
Review of the 2019 Report	
What Went Well	
TBD	
Lessons learned	
See the Governor's Council on Wildfire Response Report, TBD	
Suggestions for moving forward	
Maintain close communication with state executive staff on upcoming implementation timelines and strategies as they develop.	
Dates of action	Funding Source(s) used
2019	None

Appendix B

Implementation and Maintenance

This appendix serves as documentation for the implementation and maintenance of the Lane County Community Wildfire Protection Plan (CWPP). The primary purpose of this appendix is to document the Steering Committee's efforts to implement and maintain the plan including; the 2020 update process, 2020 plan maintenance and the anticipated 2023 update process.

2020 Update Process

The Steering Committee convened in September of 2018 to begin the update process. Between 2018 and spring of 2019 project scoping was conducted which included:

- 1) The identification and formalization of Core Committee and members
- 2) Review of the 2005 plan
- 3) Identifying potential update components and defining roles and responsibilities to committee members and agencies
- 4) Inclusion of additional partners and sub-committee members and defining additional roles
- 5) Updating the Lane County Board of Commissioners on the intent to update the plan

The CWPP committee meetings were conducted bi-monthly to review updated sections, items, and vote-in the final Steering Committee member. The CWPP Steering Committee submitted the 2020 CWPP Plan update to the Board of County Commissioners for County adoption on July 7th 2020. See Table B.1 "2020 Update Components" for a list of major updates made to the 2005 CWPP.

2020 Plan Maintenance

Plan maintenance is a critical component of the CWPP plan. Proper maintenance of this plan should improve Lane County's efforts to reduce risk in the wildland-urban interface. Lane County, with help from ODF and the 2020 CWPP Steering Committee have developed a method to ensure a regular review and update of the CWPP occurs. The Committee will be responsible for maintaining and updating the CWPP through a series of meetings outlined in the Maintenance Schedules Table 5.1 on page 63.

2023 Plan Update Process (Anticipated)

The intent of the 2020 Steering Committee is for the next CWPP revision to include the plan's incorporation into Lane County's Natural Hazards Mitigation Plan (NHMP) as either the Wildfire Hazard Section or Annex. The year 2023

was selected by the Steering Committee for the next update to coincide with the NHMP update timeline. Represented agencies on the 2020 CWPP Steering Committee will participate as CWPP Committee members for the next plan update, although representative person(s) may change. Natural hazards share overlapping boundaries, concerns, and often Action Items. Incorporating the CWPP into the NHMP should improve cross-boundary communication and collaboration, a key goal of the CWPP.

Table B.1

2020 Update Components	Committee Vote carried by	Date
2020 CWPP Update Table		
<ul style="list-style-type: none"> Records plan update components 	FDB, EM, LMD, OSU, ODF, USFS & BLM	6/09/2020
Executive Summary		
<ul style="list-style-type: none"> Drafted and added 	EM, LMD, OSU, ODF, USFS & BLM	5/11/2020
Section 1: Introduction		
<ul style="list-style-type: none"> Reduced redundancy 	EM, LMD, FDB & ODF	1/22/2019
Section 2: Risk Assessment		
<ul style="list-style-type: none"> Changed Assessment scale from 5th level watershed to 3rd level watershed Completely new data source (USFS/Pyrologix 2017 Quantitative Wildfire Risk Data) 	EM, LMD, FDB & ODF	1/22/2019
New Maps		
<ul style="list-style-type: none"> 2 Community At Risk (CARs) Maps <ul style="list-style-type: none"> Display communities listed in a recent ODF 2020 CARs Report Rural Response: Priorities for Fuel Reduction Map <ul style="list-style-type: none"> Displays response concern areas identified at the local level 	EM, LMD, OSU & ODF	5/18/2020
Changes to Existing Maps		
<ul style="list-style-type: none"> Wildland Urban Interface <ul style="list-style-type: none"> Now includes quantitative boundaries & types of WUI. 	EM, LMD, OSU & ODF	5/18/2020
Potential Impact Map		
<ul style="list-style-type: none"> Replaces the 2005 "Wildfire Hazards" Map 	EM, LMD, OSU & ODF	5/18/2020

Table B.1 (Continued)

2020 Update Components	Committee Vote carried by	Date
Section 3: Community Outreach		
<ul style="list-style-type: none"> Conducted a 2020 Community Survey largely following the 2005 survey Comparison of notable changes from the 2005 & 2020 Landowner responses were made 	EM, LMD OSU & ODF	3/25/2019
Section 4: Action Items		
<ul style="list-style-type: none"> Review and reprioritization of Action Items (matrix) Top 5 Actions identified Listed Removed Action Items with justification New Action Item Review Form created 	EM, LMD, FDB & ODF	6/02/2020
Goals and Objectives		
<ul style="list-style-type: none"> Unchanged 	FDB, EM, LMD & ODF	11/01/2019
Action Item Matrix		
<ul style="list-style-type: none"> A review of all 2005 Action Items occurred. <ul style="list-style-type: none"> Changed ranking to be either Top 5, High, or Medium Added 2.1.3, 2.1.4 & 2.3.1 Removed 1.2.1, 2.2.6, & 2.3.2 	EM, LMD, OSU & ODF	5/18/2020
Section 5: Plan Implementation and Maintenance		
<ul style="list-style-type: none"> Co-conveners changed from EM & LMD to EM and ODF Core Committee Members: ODF, EM, LMD, LC FDB, USFS & BLM 	FDB, EM, LMD, OSU, ODF, USFS & BLM	6/02/2020
Appendix A: Action Items Worksheets & Matrix		
<ul style="list-style-type: none"> New format now captures ongoing nature of Action Items <ul style="list-style-type: none"> Review Subsection includes Accomplishments, Lessons Learned & Suggestions Moving Forward 	EM, LMD, OSU, ODF, USFS & BLM	5/11/2020
Appendix B: Implementation and Maintenance		
<ul style="list-style-type: none"> Reworded narrative to include actions taken to update plan from 2005 version to 2020 plan. Identified staff responsible for updating documents, and, outlined the process utilized to update the plans and final disposition. 	FDB, EM, LMD, OSU, ODF, USFS & BLM	6/02/2020
Appendix C: Risk Assessment Methods		
<ul style="list-style-type: none"> Included OWRE data methodology Data collection and priority identification methodology for Rural Response: Priorities for Fuel Reduction Map 	EM, LMD, OSU & ODF	5/18/2020

Table B.1 (Continued)

2020 Update Components	Committee Vote carried by	Date
Appendix D: Fuel Treatment Types		
<ul style="list-style-type: none"> Matrix was consolidated to remove ecoregions Removed Action Item 2.2.6 	EM, LMD, ODF, USFS, & BLM	3/25/2020
Appendix E: Landowner Survey Summary Data		
<ul style="list-style-type: none"> Summary data and landowner responses from the 2019 Landowner Survey is included. 	EM, LMD, FDB, OSU, ODF, USFS, & BLM	6/02/2020
Appendix F: Wildfire Resources		
<ul style="list-style-type: none"> Updated Plans and Policies subsection Added Fire Siting Recommendations subsection Updated wildfire resources subsection 	EM, LMD, FDB, OSU, ODF, USFS, & BLM	6/09/2020
Plans and Policies		
<ul style="list-style-type: none"> Updated contact information Includes 2019 Governor's Council on Wildfire Report 	EM, LMD, FDB, OSU, ODF, USFS, & BLM	6/09/2020
Fire Siting Recommendations		
<ul style="list-style-type: none"> Subcommittee's recommended changes to Lane County's Fuel Break Standards Fire modeling scenarios were run to inform suggested revisions Conducted & provided literature review to inform code changes Undesirable planting list added 	EM, LMD, FDB, ODF, USFS, & BLM	6/09/2020
Wildfire Educational Resources		
<ul style="list-style-type: none"> Lane County Defensible Space Flyer Oregon's Defensible Space Act: Homeowner self-certification checklist for "high" risk areas Ember Aware Poster: Tips for home hardening 	EM, LMD, FDB, ODF, USFS, & BLM	6/09/2020
Appendix G: Contact Information		
<ul style="list-style-type: none"> Agency contacts organized by topic and function 	EM, LMD, OSU, ODF, USFS, & BLM	5/11/2020
Appendix H: 2005 Firewise Stakeholder Survey		
<ul style="list-style-type: none"> 2005 CWPP data referenced in 2020 plan 	EM, LMD, FDB, ODF, USFS, & BLM	6/09/2020
Appendix I: Acronyms and Glossary of terms		
<ul style="list-style-type: none"> Updated to reflect 2020 Plan 	EM, LMD, OSU, ODF, USFS, & BLM	5/11/2020

Appendix C

Risk Assessment Methods

This appendix outlines the specific methods, data, and values used to evaluate wildfire risk in Lane County.

Mapping Methods

The updated Lane County Risk Assessment primarily relies on the Oregon Wildfire Risk Explorer (OWRE). From the OWRE:

“The Oregon Wildfire Risk Explorer is designed to increase wildfire awareness, give a comprehensive view of wildfire risk and local fire history, and educate users about wildfire prevention and mitigation resources. The site provides decision support for homeowners, communities, and professionals to identify and prioritize local fire prevention and mitigation efforts.

This Advanced Wildfire Risk Explorer serves professional planners to inform updates to Community Wildfire Protection Plans (CWPP) and Natural Hazard Mitigation Plans (NHMP), with extensive data resources, detailed summaries, and full wildfire risk inventory report.”

Lane County has utilized the OWRE for its intended purpose, to update the local CWPP with the most current wildfire risk data.

The specific methods involved gathering data in the form of GIS layers from the OWRE for the subject area of this plan and displaying that data to depict wildfire risk, the wildland-urban interface (WUI) and potential wildfire impact on resources and assets. These layers were clipped from a state-wide view down to the boundaries of Lane County. Wildfire risk, WUI, and potential impact layers are displayed on a single map and have corresponding maps that break Lane County into the assessment areas (ecoregions). The display of the data was altered for each map to accurately demonstrate the values.

Overall Wildfire Risk Maps

The data layer from the OWRE organized wildfire risk into the following 6 categories; very high, high, moderate, low, low benefit, and benefit.

To simplify the data and more clearly show areas of wildfire risk, the categories were condensed into just high, moderate and low risk. The categories were grouped as shown in Table C1.

Table C1

OWRE Categories		CWPP Map Categories
Very High and High	→	High Risk
Moderate and Low	→	Moderate Risk
Low Benefit and Benefit	→	Low Risk

Wildland Urban Interface Maps

The OWRE WUI layer presented the data in 13 categories. The Steering Committee distilled the categories to just three based on local knowledge of development and fuel loads in Lane County. The categories were grouped as illustrated in Table C2.

Table C2

OWRE Categories		CWPP Map Categories
High, Medium & Low Density Interface	→	Interface: High & Low Density
High and Medium Density Intermix	→	Intermix: Medium Density
Low Density Intermix and Very Low Density Veg*	→	Intermix: Low Density

High, Medium, Low and Very Low Density No Veg, and Uninhabited No Veg and Uninhabited Veg were not included on the map.

*Veg stands for vegetation

Overall Wildfire Potential Impact Maps:

This data layer is similar to the Overall Wildfire Risk layer, as the OWRE organized wildfire impact into categories of very high, high, moderate, low, low benefit and benefit. The CWPP map condensed those into high, moderate and low impact, as shown in Table C3.

Table C3

OWRE Categories		CWPP Map Categories
Very High and High	→	High Impact
Moderate and Low	→	Moderate Impact
Low Benefit and Benefit	→	Low Impact

Data Source

The data used in this analysis can be viewed and downloaded with the Advanced Oregon Wildfire Risk Explorer, which can be accessed at the following link:

https://tools.oregonexplorer.info/OE_HtmlViewer/index.html?viewer=wildfireplanning

Communities at Risk

The risk assessment also includes a section identifying communities at risk. This section utilized the Oregon Department of Forestry's 2020 Communities at Risk Report. The risk assessment adopted the communities identified in this report as Lane County's communities at risk. The Communities at Risk Map utilizes the WUI data layer and a fire district boundary and points layer sourced from Lane County Public Works GIS. The full 2020 ODF Communities at Risk Report can be accessed here: <https://www.oregon.gov/odf/Pages/Reports.aspx>

Rural Response: Priority Areas for Fuel Reduction

Figure 2.14 is a combination of the Potential Impact to Infrastructure layer from OWRE as well as concern area identification by local fire response agencies. OWRE layer "Potential Impact to Infrastructure" was simplified to display line resources (roads, transmission lines and railways) without regard to level of risk. See OWRE data link on the previous page for more detail on how the "Potential Impact to Infrastructure" layer was developed.

In the winter of 2019, the following departments and agencies reviewed roads and communities within their jurisdiction for potential wildfire hazards: USFS, BLM, ODF and the Lane Fire Defense Board (Lane County Structure and Rural Fire Departments). The listed agencies coordinated with local government and stakeholders to identify and map concern areas.

Identified areas were selected using a range of categorical attributes, see Table C4 for a list of attributes. Because these attributes are not displayed in the "Rural Response: Priority Areas for Fuel Reduction" map, meta-data has not been included in this plan. Attribute data is captured in GIS layer information and may therefore be useful in the future to refine concern areas, potentially informing countywide evacuation planning and/or hazardous fuel priority treatment areas. For example a road may have: dense fuel along roadsides (1c), distance to water concern (2a) on a steep grade (3c), dead end road (3b) with a long response time (3a), resulting in a description of 1c, 2a & 3abc. Roads and Areas identified on the "Rural Response: Priorities for Fuel Reduction" Map are displayed because one or more of the hazard categories in Table C4 were identified. This data is not displayed by category, more in-depth analysis should be conducted, with results displayed at a finer scale, perhaps by Assessment Area (ecoregion).

Table C4

Attributes for Rural Response Priority Mapping Exercise**1. Fuel Characteristics**

- A. High fuel loading (storm damage for example)
- B. High fuel flammability (gorse, scotch broom, etc.)
- C. Dense fuel along roadsides
- D. Other

2. Community

- A. Distance to water
- B. Firewise USA site or proactive community
- C. High housing density
- D. Other

3. ACCESS

- A. Response time concerns
- B. Dead-end road(s)
- C. Steep grade
- D. Other
- E. Bridge restrictions and/or clearance issues

4. Critical Infrastructure

- A. Hospital
- B. Highway/major access road
- C. Utility- communication tower(s) water supply, dam, transmission lines, waste treatment, etc.
- D. Other

5. Cultural

- A. High ignition incidence
- B. Unsafe conditions for first responders
- C. Unprotected areas
- D. Other

6. Other

- A. Other Concerns not captured in Categories 1-5

Credits

Primary data contact: Alex Rahmlow, Fire Planning Coordinator, Oregon Department of Forestry, Western Lane District. Alex.J.Rahmlow@oregon.gov. Work organized by Alex Rahmlow. Priority Areas identified by various structural fire departments and natural resource agencies in Lane County, OR. Digitized by AJ Corwin, Oregon Department of Forestry Western Lane District.

Appendix D

Fuel Treatment Types

One of the minimum requirements for a CWPP as described by the Healthy Forests Restoration Act is the identification of prioritized fuel reduction projects. A CWPP must identify and prioritize areas for hazardous fuel reduction treatments, as well as recommend appropriate treatment methods. Due to the diverse topography and ecoregions present in Lane County, the appropriate treatment methods vary considerably by vegetation type, annual precipitation, slope, aspect, and elevation.

The following tables (D.1-D.3) provide information on the advantages, concerns, seasonality, application in the wildland-urban interface, and maintenance and scheduling for prescribed fire, mechanized thinning, and manual treatments across Lane County. Additionally, prescribed fire involves some risk of liability and varying restrictions based on treatment type. It is important to check with local fire and smoke management agencies before burning. The tables only provide a general framework. Individual projects will need to be tailored to the conditions present in the local area. Local fuels specialists should be consulted to determine the most feasible array of fuels treatment options for a given geographical area.

Table D.1: Prescribed Fire Treatment Method

Prescribed Fire Treatment Method (including broadcast, understory, or pile burning)	
Advantages	<ul style="list-style-type: none"> • Encourages herbaceous growth and supports native species and ecosystems • Cost effective fuels treatment method in most cases
Concerns	<ul style="list-style-type: none"> • Broadcast & understory burning requires skilled application and involves some risk of liability • Must invest time in informing and educating the public • May require additional costs if mop-up or post-burn monitoring of site is required • Multiple entries may be required to achieve objectives • Re-burn potential in areas of heavy fuels or duff
Seasonality	<ul style="list-style-type: none"> • Broadcast & understory burning constrained by weather, fuel characteristics, and smoke management constraints • Pile burning may be conducted under a broader range of conditions (i.e. less constraints) • Low elevation seasonal inversions and valley fog may affect burning opportunities
Application in WUI	<ul style="list-style-type: none"> • Burning may be effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with mechanized or manual vegetation treatment methods • Most burning opportunities will exist along outer perimeters of urban areas/boundaries
Maintenance & Scheduling	<ul style="list-style-type: none"> • Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment • Recreation and other high use areas may be evaluated annually as part of a fire prevention and fuels maintenance program planning

Table D2: Mechanized Treatment Method**Mechanized (i.e. large equipment) Treatment Method (including thinning pruning, lop and scatter, mowing, crushing, chipping, etc.)****Advantages**

- Large local labor and contract pool
- Cost effective over larger areas
- Most methods reduce fire risk by getting fuels on ground (accelerating decomposition rates) or by removal
- Can be followed by prescribed fire where needed
- Opportunities may exist for public to readily utilize material (i.e. chips, firewood, etc.)

Concerns

- Large equipment limited to gentler slopes
- Potential “product” may be market dependent
- May be less economically feasible on small sites due to move-in/move-out costs
- May create short-term increase in fire risk especially in high-use recreation areas
- In high use areas, if site precludes prescribed fire as a follow-up treatment, fuels removal or increased fire prevention patrols may be warranted

Seasonality

- May require shut-down periods on some sites due to soils conditions or seasonal wildlife concerns
- May be constrained by fire season requirements in summer

Application in WUI

- Can be very effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with follow-up prescribed fire treatment methods
- Proximity to private residences may limit mechanical use due to noise concerns

Maintenance & Scheduling

- Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment
- Re-entry into thinning areas may be scheduled using standard silvicultural practices
- Recreation and other high use areas may be scheduled for annual mechanized treatments (i.e. mowing)
- Private landowners and homeowners may be advised as to recommended maintenance by fire protection experts

Table D3: Manual Treatment Method

Manual (i.e. hand) Treatment (including. thinning, pruning, hand piling, raking, etc.)
Advantages <ul style="list-style-type: none"> • Large local labor and contract pool • Opportunities for volunteers, partnerships, stewardships, or homeowner involvement • Can treat areas that cannot be treated by prescribed fire or mechanical means
Concerns <ul style="list-style-type: none"> • More labor intensive; may not be cost effective in areas of heavy fuels • May require more than one entry to achieve initial objectives for site
Seasonality <ul style="list-style-type: none"> • Work can usually be conducted year-round • Chainsaw use may be constrained by fire season requirements in summer
Application in WUI <ul style="list-style-type: none"> • Can be very effective within or adjacent to WUI, either as a stand-alone treatment or in conjunction with follow-up fuels treatment methods (i.e. removal or burning)
Maintenance & Scheduling <ul style="list-style-type: none"> • Timing for subsequent treatments dependent upon condition class goals and degree of change made via initial treatment • Re-entry into thinning areas may be scheduled using standard silvicultural practices • Private landowners and homeowners may be advised as to recommended maintenance by fire protection experts

Appendix E

Landowner Survey Data

The purpose of the landowner survey was to gain information about how landowners in Lane County perceive the potential risk of wildfire and their attitudes towards risk reduction and preparedness strategies. This appendix shows the landowner survey questions and the data associated with those questions.

Responses to Open-Ended Questions

The Lane County Landowner Survey included a number of open-ended (e.g., fill in the blank) questions. The opened data can be found in a summarized format in Section 3, in relationship with the overall analysis of the data.

2005 LANDOWNER SURVEY DATA

Instructions: This survey focuses on wildland fire risk awareness, preparedness, and the risk reduction activities of property owners. The estimated time for completing the survey is fifteen to twenty minutes. It should be completed by an adult, preferably the head of the household. **Please return the survey in the enclosed postage paid envelope by March 21, 2005.** All responses are kept confidential.

Your participation is voluntary. If you have any questions regarding the survey, please contact Julie Baxter at the University of Oregon (541-346-3651). If you have questions regarding your rights as a research participant, please contact the Office of Human Subjects Compliance call (541) 346-2510. Please mail completed surveys to CPW, 1209 University of Oregon, Eugene, OR 97403.

WILDLAND FIRE RISK AWARENESS AND COMMUNICATION

The term *property* is used throughout this survey; please interpret this as including both land and structures such as homes.

1. Please check the box that represents your opinion on the level of risk at each of the three areas listed below:

Table E1 Opinion on Level of Wildfire Risk

Question	High	Medium	Low	None
How do you rate your property's risk to wildland fire?	16.7 %	44.1 %	36.3 %	2.9 %
How do you rate the risk of the properties in your neighborhood or area?	24.4 %	50.7 %	23.3 %	1.6 %
How do you rate your community's (e.g. roads, schools, hospitals, shopping centers, historic landmarks) risk to wildland fire?	6.4 %	37.0 %	50.9 %	5.7 %

2. Have you or someone in your household personally experienced a wildland fire? (Please check all that apply.)

45.6 % No experience with wildland fire
 57.0 % Witnessed wildland fire or observed smoke or other effects of wildland fire
 3.5 % Evacuated home due to a wildland fire
 3.5 % Suffered property damage from a wildland fire

3. How have you received information in the past about protecting your property from wildland fire? (Please check all that apply.)

27.1 % I have not received information
 2.0 % Public meeting or workshop
 59.3 % News media (radio, newspaper, TV)
 17.2 % Family, friends, or neighbors
 20.9 % Fact sheet/brochure
 28.2 % Local fire department or district
 3.3 % Internet
 9.0 % Other (specify): _____
 5.1 % Neighborhood or community group, (specify): _____

4. What is your preferred method for receiving information about protecting your property from wildland fire? (Please check all that apply.)

48.8 % Newspaper
 30.0 % Fire department/rescue
 24.3 % Radio
 5.1 % Schools
 42.2 % Television
 41.5 % Fact sheet/brochure
 59.4 % Mail
 11.3 % Public workshop/meetings
 13.0 % Internet
 12.1 % Agricultural extension service
 1.8 % Other (specify): _____

FIRE PROTECTION AND PREPAREDNESS

5. Do you know if your property is serviced by a fire department or rural fire protection district? (Please check only one.)

19.9 % Fire department
 70.4 % Rural fire protection district
 3.8 % Not serviced by a fire department or district
 5.9 % Don't know

6. Please answer the following fire protection and preparedness questions.

Table E2 Fire Protection and Preparedness

Question	Yes	No	Don't Know
A. Have you received information about wildland fire evacuation procedures for your community?	4.4 %	90.8 %	4.6 %
B. Does your household have a wildland fire evacuation plan?	30.0 %	66.0 %	3.8 %
C. Does your homeowner or business insurance policy include coverage in the event of structural damage or loss due to wildland fire?	49.9 %	7.1 %	42.8 %

REDUCING PROPERTY RISK TO WILDLAND FIRE

Property owners can take a number of actions to reduce the potential for property damage due to wildland fire. For instance, an owner can significantly reduce the chances of structures igniting during a wildland fire by creating and maintaining a defensible space around structures on their property. Defensible space is a fire-safe zone created by reducing flammable vegetation around a structure.

7. Please indicate if you have taken any actions to reduce the potential for fire losses on your property?

89.9 % Yes
10.1 % No (IF NO, Skip to Question 8)

7.1 If YES, which of the following actions have you taken on your property? (Please check all that apply.)

85.9 % Regularly clear roof/gutters of debris
87.9 % Reduced vegetation near structures (buildings) on property
66.3 % Reduced vegetation on other areas of property
23.5 % Planted native vegetation (plants)
23.8 % Invested in fire resistant building materials
29.6 % Installed a chimney spark arrester
32.8 % Installed a water source
9.0 % Invested in a sprinkler system
40.9 % Improved address signage for better visibility
16.7 % Widened the road leading to the property
10.0 % Other (specify): _____

8. Please indicate how likely you are to take the following actions to reduce the potential impacts of wildland fire to your property.

Table E3 Risk Reduction Activities Landowners are Likely to Take

Risk Reduction Action	Very Likely	Somewhat Likely	Not Likely
A. Reduce debris and vegetation on property	78.5 %	15.2 %	6.2 %
B. Create defensible zones around structures	64.9 %	25.2 %	9.9 %
C. Improve emergency access to property	35.1 %	20.1 %	44.8 %
D. Use fire resistant building materials	32.8 %	33.9 %	33.3 %

9. Which of the following incentives, if any, would motivate you to take additional steps to better protect your property from wildland fire?

69.7 % Insurance discount
29.2 % Grant program
68.6 % Tax break or incentive
12.2 % None of the above
5.6 % Other (specify): _____

REDUCING COMMUNITY RISK TO WILDLAND FIRE

10. Developed public and private lands can create a wildland fire risk when trees and underbrush grow densely near structures. Several methods can be used to maintain trees and underbrush to reduce the potential for wildland fire impacts. Mechanical thinning involves the use of chainsaws, brush mowers, or other specialized machines to reduce the number of shrubs and small trees, thus

reducing the potential for nearby structures to ignite. Prescribed burning involves controlling naturally caused fires or intentionally setting fires to burn under close and careful watch. Chemical treatment involves the application of chemical agents to prevent or restrict the growth of existing vegetation. Please indicate how supportive you are of each of the following methods.

Table E4 Support for Hazardous Fuel Treatment Methods

Treatment Method	Very Supportive	Somewhat Supportive	Neither Supportive nor Unsupportive	Somewhat Unsupportive	Very Unsupportive
A. No Action	6.2 %	4.5 %	20.5 %	15.4 %	53.4 %
B. Mechanical Thinning	68.6 %	24.5 %	3.7 %	1.6 %	1.6 %
C. Prescribed Burning	39.0 %	34.7 %	12.1 %	7.4 %	6.9 %
D. Chemical Treatment	24.7 %	22.6 %	10.0 %	13.5 %	29.2 %

11. Wildland fire can have a significant impact on a community but planning for its occurrence can help lessen the impacts. The following statements will help determine landowner priorities for planning for wildland fire. Please tell us how important each one is to you.

Table E5 Importance of Wildfire Planning

Statement	Very Important	Somewhat Important	Neither Important nor Unimportant	Somewhat Unimportant	Very Unimportant
A. Protecting critical infrastructure (e.g. roads, hospital, schools)	80.2 %	14.9 %	3.1 %	1.3 %	0.4 %
B. Protecting private property	66.3 %	28.3 %	4.5 %	0.9 %	0.0 %
C. Preventing or regulating development in hazard areas	46.1 %	34.1 %	11.4 %	3.9 %	4.5 %
D. Restoring forests to natural conditions	38.4 %	30.8 %	16.2 %	8.7 %	5.9 %
E. Protecting historical and cultural landmarks	34.3 %	42.6 %	16.6 %	3.8 %	2.7 %
F. Promoting cooperation among public agencies, citizens, non-profit groups, and businesses	52.1 %	36.2 %	8.5 %	1.3 %	1.8 %
G. Reducing damage to utilities	62.0 %	31.1 %	6.3 %	0.4 %	0.2 %
H. Strengthening emergency services (e.g. police, fire)	56.0 %	35.5 %	6.5 %	1.6 %	0.4 %
I. Educating landowners on wildland fire	65.2 %	31.3 %	2.6 %	0.4 %	0.4 %

12. Please indicate your opinion on each of the following statements about responsibility for protecting property from wildland fire.

Table E6 Opinion on Wildfire Protection Responsibility

Statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
A. Private property owners are responsible for protecting their property from wildland fire.	42.5 %	41.6 %	9.6 %	5.4 %	0.9 %
B. The community fire department is responsible for protecting property from wildland fire.	16.6 %	55.7 %	17.7 %	8.2 %	1.8 %
C. The property owner (including federal, state, local, and private) that manages the forest is responsible for protecting property from wildland fire.	32.7 %	51.2 %	14.1 %	1.6 %	0.5 %
D. The Oregon Department of Forestry is responsible for protecting property from wildland fire.	17.4 %	45.8 %	25.6 %	8.5 %	2.7 %
E. Protecting property from wildland fires is a shared responsibility between private landowners, local, state, and federal government agencies.	65.1 %	28.6 %	4.6 %	0.4 %	1.3 %

13. A number of activities can reduce your community's risk to wildland fire. These activities can be both regulatory and non-regulatory. An example of a regulatory activity would be a policy that requires the review of development plans to meet certain criteria in known wildland fire hazard areas. An example of a non-regulatory activity would be to develop a public education program to demonstrate steps citizens can take to make their property safer from wildland fire. Please check the box that best represents your support of the following strategies to reduce the risks posed by wildland fire.

Table E7 Support for Risk Reduction activities

Risk Reduction Strategy	Very Supportive	Somewhat Supportive	Neither Supportive nor Unsupportive	Somewhat Unsupportive	Very Unsupportive
A. Public information to increase citizen action in reducing risk	97.3 %	28.4 %	3.3 %	0.4 %	0.4 %
B Requirements for vegetation management around structures located in high hazard areas	38.7 %	40.0 %	10.4 %	6.2 %	4.7 %
C. Building construction standards for new development in high hazard areas	49.6 %	33.6 %	9.3 %	5.6 %	2.0 %
D Access/roadway guidelines for new development in high hazards areas	52.9 %	35.1 %	8.7 %	1.8 %	1.6 %
E Developer and builder educational programs	48.5 %	38.0 %	11.4 %	0.7 %	1.3 %
F Wildland fire mitigation checklist for development review process in high hazard areas	41.9 %	39.7 %	13.5 %	3.6 %	1.3 %
G Public purchase of land in high hazard areas for open space	19.7 %	26.5 %	30.9 %	10.3 %	12.6 %
H Require new rural residential developments be within rural fire protection district boundaries	24.3 %	25.9 %	22.8 %	13.2 %	13.8 %

GENERAL LANDOWNER INFORMATION

14. How long have you owned the property to which this survey is addressed? Average 19.3 Years

15. What is your zip code?

16. Is this property primarily used as a business?

8.2%	Yes
91.6 %	No (IF NO, Skip to Question 17)
16.1.	What type of business is it?
43.9 %	Agricultural
24.4 %	Forest Resources
2.4 %	Industrial
9.8 %	Commercial
19.5 %	Other (specify): _____

17. Do you rent or own the home in which you live?

0.4%	Rent
97.6%	Own (or am buying)
1.8%	Occupy without payment or rent

18. Do you live in the home where you received this survey year round or seasonally?

93.0%	Year round
6.1%	Seasonal

19. What is your age? Average 59 Years

20. Please estimate your total household income in 2004 before taxes.

0.8%	Less than \$5,000
11.9 %	\$15,000-\$24,999
13.7 %	\$75,000-\$99,999
2.6 %	\$5,000-\$9,999
24.9 %	\$25,000-\$49,999
8.0 %	\$100,000-149,999
4.4 %	\$10,000-14,999
25.1 %	\$50,000-\$74,999
8.5 %	\$150,000 or more

21. Please indicate your level of education.

1.1%	Grade school/no schooling
24.9%	College degree
2.7%	Some high school
35.8%	Some college/trade school
15.2%	Postcollege degree
16.6%	High school graduate/GED
1.1%	Other (Please specify) _____

Please feel free to provide any additional comments in the space provided below.

THANK YOU VERY MUCH FOR PROVIDING THIS INFORMATION

The Oregon Natural Hazards Workgroup at the University of Oregon's Community Service Center prepared this survey. For more information, please contact Oregon Natural Hazards Workgroup at 1209 University of Oregon, Eugene, OR 97403-1209, call (541) 346-3653, or visit <http://www.OregonShowcase.org>

2019 LANDOWNER SURVEY RESULTS

Instructions: This survey focuses on wildland fire risk awareness, preparedness, and the risk reduction activities of property owners. The estimated time for completing the survey is fifteen to twenty minutes. It should be completed by an adult, preferably the head of the household. Please return the survey in the enclosed postage paid envelope by **August 21, 2019**. If you have filled out this survey online, thank you! You do not need to fill it out again. All responses are kept confidential.

Your participation is voluntary. If you have any questions regarding the survey, please contact Lauren Grand at Oregon State University (541-344-5859).

WILDLAND FIRE RISK AWARENESS AND COMMUNICATION

The term *property* is used throughout this survey; please interpret this as including both land and structures such as homes.

1. Please check the box that represents your opinion on the level of risk at each of the three areas listed below:

Question	High	Medium	Low	None
How do you rate your property's risk to wildland fire?	35.1%	42.3%	21.2%	1.4%
How do you rate the risk of the properties in your neighborhood or area?	43%	4.24%	14%	0.6%
How do you rate your community's (e.g. Roads, schools, hospitals, shopping centers, historic landmarks) risk to wildland fire?	16.5%	42.5%	38.2%	2.7%

2. Have you or someone in your household personally experienced a wildland fire? (check all that apply)

35.8%	No experience with wildland fire
62.5%	Witnessed wildland fire or observed smoke or other effects of wildland fire
7.01%	Evacuated home due to a wildland fire
3.4%	Suffered property damage from a wildland fire

3. How have you received information in the past about protecting your property from wildland fire? (check all that apply)

19.3% I have not received information
 14.9% Public meeting or workshop
 51.6% News media (radio, newspaper, TV)
 25.1% Family, friends, or neighbors
 37.7% Fact sheet/brochure
 33.1% Local fire department or district
 11.4% Internet (specify): _____
 11.25% Neighborhood or community group (specify): _____
 10.6% Other (specify): _____

4. What is your preferred method for receiving information about protecting your property from wildland fire? (check all that apply)

21.2% Newspaper
 30.3% Fire department/rescue
 17.9% Radio
 3.3% Schools
 26.3% Television
 46.2% Fact sheet/brochure
 58.6% Mail
 21% Public workshop/meetings
 44.5% Internet
 18.2% Oregon State University Extension Service
 7.32% Other (specify): _____

FIRE PROTECTION AND PREPAREDNESS

5. Do you know if your property is serviced by a fire department or rural fire protection district? (check only one.)

37.8% Fire department
 52.9% Rural fire protection district
 2.2% Not serviced by a fire dept or district
 7% Don't know

6. Please answer the following fire protection and preparedness questions.

Question	Yes	No	Don't know
Have you received information about wildland fire evacuation procedures for your community?	12.1%	81.3%	6.6%
Does your household have a wildland fire evacuation plan?	37.6%	59.4%	3.0%
Does your homeowner or business insurance policy include coverage in the event of structural damage or loss due to wildland fire?	50.6%	4.4%	45.0%

REDUCING PROPERTY RISK TO WILDLAND FIRE

Property owners can take a number of actions to reduce the potential for property damage due to wildland fire. For instance, an owner can significantly reduce the chances of structures igniting during a wildland fire by creating and maintaining a

defensible space around structures on their property. Defensible space is a fire-safe zone created by reducing flammable vegetation around a structure.

7. Have you taken any actions to reduce the potential for fire losses on your property?

88.7% Yes
No (IF NO, Skip to Question 8)

7.1 If YES, which of the following actions have you taken on your property? (check all that apply.)

86.9% Regularly clear roof/gutters of debris
87.8% Reduced vegetation near structures (buildings) on property
65.4% Reduced vegetation on other areas of property
33.1% Planted native vegetation (plants)
31.9% Invested in fire resistant building materials
27.2% Installed a chimney spark arrester
29.8% Installed a water source
18.2% Invested in a sprinkler system
38.0% Improved address signage for better visibility
15.6% Widened the road leading to the property
9.3% Other (specify): _____

8. Please indicate how likely you are to take the following actions to reduce the potential impacts of wildland fire to your property.

Risk reduction action	Very likely	Somewhat likely	Not likely
Reduce debris and vegetation on property	79.1%	17.6%	3.3%
Create defensible zones around structures	65%	27.8%	7.3%
Improve emergency access to property	40.6%	22.8%	36.6%
Use fire resistant building materials	42.3%	31.7%	26%

9. Which of the following incentives, if any, would motivate you to take additional steps to better protect your property from wildland fire? (check all that apply)

69.5% Insurance discount
54.4% Grant program
69.5% Tax break or incentive
9.4% None of the above
11.6% Other (specify): _____

10. Local Government and Federal Agencies provide a number of landowner assistance and recognition programs. How familiar are you with the available programs?

Table E8 Familiarity with Landowner Assistance Programs

Program	I've participated in this program	Very familiar	Some-what familiar	Not familiar At all
Fuels reduction cost share grants through the Natural Resources Conservation Service (NRCS)	1.4%	1.9%	7.2%	89.5%
Firewise Communities	3.3%	4.7%	16.4%	75.6%
Fire Adaptive Communities	0.8%	2.0%	7.8%	89.3%
Oregon Department of Forestry Fuels Reduction Program	3.2%	4.1%	13.2%	79.4%
Lane County Firewise Grant Program	3.4%	2.4%	10.4%	84.4%

REDUCING COMMUNITY RISK TO WILDLAND FIRE

11. Developed public and private lands can create a wildland fire risk when trees and underbrush grow densely near structures. Several methods can be used to maintain trees and underbrush to reduce the potential for wildland fire impacts. Mechanical thinning involves the use of chainsaws, brush mowers, or other specialized machines to reduce the number of shrubs and small trees, thus reducing the potential for nearby structures to ignite. Prescribed burning involves controlling naturally caused fires or intentionally setting fires to burn under close and careful watch. Chemical treatment involves the application of chemical agents to prevent or restrict the growth of existing vegetation. Please indicate how supportive you are of each of the following methods.

Treatment method	Very supportive	Somewhat supportive	Neither supportive nor unsupportive	Somewhat unsupportive	Very unsupportive
No Action	3.5%	5.1%	12.8%	13.3%	65.4%
Mechanical Thinning	72%	21.1%	5.1%	1%	0.8%
Prescribed Burning	38.9%	34%	12.5%	9.4%	5.2%
Chemical Treatment	13.7%	18.4%	12.6%	20.4%	34.9%

12. Wildland fire can have a significant impact on a community but planning for its occurrence can help lessen the impacts. The following statements will help determine landowner priorities for planning for wildland fire. Please tell us how important each one is to you.

Statement	Very important	Somewhat important	Neither important nor unimportant	Somewhat unimportant	Very unimportant
Protecting critical infrastructure (e.g. roads, hospitals, schools)	87.4%	10.1%	1.4%	0.6%	0.5%
Protecting private property	67.6%	27.7%	3.2%	1.1%	0.4%
Preventing or regulating development	47.3%	31.5%	13.6%	4.4%	3.2%
Restoring forests to natural Conditions	49.2%	27.3%	13.5%	5.8%	4.3%
Protecting historical and cultural Landmarks	38.6%	40%	14.5%	4.6%	2.4%
Promoting cooperation among public agencies, citizens, nonprofits, & businesses	62.5%	26.9%	7.7%	1.6%	1.3%
Reducing damage to utilities	72.9%	22.4%	4.1%	0.4%	0.4%
Strengthening emergency services (e.g. Police, fire)	71.2%	20.7%	5.8%	1.1%	1.3%
Educating landowners on wildland Fire	74%	21.1%	3.9%	0.5%	0.8%

13. Please indicate your opinion on each of the following statements about responsibility for protecting property from wildland fire.

Statement	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
Private property owners are responsible for protecting their property from wildland fire.	35.5%	47.4%	10.4%	5.4%	1.4%
The community fire department is responsible for protecting property from wildland fire.	22.7%	52.5%	18.6%	5.3%	0.9%
The property owner (including federal, state, local, and private) that manages the forest is responsible for protecting property from wildland fire.	37.3	47.8%	12.2%	2.3%	0.5%
The Oregon Department of Forestry is responsible for protecting property from wildland fire.	24.3%	48.5%	22.1%	4.2%	0.9%
Protecting property from wildland fires is a shared responsibility between private landowners, local, state, and federal government agencies.	71.5%	24.1%	3.3%	0.9%	0.2%

14. A number of activities can reduce your community's risk to wildland fire. These activities can be both regulatory and non-regulatory. An example of a regulatory activity would be a policy that requires the review of development plans to meet certain criteria in known wildland fire hazard areas. An example of a non-regulatory activity would be to develop a public education program to demonstrate steps citizens can take to make their property safer from wildland fire. Please check the box that best represents your support of the following strategies to reduce the risks posed by wildland fire.

Risk Reduction Strategy	Very supportive	Somewhat supportive	Neither supportive nor unsupportive	Somewhat unsupportive	Very unsupportive
Public information to increase citizen action in reducing risk	78.5	17%	3.7%	0.4%	0.5%
Requirements for vegetation management around structures located in high hazard areas	47.1	35.2%	8.8%	5.3%	3.7%
Building construction standards for new development in high hazard areas	60.8	27.7%	7.3%	2.2%	2.0%
Access/roadway guidelines for new development in high hazards areas	63.8	28.1%	5.2%	1.9%	0.9%
Developer and builder educational programs	59.4	29.8%	8.3%	1.3%	1.3%
Wildland fire mitigation checklist for development review process in high hazard areas	59.8	27.6%	9.3%	2.2%	1.1%
Public purchase of land in high hazard areas for open space	30.4	27.6%	26.24%	6.8%	8.9%
Require new rural residential developments be within rural fire protection district boundaries	32.3	27.3%	22.6%	8.5%	9.3%
Development of a tax service district to fund preventative wildfire reduction work and education	23.2	26.6%	24.2%	10.0%	16.1%

GENERAL LANDOWNER INFORMATION

15. How long have you owned your property? 19 Years

16. In which fire district is your property located? (There is a fire district map at the end of this packet.) _____

17. What is your street address? Your address will remain confidential and will not be used for anything other than this survey.

18. Is this property primarily used as a business?

4.6% yes

95.4% no

(IF NO, Skip to question 19)

18.1 If YES, what type of business is it?

51.5% Agricultural

10.3% Forest Resources

0.0% Industrial

7.4% Commercial

30.9% Other: (specify)

19. Do you rent or own the home in which you live?

3.4% Rent

94.4% own (or am buying)

2.2% Occupy without payment or rent

20. Do you live in the home where you received this survey year round or seasonally?

95% Year round

5% Seasonal

21. What is your age? 62 Years

22. Please estimate your total household income in 2018 before taxes.

1.4% Less than \$5,000

1.6% \$5,000-\$9,999

1.9% \$10,000-\$14,999

6.9% \$15,000-\$24,999

18.6% \$25,000-\$49,999

22.4% \$50,000-\$74,999

17.6% \$75,000-\$99,999

29.7% \$100,000- or more

23. Please indicate your level of education.

0.1% Grade school/no schooling

33.5% College degree

0.3% Some high school

27.5% Postcollege degree

12.3% High school graduate/GED

21% Other (please specify): _____

24.2% Some college/trade school

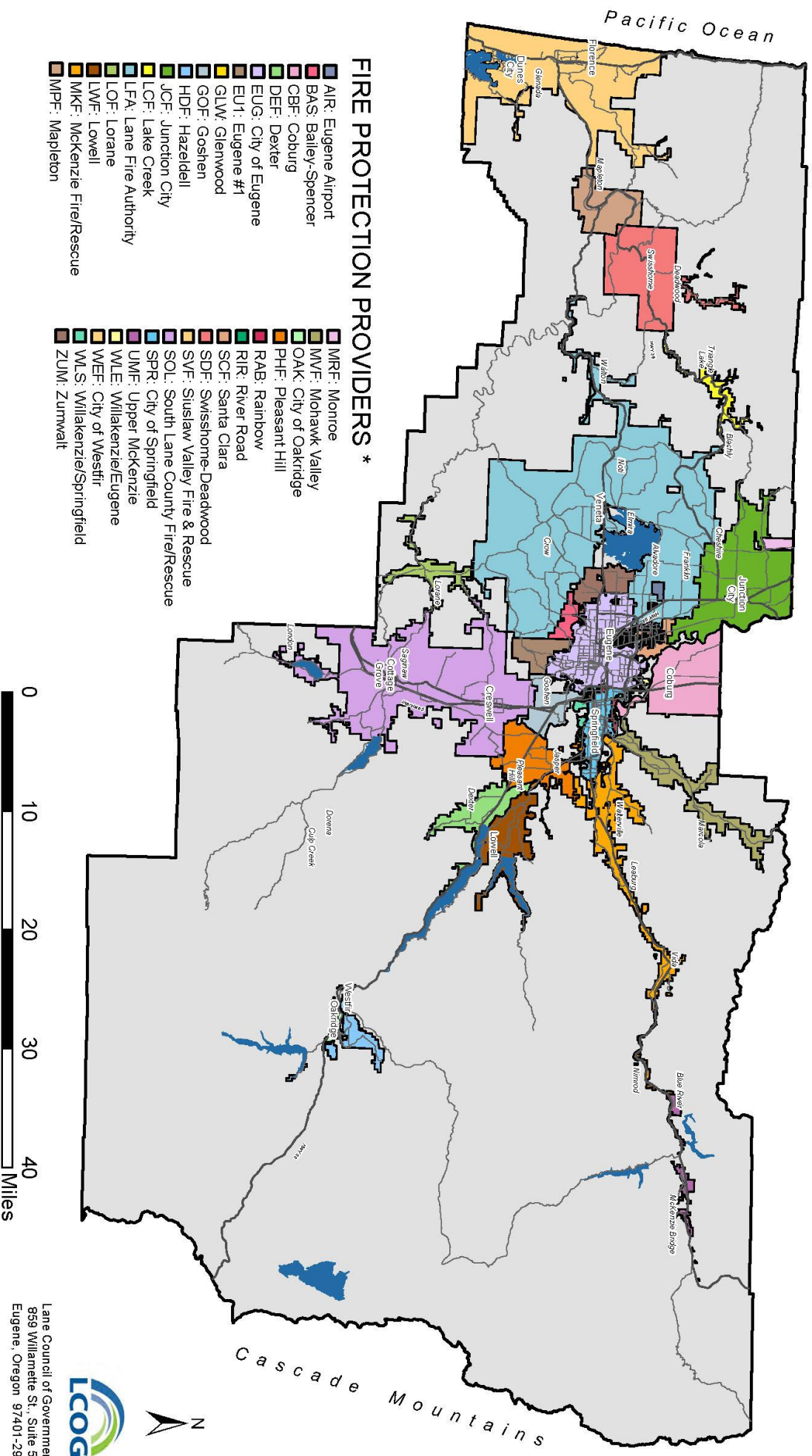
24. Please feel free to provide any additional comments in the space provided below.

THANK YOU VERY MUCH FOR PROVIDING THIS INFORMATION

For more information, please contact Lauren Grand, Oregon State University,
541-344-5859

Fire Districts* in Lane County

* Various types of fire protection providers are shown on the map. Most are either RFPDs or Water Districts. The cities of Eugene and Springfield jointly provide fire protection service inside their combined city limits, as well as for the Eugene Airport (AIR) and several contract districts in and around the Eugene-Springfield area (BAS, ZUM, RIR, EU1, GLW, WLE, WLS, and RAB). The cities of Oakridge and Westfir provide fire protection through contract with HDF. Small private contract areas are not shown on the map. Some Lane County districts extend into adjacent counties, while the Monroe district extends into Lane County from Benton County.



Appendix F

Wildfire Resources

This section covers eight topics:

- Policies
- Fire Siting Recommendations
 - Recommendations for fire siting standards in Lane County
 - Undesirable plants list for Lane County
- Wildfire Mitigation: Educational Resources
 - Survivable Space Poster
 - Oregon Forestland Dwelling Statute: Self-Certification Checklist
 - Ember Awareness Checklist Poster

These resources are intended to help local stakeholders, members of the public, landowners, and communities take proactive steps and learn more about pathways to reduce wildland urban interface fire risk.

Policies

Policies are often created at the federal and state level that affect how agencies, businesses, and residents can work individually and collaboratively to reduce communities' risk to wildfire. The following resources provide information on existing federal and state policies regarding wildfire risk reduction.

Healthy Forests Initiative and Healthy Forest Restoration Act

<https://www.fs.fed.us/projects/hfi/field-guide/web/page03.php>

National Fire Plan 10 Year Comprehensive Strategy

https://www.fs.fed.us/database/budgetoffice/NFP_final32601.pdf

FLAME Act of 2009 (Federal Land Assistance, Management and Enhancement)

https://www.forestsandrangelands.gov/documents/strategy/reports/2_ReportToCongress03172011.pdf

Disaster Mitigation Act of 2000

<http://www.dem.dcc.state.nc.us/PA/Assets/Forms/dma2000.pdf>

Oregon Statewide Land Use Planning Goal 7: Areas Subject to Natural Hazards

<https://www.oregon.gov/lcd/OP/Pages/Goal-7.aspx>

Oregon Forestland Dwelling Units Statute, ORS 215.730

<https://www.oregonlaws.org/ors/215.501>

Oregon Forestland-Urban Interface Fire Protection Act of 1997 (Oregon's Defensible Space Law)

<https://oregonexplorer.info/content/oregon-forestland-urban-interface-fire-protection-act?topic&ptopic>

Governor's Council on Wildfire Response 2019

<https://www.oregon.gov/gov/policy/Pages/wildfirecouncil.aspx>

Fire Siting Recommendations

The following content was developed by the Hazardous Fuel Subcommittee. The Subcommittee was formed to help guide recommendations for an update to Fire Siting Standards in Lane County. The Committee was composed of members from: Lane County Fire Defense Board, Oregon Department of Forestry, Oregon Office of State Fire Marshals, BLM, USFS, The Nature Conservancy, Friends of Buford Park and Mt. Pisgah, and Lane County Parks and Open Spaces.

The recommendations were formed during six meetings from October 2019-March 2020 in an effort to inform recommended changes to current fire siting standards with a combination of literature review, expert opinion, and fuels and fire behavior modeling (Action item 2.3.1 in the CWPP). The following are the codes the subcommittee addressed; Lane Code: 16.210(7)(c) Non-Impacted Forest Lands Zone (F-1), Fire Siting Standards and 16.211(8)(c), Impacted Forest Lands Zone (F-2), and Fire Siting Standards.

The following content is non-regulatory and was developed by the Hazardous Fuels Subcommittee to inform policy makers, stakeholders, and future land use regulations. To view current fire siting regulations in Lane County visit:

www.lanecounty.org/lanecode.

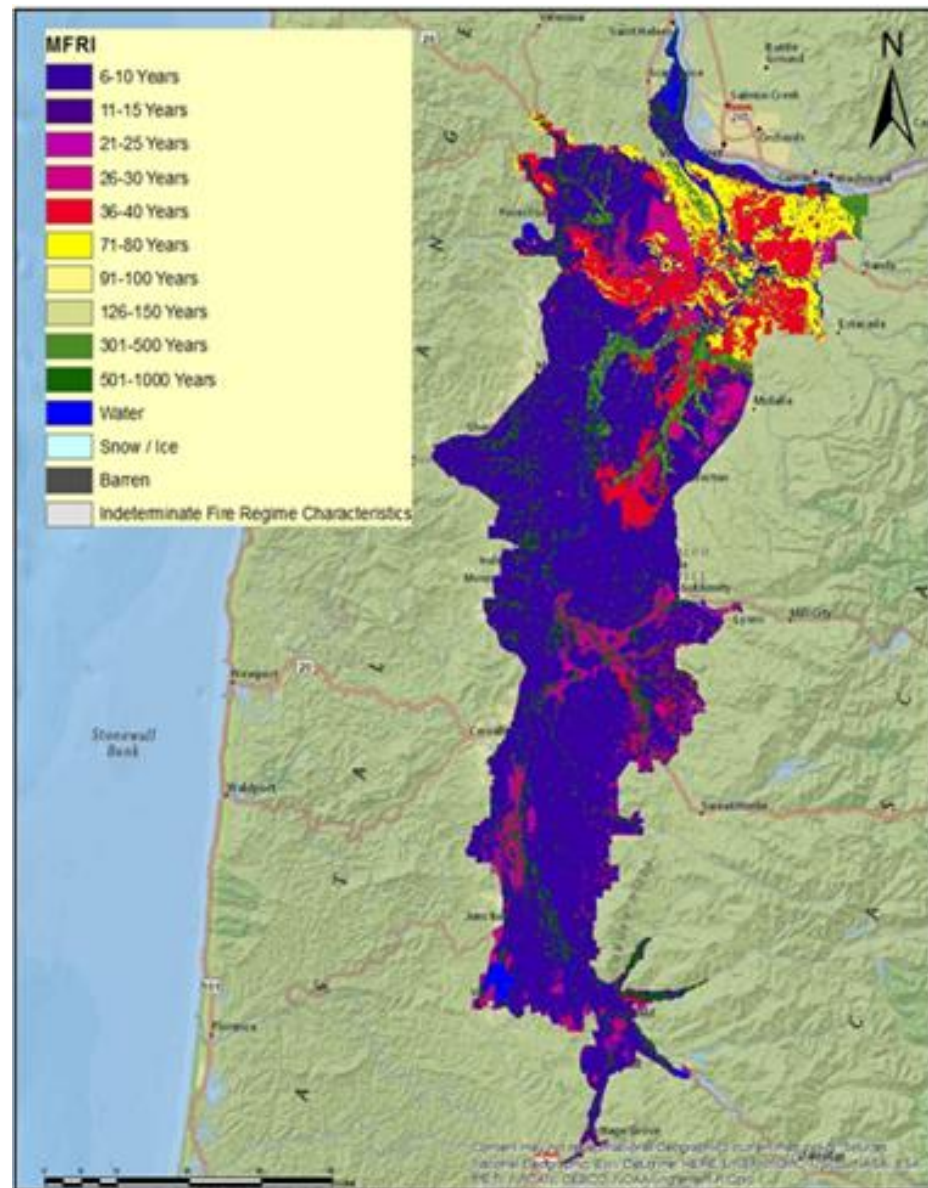
Fire Siting Recommendations and Fuels and Fire Behavior Modeling

The best long-term solution to avoid structure loss during a wildfire event is a combination of defensible space treatments, building design, education, and proactive land-use planning that limits exposure.¹ Defensible space can be defined as a given proximity within structures in which fuel treatments are conducted to alter fire behavior which in turn reduces the risk of a structure ignition during a wildfire event.

In California (a much higher risk area than Lane County) researchers found that, "The most effective treatment distance varied between 5 and 20 m (16–58 ft.) from the structure, but distances larger than 30 m (100 ft.) did not provide additional protection, even for structures located on steep slopes. The most effective actions were reducing woody cover up to 40% immediately adjacent to structures and ensuring that vegetation does not overhang or touch the structure. Multiple-regression models showed landscape-scale factors, including low housing density and distances to major roads, were more important in explaining structure destruction."²

Fuels and fire behavior in Lane County vary considerably depending upon aspect, elevation, soil type, and vegetation.³ Historical wildland fire frequencies based on both natural ignitions from lightning and indigenous burning practices range from every six to once every thousand years.⁴ When considering the availability of fuels to burn, it is helpful to identify the most common fuel types for modeling and planning purposes.

Figure F 1: Willamette Valley, Presumed Historic Mean Fire Return Intervals



Created by Amanda Rau using LANDFIRE Data³ 2017.

Lane County Fire Behavior and Model Design

The height of fire season in Lane County has historically occurred in late summer and early fall, when dry climate, available fuels, and easterly winds combine to create conditions for rapid fire growth. While the time of year during which conditions enabling wildfire growth is relatively short compared with other parts of the state such as the Rogue Basin and Central Oregon, the hazard potential associated with wildfire during those times is equally significant.

For the purposes of modeling potential fire behavior impacts to recommended buffers around structures, we identified the four most common fuel types as

described by Scott and Burgan⁵ found in Lane County: compact timber litter associated with closed canopy Douglas-fir dominated forests (timber litter), broadleaf and long-needle pine litter associated with oak, madrone, maple, and Ponderosa pine woodlands (broadleaf litter), grasses most commonly found in valley bottom prairies and upland savannas (grass), and shrubs such as blackberry and rose intermixed with grasses found in prairie, savanna, and disturbed forests where the forest canopy has been removed (grass/shrub) were chosen as representative.

Based on fire behavior modeling of the four fuel types described above, under three slope scenarios (0-9%, 10-24%, and 25-40%), and two weather scenarios (hot/dry and cool/wet). It is evident that shading, wind obstruction, increased crown base height with pruning limbs to 8 ft., and fuel arrangement in timber litter has the effect of reducing surface fire behavior (flame lengths and rates of spread) as well as crown fire potential. The highest potential for problematic surface fire and crown fire is found in grass/shrub. Maintenance of fuels that fall within this category including mowing and burning significantly reduces potential wildfire hazards and is recommended in the absence of canopy limiting growth of surface vegetation that inevitably becomes fuel for fire.

Recommendations for safe distances between surface and crown fuels to limit crown fire potential are based on best available science and associated modeling coupled with local fire management expertise. Studies and research looking at the effectiveness of fuel breaks generally focus on dry forests known for high historical fire frequency with low severity⁶ where canopy spacing reduces crown fire potential without increasing surface fuel loading to the extent that it does in Lane County. The Willamette Valley also has a more complex fire history of both higher and lower frequency fires of varying severities, occurring during late summer and early fall. Lower frequency of fire return is associated with canopy closure, with higher fire frequency occurring in unshaded areas such as prairie and savanna.

Modeling Implications

Main text results of modeling fuels and fire behavior confirmed what Lane County fire managers know, that maintaining a canopy adequately disconnected from surface fuels is the most effective long-term forest management action in an environment where vigorous vegetative growth occurs when light reaches the forest floor. The current code increases surface and ladder fuel growth by allowing light to penetrate the forest canopy through the requirement for canopy spacing to reduce crown fire potential. Model results as outlined in Figure 2⁷ indicates that under very dry, hot, and windy conditions in open canopy with grass and shrub, flame lengths from Douglas fir trees torching would be 41 feet. Compared with just 14 feet under the same conditions in a closed canopy forest where trees have been pruned to 8 feet from the ground.

Buffers between structures and fuels alone are not sufficient to prevent embers from causing homes to ignite. Home hardening has been shown to be of equal importance in protecting homes from ignitions during wildfire events.⁸ Ignitions from flame radiation are unlikely to occur from burning vegetation beyond 120 feet of a structure, and thinning vegetation within 120 feet has a significant ignition mitigation effect.⁹

Figure F 2: Lane County CWPP Fire Behavior

Fuel Model and Environmental Conditions	Head Fire ROS (ch/hr)	Head Fire Surface Flame Length (ft.)	Crown Fire Type	Active Crown Fire Rate of Spread (ch/hr)	Active Crown Fire Flame Length (ft.)	Passive Crown Fire Rate of Spread (ch/hr)	Passive Crown Fire Flame Lengths (ft.)
TL1 Compact Timber Litter Hot	0-9% 0.1-0.3 10-24% 0.2-0.3 25-40% 0.2-0.5	0-9% 0.2-0.3 10-24% 0.3-0.4 25-40% 0.3-0.4	Surface	0-9% 2.3-34.5 10-24% 2.3-34.5 25-40% 2.3-34.5	0-9% 2.3-14.0 10-24% 2.3-14.0 25-40% 2.3-14.0	0-9% 0.1-0.3 10-24% 0.2-0.3 25-40% 0.4-0.5	0-9% 0.1 10-24% 0.1 25-40% 0.1-0.2
TL1 Compact Timber Litter Cool	0-9% 0.1-0.2 10-24% 0.1-0.3 25-40% 0.2-0.4	0-9% 0.2-0.3 10-24% 0.3-0.4 25-40% 0.3-0.5	Surface	0-9% 1.0-14.3 10-24% 1.0-14.3 25-40% 1.0-14.3	0-9% 1.3-7.0 10-24% 1.3-7.0 25-40% 1.3-7.0	0-9% 0.1-0.2 10-24% 0.1-0.3 25-40% 0.2-0.4	0-9% 0.1 10-24% 0.1 25-40% 0.1
TL9 Very High Load Broadleaf Hot	0-9% 1.1-2.4 10-24% 1.2-3.2 25-40% 2.0-4.7	0-9% 1.8-2.6 10-24% 1.9-3.0 25-40% 2.4-3.6	0% Surface 0-8 mph Torching 0% 12-16mph 10-40%	0-9% 2.3-34.5 10-24% 2.3-34.5 25-40% 2.3-34.5	0-9% 3.7-22.3 10-24% 3.7-22.3 25-40% 3.7-22.3	0-0% 1.1-4.4 10-24% 1.2-7.1 25-40% 2.0-11.3	0-9% 1.5-4.0 10-24% 1.6-5.6 25-40% 2.3-8.0
TL9 Very High Load Broadleaf Cool	0-9% 0.8-1.8 10-24% 0.9-2.4 25-40% 1.5-3.6	0-9% 1.5-2.1 10-24% 1.6-2.5 25-40% 2.0-2.9	Surface	0-9% 1.0-14.3 10-24% 1.0-14.3 25-40% 1.0-14.3	0-9% 1.9-11.8 10-24% 1.9-11.8 25-40% 1.9-11.8	0-9% 0.8-1.8 10-24% 0.9-2.4 25-40% 1.5-3.6	0-9% 1.1-1.9 10-24% 1.2-2.3 25-40% 1.7-3.0
GR4 Moderate Load Grass Hot	0-9% 4.0-18.3 10-24% 5.4-26 25-40% 13.1-40.2	0-9% 2.2-4.4 10-24% 2.5-5.2 25-40% 3.8-6.3	Torching	0-9% 2.3-34.5 10-24% 2.3-34.5 25-40% 2.3-34.5	0-9% 2.8-17.1 10-24% 2.8-17.1 25-40% 2.8-17.1	0-10% 4-19.9 10-24% 5.4-27.2 25-40% 13.1-40.2	0-10% 2.0-6.5 10-24% 2.5-8.4 25-40% 4.7-11.7
GR4 Moderate Load Grass Cool	0-9% 0-0.2 10-24% 0.1-0.2 25-40% 0.2-0.3	0-9% 0.1-0.2 10-24% 0.1-0.2 25-40% 0.2	Surface	0-9% 1.0-14.3 10-24% 1.0-14.3 25-40% 1.0-14.3	0-9% 1.2-7.5 10-24% 1.2-7.5 25-40% 1.2-7.5	0-9% 0.1-0.2 10-24% 0.1-0.2 25-40% 0.1-0.3	0-9% 0-0.1 10-24% 0-0.1 25-40% 0-0.1
GS4/SH8 High Load Shrub/Grass Hot	0-9% 1.7-5.5 10-24% 2.0-7.4 25-40% 3.1-10.9	0-9% 4.4-7.4 10-24% 4.8-8.5 25-40% 5.8-10.3	Torching	0-9% 2.3-34.5 10-24% 2.3-34.5 25-40% 2.3-34.5	0-9% 6.8-41.1 10-24% 6.8-41.1 25-40% 6.8-41.1	0-9% 1.7-9.3 10-24% 2.0-12.0 25-40% 4.0-16.4	0-9% 4.8-15.3 10-24% 5.5-18.3 25-40% 8.7-22.7
GS4/SH8 High Load Shrub/Grass Cool	0-9% 0.1-0.6 10-24% 0.2-0.7 25-40% 0.4-1.1	0-9% 0.7-1.3 10-24% 0.7-1.5 25-40% 1.0-1.7	Surface	0-9% 1.0-14.3 10-24% 1.0-14.3 25-40% 1.0-14.3	0-9% 1.8-11.2 10-24% 1.8-11.2 25-40% 1.8-11.2	0-9% 0.1-0.6 10-24% 0.2-0.7 25-40% 0.4-1.1	0-9% 0.3-0.8 10-24% 0.4-1.0 25-40% 0.6-1.2

Source: Generated by Amanda Rau using Behave 6.0.0 Modeling Program Beta 3 (<https://www.frames.gov/catalog/57066>)

Behave 6.0.0 runs assumes maximum effective wind speed limit is imposed, two fuel model weighting method is based on two dimensional spread, fire spread as a head fire, wind is blowing upslope, wind and spread directions are degrees clockwise from upslope, and direction of the wind vector is the direction the wind is pushing the fire. 2020.

Voluntary Compliance

Defensible space can be enforced with adequate funding for annual maintenance and inspections. This often means enforcement is not feasible due the cost of site inspections even with grants for fuels reduction and other programs to help landowners. Many communities elect for education and technical support as a means to increase voluntary compliance. Compliance for defensible space is related to feasibility.¹⁰ Homeowners are more accepting of policies perceived as fair and part of a more comprehensive risk reduction strategy.¹¹

In Lane County many landowners echo research indicating that the choice to participate in strategies for wildfire hazard mitigation hinges on consideration of homeowners' feelings of connectedness to nature as impacted by vegetation management, the cost of mitigation activities, as well as emotional drivers like fear and sense of responsibility.¹² The willingness to implement defensible space was predicted by the perceived effectiveness of, and attitude toward defensible space.¹³

As the referenced material, and model results indicate, treatments within 60 feet are the most important and treatments beyond 100 feet do not provide additional

protection, even on steep slopes (Figure 2). Fuels reduction should be focused on ladder fuel reduction within a closer distance to the home while eliminating requirements for canopy spacing in areas where it would not have a beneficial impact. Landowners who choose an open canopy fuel break should be made aware of the need for maintenance in reducing wildfire risk over time.

Recommendations for Fire Siting Standards in Lane County

Primary Fuel Break

The primary fuel break is measured from the edge of the structure footprint, defined as the structure **and** attached accessories, such as decks, carports and any other building material attached to structure.

The Primary Fuel Break includes the Structure Ignition Zone; 0-5 Feet from the structure and an additional 25 feet of managed landscaping.

Immediate Zone 0-5 Feet

A 5 foot non-combustible perimeter is required, measured from structure perimeter outwards. Non-combustible is defined as material incapable of burning during sustained convection and radiant heat. Non-combustible is also defined as material unable to combust under extreme heat and extended flame contact, rock or mineral soil for example. There shall be no tree trunks within this zone.

Intermediate Zone 5-30 Feet

Grass is maintained to no more than 4 inches above the ground and kept green if possible. Mature trees are pruned to a height of 10 feet from the ground (lowest point of branch), trees less than 20 feet tall are pruned between 1/3 and 1/2 of the trees height do not exceed 1/2 of the trees height to avoid damage from pruning. Prune trees as they grow until the branches reach 10 feet from the ground. No dead plant material is present. 3x vertical spacing is maintained between surface and canopy fuels. Surface fuels other than short maintained grass lawns shall not be growing or arranged in a continuous or otherwise connected fashion, nor in quantities nor densities known to sustain fire activity under extreme conditions.

Trees

There shall not be any tree branches within 15 feet of the structure footprint in any direction. Within 15 feet, tree trunks (defined as the main stem(s) of a large woody plant) are acceptable within this zone, as long as tree limbs have been pruned to allow 15 feet of clearance from the structure footprint. For example; a large conifer tree may be growing within 6 feet of a house, as long as the closest branches are at least 15 feet above and away from the structure in all directions.

Secondary Fuel Break

Extended Zone: 30-100 feet

All trees over 20 feet tall are pruned to a height of 10 feet from the ground (lowest point of branch), trees less than 20 feet tall are pruned between 1/3 and 1/2 of the trees height, not to exceed 1/2 of the trees height to avoid damage

from pruning. Prune trees as they grow until the branches reach 10 feet from ground. All dead plant material within 10 feet of the surface has been removed or mulched. Dead plant material includes but is not limited to sticks, limbs, leaves, branches and trunks. Maintain at least 2x vertical clearance between canopy layers and from the lowest canopy layer to the ground. This may be replicated for multiple canopy layers. For example surface vegetation may be 2 feet tall, with the understory canopy greater than 4 feet above the surface vegetation, and at least 2x lower than the height of the dominant canopy.

Coarse Woody Debris (CWD) Exemption

CWD can be defined as dead trees and remains of large branches on the ground in forests, rivers and wetlands. CWD is known to increase soil moisture and improve wildlife habitat, therefore a Limited Amount will be allowed within the secondary fuel break. In total no more than 200 linear feet will be allowed within the secondary fuel break. The diameter of all CWD must be a minimum of 9 inches. All CWD present must either be in contact with surface soil or within 6 inches of surface contact. For example you could have two 100 foot long downed trees 9 inches in diameter or larger as long as the fine fuels such as branches have been removed or mulched.

Additional Slope restrictions:

Sloping land within 100 feet of structures in which the majority of a quadrant has a greater than 10% grade will have additional primary fuel break distances. No matter the additional primary fuel break distance, the immediate zone will remain the same (0-5 feet non-combustible fuel break)

0-9%

The standard fuel breaks mentioned above shall be created (5-30 feet Intermediate Zone) and the Secondary Fuel Break (30-100 feet).

10-24%

Within 180° of the steepest downward slope the Primary Fuel Break shall extend an additional 10 feet, creating an Intermediate Zone from 5-40 feet. The Secondary Fuel Break (Extended Zone) shall be 40-100 feet.

24-39%

Within 180° of the steepest downward facing slope, the primary fuel break shall extend an additional 20 feet creating a 50 foot Intermediate Zone (5-50 feet) on the downslope half of the house/property. The Secondary Fuel Break shall extend from 50 feet to 100 feet.

>40%

We do not recommend allowing structures within 100 feet of slopes exceeding 39%. If additions occur on sites with slopes 40% or greater, the Primary Fuel Break shall extend an additional 30 feet (5-60 feet) from the structure on all sides. The Secondary Fuel Break shall extend from 60-100 feet from the structure.

The above specifications alone will not improve home survivability during wildfire events. Home hardening activities (fire resistant building material paired with annual fine fuel removal and maintenance) have a much larger impact on home

ignition risk than fuel breaks. Fuel breaks require annual maintenance. The above recommendations are an attempt to improve long term efficacy of fuel break codes by incorporating canopy shade as a significant maintenance tool for controlling surface fuels in Western Oregon.

The preceding recommendations were developed with input from the following entities: Oregon Department of Forestry, Oregon Office of State Fire Marshalls, United States Forest Service, Bureau of Land Management, The Nature Conservancy, Friends of Buford Park and Lane County Parks to inform Lane County Code LC 16.210(7) (c) and 16.211(8) (c), generally referred to as Lane County Fire Siting Standards.

Conclusion

Fire managers are the architects of the suggested fire siting standard recommendations. Recommendations were informed by relevant scientific research, expert knowledge of social and wildfire factors influencing defensible space, as well as fire modeling research for Lane County vegetation types. The best long-term strategy to reduce structure loss includes a suite of prevention measures. We believe the suggested revisions to County Code 16.210(7)(c) and 16.211(8)(c) represents a commonsense approach in an environment notorious for vegetative growth that will reduce structure loss from wildfires in Lane County as much or better than current regulations. Fit with other county wildfire risk reduction measures including the CWPP, and improved voluntary landowner participation in fuel break maintenance.

Undesirable Planting List

Table 1 includes trees, shrubs, and ornamental grasses that are highly flammable and should be avoided when planting within the primary fuel break. The plants listed below are more susceptible to burning, due to rough or peeling bark, production of large amounts of litter, vegetation that contains oils, resin, wax, or pitch, large amounts of dead material in the plant, or plantings with a high dead to live fuel ratio. Note that this is not a complete list of flammable plants that can be grown in Lane County. Furthermore, all plants can increase fire behavior due to lack of maintenance, growth habit, and/or site conditions. Table 1 includes some species known to be a hazard, even under optimal growing conditions.

Table F 1: Undesirable Planting List

Botanical name	Common Name
<i>Acacia</i> species	Acacias
<i>Araucaria araucana</i>	Monkey Puzzle
<i>Arctostaphylos</i> species	Manzanita
<i>Bambusa</i> and related species	Bamboos (all)
<i>Callistemon</i> species	Bottlebrush
<i>Calocedrus decurrens</i>	Incense Cedar
<i>Ceanothus</i> species	Ceanothus
<i>Cedrus</i> species	Cedars
<i>Chamaecyparis</i> species	False Cypress
<i>Cortaderia</i> species	Pampas Grass
<i>Cotoneaster</i> species	Cotoneasters
<i>Cryptomeria japonica</i>	Japanese Cryptomeria
<i>Cupressus</i> species	Cypresses
<i>Cytisus</i> species	Brooms
<i>Elaeagnus</i> species	Silverberry, etc.
<i>Eucalyptus</i> species	Eucalyptus
<i>Genista</i> species	Brooms
<i>Juniperus</i> species	Junipers
<i>Picea</i> species	Spruce Trees
<i>Pinus</i> species	Pines
<i>Prunus laurocerasus</i>	Cherry Laurel
<i>Pyracantha</i> species	Firethorn
<i>Rosmarinus</i> species	Rosemary
<i>Rubus</i> species (<i>armeniacus</i> , <i>vestitus</i> , etc.)	Non-Native Invasive Blackberries
<i>Spartium junceum</i>	Spanish Broom
<i>Taxodium</i> species	Bald Cypresses
<i>Taxus</i> species	Yews
<i>Thuja</i> species	Arborvitae
<i>Trachycarpus fortunei</i>	Windmill Palm
<i>Ulex europea</i>	Gorse
<i>Umbellularia californica</i>	California Bay
<i>Vaccinium ovatum</i>	Evergreen Huckleberry

Wildfire Mitigation: Educational Resources

Many programs currently exist to help mitigate communities' risk to wildfire and to educate agencies, businesses, and residents on issues related to wildland-urban interface fire. The following resources provide links to educational information and programs regarding wildfire mitigation and community outreach:

IBHS Research Center

Contact: N/A

Address: N/A

Phone: N/A

<https://ibhs.org/risk-research/wildfire/>

Federal Emergency Management Agency (FEMA) for Kids: Teaching Kids About Prescribed Fire

Contact: FEMA

Address: 500 C Street, Southwest Washington D.C. 20472

Phone: (202) 566-1600

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

Fire Adapted Communities

Contact: National Wildfire Coordinating Group

Address: N/A

<https://fireadapted.org/>

Firewise USA Communities

A voluntary program that provides a framework to help neighbors get organized, find direction, and take action to increase the ignition resistance of their homes and community.

Contact: Firewise Communities

Address: N/A

Phone: N/A

<http://www.firewise.org/>

Firewise USA Communities, Lane County Program

Lane County offers financial grants to residents who are interested in making landscaping or structural improvements to their properties in order to help increase the survivability of their homes in the event of a wildfire.

Contact: Lane County Public Works Department: Land Management Division

Address: 3050 N Delta Hwy, Eugene, OR 97408

Phone: (541) 682-6522

https://lanecounty.org/government/county_departments/public_works/land_management_division/firewise

Keep Oregon Green

Contact: Keep Oregon Green Association Incorporated

Address: Salem, OR 97309

Phone: (503)-945-7498

<https://keeporegongreen.org/>

Missoula FireLab

Contact: Missoula FireLab

Address: PO Box 8089, 5775 West Highway, Missoula, MT 59807

Phone: N/A

<http://www.firelab.org/>

National Wildfire Coordinating Group

Contact: National Wildfire Coordinating Group

Address: National Office of Fire and Aviation, Bureau of Land Management,
National Interagency Fire Center

Phone: (208)-387-5144

<https://www.nwccg.gov/>

National Fire Protection Association

Contact: National Fire Protection Association

Address: 1 Batterymarch Park, Quincy, MA 02169-7471

Phone: (617) -770-3000

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

National Interagency Fire Center

Contact: NIFC

Address: 3833 Development Avenue, Boise, ID 83705

Phone: (208)-387-5512

<https://www.nifc.gov/>

Oregon Wildfire Risk Explorer

Contact: Oregon Department of Forestry

Address: N/A

Phone: N/A

<https://tools.oregonexplorer.info/>

Oregon Prescribed Fire Council

Contact: N/A

Address: N/A

Phone: N/A

Website: <https://oregonrxfire.weebly.com/>

Ready, Set, Go! Program

Contact: N/A

Address: N/A

Phone: N/A

Website: <https://www.wildlandfirersg.org>

Smokey Bear

Contact: Karen Curtiss

Address: 63096 Deschutes Market Road, Bend, OR 97701

Phone: (541)-383-5583

Website: <https://smokeybear.com/en>

US Fire Administration: WUI fires

Contact: US Fire Administration

Address: 16825 South Seton Ave, Emmitsburg, MD, 21727

Phone: (301)-447-1853

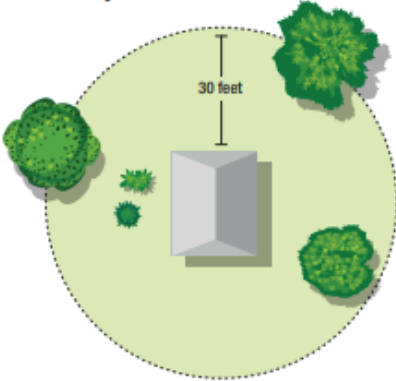
Website: https://www.usfa.fema.gov/wui/wui_awareness_month.html**Figure F 3 Survivable Space Poster**

The poster below was made for Lane County and details survivable space guidance on how to harden your home prior to wildfire season as well as evacuation levels used to notify landowners of impending incidents.

DO YOU HAVE **SURVIVABLE SPACE?**



Your home should have a buffer of 30 feet that is **lean, clean and green to reduce the threat of wildfire to your home.**

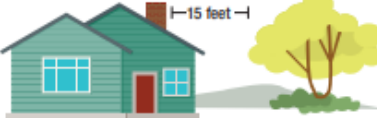


Fire-Resistant Landscaping and Construction

- Avoid plants that contain resins, oils and wax that burn easily and are extra flammable, especially in your survivable space. Keep trees pruned at least 6 feet from the ground.
- Use fire-resistant materials when constructing your home, roof, outbuildings, and decks or when improving your home.

LEAN

Prune shrubs and cut back tree branches, especially within 15 feet of your chimney.



CLEAN

Remove all dead plant material from around your home; this includes dead leaves, dry vegetation and even stacked firewood.



GREEN

Plant fire-resistant vegetation that is healthy and green throughout the year. Keep landscaping, including mulch, well watered to prevent it from becoming fuel for fires.



ARE YOU READY TO EVACUATE? KNOW YOUR LEVELS

BE READY.	BE SET.	GO NOW.
<p>Prepare to leave at a moment's notice. Monitor television, radio, mobile phones for emergency alerts. There are dangerous conditions in your area.</p>	<p>Be ready to go at a moment's notice. Consider leaving now. There is significant danger in your area.</p>	<p>Leave immediately. Do not stop to gather belongings. You are in immediate danger.</p>











www.LaneCountyOR.gov/prepare

Figure F 4 Oregon's Forestland-Urban Interface Protection Act: Self-Certification Checklist

The checklist below can be used by landowners to check if state required defensible space specifications are met prior to fire season. To learn more about Oregon's Defensible Space Law, including a complete form to self-certify your compliance visit: <https://www.oregon.gov/ODF/Fire/Pages/UrbanInterface.aspx>.



EVALUATION FORM FOR FORESTLAND URBAN INTERFACE PROPERTIES LOCATED IN AREAS CLASSIFIED AS HIGH.



Checking "Y" means "yes, the standard or step has been met or satisfied. Checking "N/A" means the step or standard does not apply to this property or situation. No fuel-reduction treatment is required on a property where a structure does not exist. See reverse for additional guidance.

1. 30-FOOT PRIMARY FUEL BREAK: The intent of this fuel break is to reduce the intensity of a wildland fire, slow its rate of spread, and create an area in which fire suppression operations may more safely take place.		
1a. Is the area substantially composed of nonflammable ground cover?	☐ Y	☐ NA
1b. If dry grass is present, has it been mowed to a height of 4 inches or less?	☐ Y	☐ NA
1c. Have continuous beds of fine fuel been eliminated?	☐ Y	☐ NA
1d. Are trees and shrubs maintained in a green condition?	☐ Y	☐ NA
1e. Are trees and shrubs substantially free of dead plant material?	☐ Y	☐ NA
1f. Have ladder fuels been removed?	☐ Y	☐ NA
1g. Have trees and shrubs been thinned to discourage the transfer of fire from plant-to-plant?	☐ Y	☐ NA
2. SECONDARY FUEL BREAK: This fuel break is to increase the total size of the area around a structure in which a wildfire's rate of spread will be reduced and fire-fighting operations may more safely occur. While recommended, a secondary fuel break is only required for structures with flammable roofing material. Check NA for all if this is the case.		
2a. Are trees and shrubs maintained in a green condition?	☐ Y	☐ NA
2b. Are trees and shrubs substantially free of dead plant material?	☐ Y	☐ NA
2c. Have ladder fuels been removed?	☐ Y	☐ NA
2d. Have trees and shrubs been thinned to discourage the transfer of fire from plant-to-plant?	☐ Y	☐ NA
3. DRIVEWAY FUEL BREAK: This standard is to ensure that there is sufficient vertical and horizontal clearance alongside and above the driving surface for fire trucks, and to create areas adjacent to the driveway in which fire intensity will be reduced and fire suppression operations may more safely take place. Not required for driveways less than 150 feet long. Check NA for all if this is the case.		
3a. Is there at least 12 horizontal feet of clear space above the driving surface?	☐ Y	☐ NA
3b. Within the 12-foot-wide clearance area, is there at least 13 ½ feet of vertical clearance?	☐ Y	☐ NA
4. Have tree branches or other vegetation within 10 feet of a chimney or stovepipe been removed?	☐ Y	☐ NA
5. Are trees that overhang the structure substantially free of dead plant material?	☐ Y	☐ NA
6. Is the area beneath a deck substantially free of flammables?	☐ Y	☐ NA
7. During fire season, are there firewood or lumber piles on the property?	☐ Y	☐ NA
7a. If "Y" is checked, has each pile been moved 20 feet or farther from the structure? OR	☐ Y	☐ NA
7b. Has each pile been fully enclosed?	☐ Y	☐ NA

Figure F 5 Ember Awareness Checklist

The checklist below is intended to inform landowners of where embers often pose serious risk during wildfire events. The checklist provide actions homeowners can take to reduce this risk. To view and download a high resolution pdf version visit: <http://azfac.org/2018/07/23/ember-aware-poster/>

WHERE IS THIS HOME VULNERABLE TO EMBER ATTACK?

EMBER AWARENESS CHECKLIST

WHAT YOU CAN DO TO PROTECT YOUR HOME:

1 WOOD ROOF
Replace wood roofs with fire-resistant types such as composition, metal and tile.

2 ROOF OPENINGS
Plug openings at locations between the roof covering and roof deck using a noncombustible material.

3 ROOF DEBRIS
Routinely remove leaf and pine needle debris from the roof.

4 SKYLIGHTS
Replace plastic skylights with double-pane tempered glass on gabled or sloped roofs.

5 SPARK ARRESTER
Install an approved spark arrester on chimneys.

6 WINDOWS
Use multi-pane, tempered glass windows. Close windows if wildfire is threatening.

7 VENTS
Cover all exterior vents with 1/8-inch corrosion resistant wire mesh or install new vents designed to resist ember entry. Use a louvered vent for the dryer.

8 RAIN GUTTERS
Use noncombustible rain gutter covers. Inspect and keep gutters free of debris.

9 SIDING
Fill gaps in siding and trim with caulk. Assure at least a six-inch separation between the ground and the start of the siding.

10 WOODEDILES
Move woodpiles at least 30 feet from the house.

11 PATIO FURNITURE
Put combustible patio furniture inside or move 30 feet from the house if wildfire is threatening.

12 DECK BOARDS
Replace deck boards <1" thick, or in poor condition, with thicker higher density decking (i.e., hardwood or plastic composite). Properly install metal flashing between the deck and house.

13 DECK DEBRIS
Remove leaf and pine needle debris on top of deck and between deck board gaps.

14 PORCH & DECK ACCESSORIES
If wildfire is threatening, remove door mats and combustible materials from the porch and deck. Place BBQ propane tanks indoors.

15 UNDER THE DECK
Remove leaf and pine needle debris and other combustible materials from under decks. Enclose open sided decks with 1/8-inch corrosion resistant wire mesh.

16 FLOWERBOXES
Remove plants and combustible materials (or flowerboxes as practical) from beneath windows if wildfire is threatening.

17 EAVES
Enclose open eaves with a noncombustible material.

18 FLOWERBEDS
Should be at least five feet from the house. Use noncombustible mulch like gravel. Routinely remove dead and dry plant material. Choose plants and flowers that are deciduous, herbaceous, low resin or non-resinous, succulent and/or low growing.



19 VEHICLES
Close vehicle windows. Park in closed garage or away from the house.

20 GARAGE DOOR
Adjust garage doors to achieve a tight fit. Close the garage door if wildfire is threatening.

21 GARBAGE CANS & RECYCLING BINS
Use garbage cans with tight lids. Place recycling bins in garage or away from the house.

22 WOODEN FENCES
Use a five-foot or longer noncombustible gate or fence section next to the house. Keep base of fence free of combustible debris.

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This poster was created using the Ember Aware! Will Your Home Survive When the Embers Arrive? (S or A) kit, produced by the University of Nevada Cooperative Extension, in partnership with the Arizona Department of Forestry and Fire Protection. The Program Coordinator, Graphic Design, layout, and printing provided by the PFAAC Publishing Group.

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⁵ Scott, Joe H.; Burgan, Robert E. 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 72 p.

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¹⁰ Winter, G., McCaffrey, S., & Vogt, C. A. (2009). The role of community policies in defensible space compliance. *Forest Policy and Economics*, 11(8), 570-578.

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¹² McFarlane, B. L., McGee, T. K., & Faulkner, H. (2012). Complexity of homeowner wildfire risk mitigation: an integration of hazard theories. *International Journal of Wildland Fire*, 20(8), 921-931.

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Appendix G

Local Contact Information

The resources below are organized into wildfire related functions: Law Enforcement, Evacuation Planning, Wildfire Restrictions, Smoke Management, Prevention Education and Funding, and Federal Lands.

*Note: Agencies are listed under sections which are most appropriate for their given function. Other listed agencies likely coordinate and support a number if not all listed functions.

Reporting a Wildfire: **Dial 911**

Law Enforcement

Learn about laws pertaining to fire or reporting suspicious activity (i.e. arson).

Oregon State Police (541) 726-2525

<https://www.oregon.gov/OSP/Pages/index.aspx>

3620 Gateway St., Springfield, OR 97477

Oregon State Fire Marshal (541) 726-2572

<https://www.oregon.gov/osp/programs/sfm/Pages/default.aspx>

3620 Gateway St, Springfield 97477

Lane County Sheriff's Office (541) 682-4150

https://lanecounty.org/government/county_departments/sheriff_s_office

125 E. 8th Ave., Eugene, OR 97401

Emergency Evacuation, Disaster Preparedness and Recovery

The following contacts may provide local information for: all hazard preparedness, Lane County preparedness plans, post-wildfire recovery strategies and funding, and education on these topics.

Lane County Emergency Management (541) 682-6999

www.Lanecountyor.gov/prepare

3040 N Delta Hwy., Eugene, OR 97408

State and Federal Contacts

The agencies listed below coordinate with Lane County Emergency Management on state, regional, and nationwide planning and implementation strategies, educational resources, and preparedness plans.

Federal Emergency Management Administration
Disaster Preparedness, Responses and Recovery.
<https://www.ready.gov/wildfires>

Oregon Office of Emergency Management
<https://www.oregon.gov/OEM/Pages/default.aspx>

Wildfire Related Restrictions

Fire Danger Levels, public and industrial fire restrictions (on private lands), forestry related equipment inspections, and waivers for operations.

Oregon Department of Forestry
<https://www.oregon.gov/odf/Pages/index.aspx>

Western Lane District Office (541) 935-2283
87950 Territorial Hwy., Veneta, OR 97487
<https://www.facebook.com/ODFWesternLane>

South Cascades Eastern Lane Unit Office (541) 726-3588
3150 Main St., Springfield, OR 97478
<https://www.facebook.com/odfscas>

Smoke Management

Coordinate to mitigate planned smoke emitting activities in Lane County.

Lane Regional Air Protection Agency (LRAPA) (541) 736-1056
Regulatory Agency for burning operations not related to forest or Agriculture.
<http://www.lrapa.org/>
1010 Main St., Springfield, OR 97477

Oregon Department of Forestry
Regulatory Agency for slash burning relating to forest operations
<https://www.oregon.gov/odf/Pages/index.aspx>

Western Lane (541) 935-2283
87950 Territorial Hwy., Veneta, OR 97487

South Cascades Eastern Lane Unit (541) 726-3588
3150 Main St., Springfield, OR 97478

Wildfire Prevention Education and Funding

Below are potential funding sources and local programs for treating hazardous fuel, education on wildfire, and county resources. For online educational resources see Appendix F, Wildfire Resources.

Oregon Department of Forestry

Defensible space education, inspections, funding, forest fuel treatments to reduce wildfire risk, Firewise Communities USA™ guidance and wildfire education presentations.

<https://www.oregon.gov/odf/fire/pages/fireprevention.aspx>

Western Lane Unit Office

(541) 935-2283

87950 Territorial Hwy., Veneta, OR 97487

South Cascades Eastern Lane Unit Office

(541) 726-3588

3150 Main St., Springfield, OR 97478

Oregon State Extension Service

Wildfire science, defensible space, fire resistant native plants, and landscape design.

Lane County Office

(541) 344-5859

996 Jefferson St., Eugene, OR 97402

<https://extension.oregonstate.edu/lane>

Lane County Emergency Management

(541) 682-6999

All hazards community preparedness, evacuation kits and plans, and local contact for FEMA funding.

www.Lanecountyor.gov/prepare

3040 N Delta Hwy., Eugene, OR 97408

Lane County Land Management

(541) 682-3577

Code requirements, fuel break and driveway access requirements for new homes and additions, and cost-share funding for structural retrofits for homes and structures in Lane County.

Lane County Firewise Program

(541) 682-6522

A cost-share funding program for structural retrofits for homes and structures in Lane County.

Firewise Communities

<https://www.oregon.gov/odf/Pages/index.aspx>

Lane County Firewise

www.lanecounty.org/firewise

firewiseprogram@lanecountyor.gov

Lane County CWPP**CWPP website**

www.lanecounty.org/fireplan

Oregon Wildfire Risk Explorer:

<https://oregonexplorer.info/topics/wildfire-risk?ptopic=62>

Lane County Fire Defense Board Agencies

Structural ignitability, structure/home fire safety, emergency and wildfire preparedness, and evacuation. To find out which structural fire district you live in go to:

https://lanecounty.org/government/county_departments/lane_county_emergency_management/fire_departments_and_districts

Coburg Rural Fire Protection District (541) 686-1573
<https://www.coburgoregon.org/community/page/coburg-rural-fire-district>
91232 N Coburg Rd., Coburg, OR 97408

Dexter Rural Fire Protection District (541) 937-3045
<https://dexterorfd.samariteam.com/>
82781 Barbre Rd., Dexter, OR 97431

Lane Fire Authority (541) 935-2226
Includes Santa Clara Fire Department.
<https://www.lanefire.org/>
88050 Territorial Hwy., Veneta, OR 97487

Lowell Rural Fire Protection District (541) 937-3393
<https://www.lowellfiredistrict.org/>
389 Pioneer St., Lowell, OR 97452

McKenzie Fire & Rescue (541) 896-3311
<https://www.mckenziefire.com/wordpress/>
Station #3 McKenzie Hwy., Leaburg, OR 42870

Mohawk Valley Rural Fire Protection District (541) 933-2907
<https://mohawkvalleyfire.com/>
92058 Marcola Rd., Marcola, OR 97454

Oakridge Fire Department (541) 782-2416
Includes Oakridge Fire Department, Hazeldell and Westfir Rural Fire Protection Districts.
<https://www.ci.oakridge.or.us/fire>
47592 Hwy. 58, Oakridge, OR 97463

Pleasant Hill Goshen Fire & Rescue (541) 747-8016
Includes Pleasant Hill and Goshen Rural Fire Protection District.
<https://www.goshenfd.net/>
36024 Hwy. 58, Pleasant Hill, OR 97455

Eugene Springfield Fire (541) 682-5111
<https://www.eugene-or.gov/120/Fire-and-Emergency-Medical-Services>
1705 West 2nd Ave., Eugene, OR 97402

South Lane County Fire & Rescue https://southlanefire.org/ 233 Harrison Ave., Cottage Grove, OR 97424 (#1)	(541) 942-4493
Upper McKenzie Rural Fire Protection District https://www.uppermckenziefire.org/ 56578 McKenzie Hwy., McKenzie Bridge OR 97413	(541) 822-3479
Junction City Fire Department Includes Junction Rural Fire Protection District. https://sites.google.com/site/junctioncityfire/ 1755 Juniper St., Junction City, OR 97448	(541) 998-2022
Lake Creek Rural Fire Protection District 20451 Hwy. 36, Blachly, OR 97412	(541) 925-3064
Siuslaw Valley Fire and Rescue http://www.svfr.org/ 2625 Hwy. 101 N, Florence, OR 97439	(541) 997-3212
Lorane Rural Fire Protection District https://loraneorfd.samariteam.com/ 80287 Old Loraine Rd., Loraine, OR 97451	(541) 942-1233
Swisshome Deadwood Rural Fire Protection District (541) 268-1959 13283 Hwy. 36, Swisshome, OR 97480	

Federal Lands

Contact information for local offices for Federal Agencies can be found below. These contacts can inform the public on wildfire danger levels on national lands, permits (i.e. collecting firewood, backcountry travel, etc.), closures, general recreation, and forest inquiries.

Bureau of Land Management (541) 683-6600 <https://www.blm.gov/>
3106 Pierce Parkway, Suite E., Springfield, OR 97447

Willamette National Forest
<https://www.fs.usda.gov/willamette/>

Supervisors Office 3106 Pierce Parkway, Suite D, Springfield, OR 97477	(541) 225-6300
Middle Fork Ranger District 46375 Hwy 58, Westfir, OR 97492	(541) 782-2283
McKenzie River Ranger District 57600 McKenzie Hwy, McKenzie Bridge, OR 97413	(541) 822-3381

Umpqua National Forest<https://www.fs.usda.gov/umpqua>**Supervisors Office**

2900 Stewart Parkway, Roseburg, OR 97471

(541) 957-3200

Cottage Grove Ranger District

34963 Shoreview Dr, Cottage Grove, OR 97424

(541) 767-5000

Siuslaw National Forest<https://www.fs.usda.gov/siuslaw>**Supervisors Office**

3200 SW Jefferson Way, Corvallis, OR 97331

(541) 750-7000

Central Coast Ranger District

1130 Forestry Lane, Waldport, OR 97394

(541) 563-8400

Oregon Dunes Visitor Center

855 Hwy. 101, Reedsport, OR 97467

(541) 271-6000

U.S. Army Corp of Engineers<https://www.usace.army.mil/>

211 E. 7th St., Eugene, OR 97401

(541) 684-4300

Appendix H

2005 Firewise Stakeholder Survey

This Appendix contains

- 2005 Stakeholder Interview Findings
- 2005 Firewise Workshop Summary
- Past Accomplishments: Lane County Firewise Program

2005 Stakeholder Interview Findings

The text below is sourced from a memo titled *Stakeholder Interview Findings* sent June 12, 2020 from the Oregon Natural Hazards Workshop at the University of Oregon to the Lane County CWPP Steering Committee.

The purpose of this memo is to provide you with the findings of the Stakeholder Interviews conducted in conjunction with the development of the Lane County Community Wildfire Protection Plan (CWPP). The findings are summarized below and the entire Stakeholder Interview Appendix including the full interview transcriptions has been attached as well. Please review the summary below.

Background

Main text Lane County initiated a Community Wildfire Protection Planning (CWPP) process in fall 2004. The County hired Oregon Natural Hazards Workgroup to assist in the development of a plan aimed to address the complex issues surrounding Wildland/Urban Interface Fire. Lane County understands that the success of a CWPP is tied to the ability to effectively involve a broad range of local, state and federal stakeholders in the planning process. The inputs from a diverse group insure that the final plan reflects the highest priorities of the community, while highlighting the fact the implementation will need to be accomplished through a collaborative partnership.

In early January, ONHW conducted telephone interviews with 18 stakeholders identified by the Steering Committee for the Lane County CWPP. The purpose of the stakeholder interviews was to document key issues, concerns, and current activities related to the CWPP requirements of:

- 1) Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
- 2) Prioritization Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuels reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.

- 3) Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

Stakeholder interviews accomplish this by gather various perspectives from the local, state and federal partners by:

- Identifying critical issues and concerns,
- Documenting of current activities, and
- Exploring opportunities for collaboration.

Appendix A includes a summary of key issues identified by stakeholders and a transcript of the telephone interviews. Lane County will use the information from the interviews to assess the risk factors of local preparedness and capabilities and to analyze common themes surrounding fuel reduction and structural ignitability within the wildland/urban interface.

Methodology

Stakeholders came from a pool that included both public and private interests, and all have either expertise in fire issues or the authority to help with implementation of the plan.

ONHW sent each stakeholder a preliminary email explaining the plan and its purpose. The email also contained a copy of the interview questions for the stakeholder to look over prior to the actual interview, a brief statement explaining why they had been selected as a stakeholder in the process, and a list of available times to be interviewed. Interview questions were grouped into four main areas:

- 1) Current Activities
- 2) Key Issues Related to Hazardous Fuel Reduction
- 3) Key Issues Related to Structural Ignition
- 4) Collaboration and Participation

Some questions were modified slightly or not asked at all depending on their relevance to the stakeholder. Each interview lasted approximately 30 minutes. Interviews were transcribed by hand during the interview, and then typed into a computer template afterward. Following completion of the interviews, all of the answers were documented then analyzed for common themes.

ONHW completed the interviews in February and March 2005.

Participants

ONHW interviewed the following stakeholders:

- Nancy Ashlock – Assistant Fire Management Office, BLM Eugene
- Carl West – Fire Management Officer, USFS - Siuslaw National Forest

- Rick Rogers – District Forester, ODF Western Lane County
- Lena Tucker – District Forester, ODF Eastern Lane County
- Donna Disch – Oregon State Fire Marshal
- Mark Reese – Lane County Sheriff's Office
- Dale Wendt – Lane County Public Works/Land Management
- Don Nickell – Lane County Public Works/Land Management
- Chief Dale Ledyard – McKenzie Fire and Rescue
- Chief John Buchanan – Siuslaw Valley Fire and Rescue
- Chief Marty Nelson – Lane County District #1 (Veneta)
- Kevin Urban – Community Services Director, City of Oakridge
- Karl Morgenstern – Coordinator, Drinking Water Source Protection, EWEB
- Mike McDowell – Team Leader, Weyerhaeuser
- Steve Akehurst – Chief Forester, Rosboro Lumber Co.
- John Buss – Chief Forester, Davidson Industries
- John Day – Union Pacific Railroad, Oakridge Office
- Roxie Cuellar – Director of Government Affairs, Homebuilders Association of Lane County

Summary of Themes

Stakeholders mentioned several themes repeatedly through all categories of questions: 1) funding obstacles; 2) follow-up and maintenance of policies and programs; and 3) education of landowners. The remainder of this section summarizes other themes of the interviews within the four areas of interview questions.

Risk Perception and Current Activities

The following is a brief summary of the stakeholder's perception of wildland/urban interface (WUI) fire risk, current policies and programs, and funding for programs related to WUI fire.

Perception of fire risk

There is a perceived threat from fire in the wildland-urban interface area by all of the stakeholders

The WUI conditions exist and in fact the threat is increasing and protection capabilities are difficult without strategic planning

The main fire threat is from the build-up of hazardous fuels when debris accumulates on the forest floor after thinning or other treatments
There is a need for outreach in areas that are unprotected by a Rural Fire Protection District

Current policies and programs

Lane County zoning codes (e.g. Chapter 15 and Chapter 16 sections 10 & 11) were mentioned as mitigation element Fire Defense Board and Fire Prevention Co-ops activities

Current emphasis is on response plans

Oregon Department of Forestry's plans and programs focused on prevention and response

Oregon Forest Land Urban Interface Protection Act of 1997 (better known as Senate Bill 360) was also mentioned

Funding

Nearly 50% of the stakeholders have received some form of grant funding for various activities related to WUI fire issues

Government agencies and Rural Fire Protection Districts currently apply for grants and matching funds for mitigation projects, fire planning, outreach, equipment needs, and GIS mapping

Private sector stakeholders raised questions on eligibility

Key Issues Related to Hazardous Fuels Reduction

Stakeholders provided their issues and concerns related to identifying and prioritizing fuel reduction treatments. They were also asked about concerns they had regarding the types of methods used for fuel reduction treatments and about resources to help Lane County move forward with fuel reduction projects.

Identifying and prioritizing fuel reduction treatments

Risk assessment can and should be used to identify and prioritize hazardous fuels projects

Urban and under-protected areas should be a priority

Fuels need to be treated on a landscape scale vs. a site-specific scale (e.g. defensible space projects and landscape scale projects should be done in conjunction with one another)

Public and private projects need to be more coordinated and can facilitate sharing of labor, tools, and knowledge

Types and methods for fuel reduction treatments

Most methods have been proven to work well, but the effectiveness of a particular method is dependent upon the nature of the hazard and the topography of the area

Prescribed burning presents unique challenges in Lane County specifically around smoke management (e.g. diminished air quality and complaints from residents) and safety fuels can hold heat and flare up long after the fire crews have left. However, some stakeholder believe prescribed burning is good for forest health on a larger landscape scale

Stakeholders were split on their concerns over the use of chemical treatments. Some see chemical treatments as affordable means of fuel reduction, while others had concerns about their environmental impacts.

Brush cutting is effective, but is costly and requires dedicated maintenance

Stakeholders indicated that debris removal is an important component of fuel reduction but that it is costly

Key Issues Related to Structural Ignition

Stakeholders provided insight regarding which regulatory and non-regulatory policies and programs might be effective in motivating property owners to reduce their risk to wildfire. A follow-up question was then asked regarding the obstacles that may hinder implementation of these policies and programs.

Non-regulatory policies and programs

Homeowner and landowner awareness plays an important role in reducing structural ignitability, but current levels of education and awareness are lacking

Free or easy debris removal programs are lacking and would be a great resource to enable the public to reduce their risk by removing hazardous fuels from their properties

Firewise Workshops and Firewise Communities USA programs at the local level (e.g. fire district, town, or neighborhood levels)

Regulatory policies and programs

Defensible space incentives or fire protection requirements from the insurance industry should be explored

County building ordinances that regulate building and roofing materials are needed, and need to be followed up on and maintained over the long-term

Obstacles

Funding for both non-regulatory and regulatory policies and programs is lacking

Human resources for long-term follow-up and maintenance of policies and programs could be a problem

Education of landowners and the public of their responsibilities in following regulations

Collaboration and Participation

Stakeholders answered questions related to their current level of participation in reducing the wildland/urban interface fire risk to Lane County. Other questions

asked about current and future collaboration opportunities among stakeholders or other agencies. All stakeholders interviewed stated that their organizations are willing to collaborate on more site-specific local community fire plans that follow the countywide plan.

There is currently limited collaboration among several agencies regarding wildland-urban interface or disaster protection issues:

- US Forest Service and BLM Interagency office collaborates with the Oregon Department of Forestry on wildfire response
- Lane County Fire Defense Board
- Lane County Fire Prevention Co-op
- Lane County Interagency Emergency Response Team
- EWEB Hazardous Materials GIS Tool (collaborated with 27 agencies)

Opportunities for collaboration will be increased through the process of this plan. There will need to be a designated leader to drive the process and keep up the interest in the issues in order to ensure long-term collaboration and participation. Careful consideration must be given on how to establish effective collaborative process to accomplish risk reduction.

Firewise Workshop Summary

In conjunction with the development of the Lane County Community Wildfire Protection Plan (CWPP), Oregon Natural Hazards Workgroup (ONHW) and Oregon Department of Forestry (ODF) conducted a Firewise Communities Workshop on April 5, 2005 at the University of Oregon for an invited group of diverse stakeholders. Participants in the workshop included representatives of federal and state fire and land management agencies, rural fire protection districts, local planning and emergency management departments, utility providers, the private forestry industry, the real estate industry, watershed councils, and elected officials, among others.

Firewise Communities Workshop

The National Wildland-Urban Interface Fire Protection Program developed Firewise Communities Workshops in 2000 to address the wildland-urban interface fire problem at a community level. The workshops have three main goals:

- 1) To improve safety in the wildland/urban interface by learning to share responsibility.
- 2) To create and nurture local partnerships for improved decisions in communities.
- 3) To encourage the integration of Firewise concepts into community and disaster mitigation planning.

The Firewise goals are consistent with Lane County Plan's goals and emphasis on collaboration. Participants worked in small groups to learn Firewise concepts, completed interactive scenarios designed to assess and reduce the wildfire risk of a hypothetical community, and were asked to apply the lessons learned from the sessions to Lane County.

ONHW and ODF worked to prepare an agenda for the workshop that would engage and encourage communication between participants while providing them with information on current wildland-urban interface fire risk issues and mitigation efforts. In addition to the small group scenarios and a video, several key speakers addressed the wildland-urban interface issue from both the state and local perspectives. Speakers included Marvin Brown, Oregon State Forester; Faye Stewart, Lane County Commissioner and Linda Cook, Lane County Emergency Manager. A list of workshop participants and a copy of the workshop's agenda can be found at the end of this appendix.

Opportunities and Obstacles in Lane County

Throughout the day facilitators asked participants to think about how Firewise concepts apply to issues in Lane County. ONHW created a worksheet for participants to identify opportunities and obstacles in Lane County for each of the three requirements of the CWPP - 1) reducing structural ignitability, 2) prioritizing fuel reduction projects, and 3) collaboration. Participants discussed their ideas in small groups and shared these results with the whole group at the end of the workshop. ONHW analyzed the completed worksheets to compile the opportunities and obstacles frequently identified by participants.

Treatment of Structural Ignitability

A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures. Workshop participants were asked to list opportunities and obstacles to implementing structural ignition reduction projects in Lane County. Participant's responses are summarized below.

Opportunities

Education and outreach through various sources including media, town hall meetings, and publications such as the Oregon State University Extension Service newsletter

Incentive programs, especially the use of insurance incentives, to encourage participation in projects to reduce risk

Collaboration with community groups, developers, neighbors, fire agencies, and others to better educate residents and implement projects

Available grant money from the National Fire Plan and other sources for implementing projects to reduce structural ignitability

Updating or revising Lane County codes and ordinances to reduce structural ignitability

Obstacles

Lack of homeowner education and awareness regarding the true risk of wildfire in Lane County and how defensible space can reduce risk

Lack of funding to implement projects, along with the cost of fire resistant building materials for homeowners

Lack of collaboration and involvement among homeowners, agencies, and developers to implement projects

Lack of regulations to enforce the use of fire resistant building materials and practices within Lane County

Prioritized Fuel Reduction

A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure. Participants were asked to list opportunities and obstacles to implementing prioritized fuel reduction projects in Lane County. Participant's responses are summarized below.

Opportunities

Education using community outreach, public forums, media and other sources emphasizing examples of fuel reduction projects and homes saved by defensible space

Incentive programs such as rebates or other support to help landowners with debris removal, as well as insurance or property tax incentives to encourage fuel reduction

Collaboration and participation to share costs, tools, and manpower to implement fuel reduction projects on a larger scale

Finding uses for the biomass generated from fuel reduction projects, such as selling the chips or using it as an energy source

Available grant money from the National Fire Plan and other sources to aid in implementation of fuel reduction projects

Obstacles

Debate surrounding the best method to conduct fuel reduction treatments on private and public lands based on differing topography, environmental issues, public perception, and cost

Long term maintenance of fuel reduction treatments

The size and scope of the county and the sheer volume of work that is needed to begin and maintain fuel reduction projects as the wildland-urban interface continues to increase

Public perception of low wildfire risk and that fuel reduction treatments are aesthetically unpleasant

The cost of implementing fuel reduction treatments on properties and removing debris

Special needs populations who require extra assistance with fuel reduction projects

Collaboration

A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties. Participants were asked to list opportunities and obstacles to collaborating on projects to reduce hazardous fuels and structural ignitability in Lane County. Participant's responses are summarized below.

Opportunities

Brings people with diverse expertise together for better solutions to problems

Showing collaboration increases success with grant applications

Work with real estate agencies and other groups and businesses to raise awareness of wildland-urban interface wildfire issues

Use the media to capture public attention of current collaboration efforts and encourage future efforts

Obstacles

Differing priorities, values, and interests among partners

Lack of time and communication needed to foster working relationships among partners

"Turf battles" and conflicts over jurisdictional authority

Resistance or lack of interest in collaborating with others

Conclusion

The Firewise Communities Workshop brought together a diverse group of stakeholders to identify strategies for community planning and partnership building in order to reduce fire risk in the wildland-urban interface. The opportunities and obstacles identified by participants were used to develop the Action Items identified in the CWPP. A second forum will be held in late summer to present the final Community Wildfire Protection Plan to interested participants.

Appendix I

Glossary of Terms

Aquatic Species – A plant or animal that lives in water for the majority of its lifetime.

Canopy – The stratum containing the crowns of the tallest vegetation present (living or dead), usually above 20 feet.

Catastrophic fires – Those that burn more intensely than the natural or historical range of variability, thereby fundamentally changing the ecosystem, destroying communities and/or rare or threatened species/habitat, or causing unacceptable erosion.

Climax Species - Plant species which remain largely unchanged in terms of species composition for as long as the site remains undisturbed. Synonyms: late seral, late successional.

Combustible – Any material that, in the form in which it is used and under the conditions anticipated, will ignite and burn.

Coordinating Organization – An organization that is willing and able to organize resources, find appropriate funding, and oversee activity implementation, monitoring, and evaluation.

Crown Fire – A fire that advances from top to top of trees or shrubs more or less independent of a surface fire.

Debris Burning Fire – In fire suppression, a fire spreading from any fire originally ignited to clear land or burn rubbish, garbage, crop stubble, or meadows (excluding incendiary fires).

Defensible Space – An area, typically a width of 30 feet or more, between an improved property and a potential wildfire where the combustibles have been removed or modified.

Duff – The layer of decomposing organic materials lying below the litter layer of freshly fallen twigs, needles and leaves and immediately above the mineral soil.

Dwellings – A place of residence. A building or portion thereof which is occupied in whole or in part as a residence or sleeping place, either permanently or temporarily, but excluding hotels, motels, auto courts, mobile homes and camping vehicles.

Ecological – relating to or concerned with the relation of living organisms to one another and to their physical surroundings.

Eco-region – A major ecosystem defined by distinctive geography and receiving uniform solar radiation and moisture.

Endangered Species – A species that is very likely to become extinct in the near future, either worldwide or in a particular political jurisdiction.

Escape Route – Route leading away from dangerous areas on a fire; should be preplanned.

Evacuation – The temporary movement of people and their possessions from locations threatened by wildfire.

Exposure – 1: Property that may be endangered by a fire burning in another structure or by a wildfire. 2: Direction in which a slope faces, usually with respect to cardinal directions. 3: The general surroundings of a site with special reference to its openness to winds.

External Partners – Organizations that can assist the coordinating organization in implementing an action in various functions and may include local, regional, state, or federal agencies, as well as local and regional public and private sector organizations.

Impacted Forest Lands Zone (F-2) – A type of forest land zoning in Lane County pursuant to the land use regulations at Lane Code Chapter 16.211.

Forest Land Zoning – Forest land zoning is divided into two zones in Lane County, Non-impacted and Impacted. The purpose of these zones is to protect and maintain forest land for grazing, rangeland and forest use consistent with existing and future needs for agriculture and forest products.

Fire Behavior – The manner in which a fire reacts to the influences of fuel, weather, and topography.

Fire Department – Any regularly organized fire department, fire protection district or fire company regularly charged with the responsibility of providing fire protection to the jurisdiction.

Fire Hazard – A fuel complex, defined by volume, type condition, arrangement, and location, that determines the degree of ease of ignition and of resistance to control.

Fire History – The chronological record of the occurrence of fire in an ecosystem or at a specific site. The fire history of an area may inform planners and residents about the level of wildfire hazard in that area.

Fire Prevention – Activities, including education, engineering, enforcement, and administration, that are directed at reducing the number of wildfires, the costs of suppression, and fire-caused damage to resources and property.

Fire-Proofing – Removing or treating fuel with fire retardant to reduce the danger of fires igniting or spreading (e.g., fire-proofing roadsides, campsites, structural timber). Protection is relative, not absolute.

Fire Protection – The actions taken to limit the adverse environmental, social, political, and economical effects of fire.

Fire Regime – The pattern, frequency and intensity of wildfires that prevail in an area over long periods of time. Informs fire ecology of a given environment.

Fire Resistant Roofing – The classification of roofing assemblies A, B, or C as defined in the Standard for Safety 790, *Tests for Fire Resistance of Roof Covering Materials* 1997 edition.

Fire Resistant Tree – A species with compact, resin-free, thick corky bark and less flammable foliage that has a relatively lower probability of being killed or scarred by a fire than a fire sensitive tree.

Fire Retardant – Any substance except plain water that by chemical or physical action reduces flammability of fuels or slows their rate of combustion.

Fire Triangle – Instructional aid in which the sides of a triangle are used to represent the three factors (oxygen, heat, and fuel) necessary for combustion and flame production; removal of any of the three factors causes flame production to cease.

Firebrands – 1: Any source of heat, natural or human made, capable of igniting wildland fuels. 2: Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuels. Examples include leaves, pinecones, glowing charcoal, and sparks.

Firefighter – A person who is trained and proficient in the components of structural or wildland fire.

Firewise Construction – The use of materials and systems in the design and construction of a building or structure to safeguard against the spread of fire within a building or structure and the spread of fire to or from buildings or structures to the wildland-urban interface area.

Firewise Landscaping – Vegetative management that removes flammable fuels from around a structure to reduce exposure to radiant heat. The flammable fuels may be replaced with green lawn, gardens, certain individually spaced green, ornamental shrubs, individually spaced and pruned trees, decorative stone or other non-flammable or flame-resistant materials.

Firewise USA – A voluntary program that provides a framework to help neighbors get organized, find direction, and take action to increase the ignition resistance of their homes and community.

Flammability – The relative ease with which fuels ignite and burn regardless of the quantity of the fuels.

Fuel(s) – All combustible material within the wildland-urban interface or intermix, including vegetation and structures.

Fuel Condition – Relative flammability of fuel as determined by fuel type and environmental conditions.

Fuel Loading – The volume of fuel in a given area generally expressed in tons per acre.

Fuel Management/Fuel Reduction – Manipulation or removal of fuels to reduce the likelihood of ignition and to reduce potential damage in case of a wildfire. Fuel reduction methods include prescribed fire, mechanical treatments (mowing,

chopping), herbicides, biomass removal (thinning or harvesting of trees, harvesting of pine straw), and grazing. Fuel management techniques may sometimes be combined for greater effect.

Fuel Modification – Any manipulation or removal of fuels to reduce the likelihood of ignition or the resistance to fire control.

Ground Fuels – All combustible materials such as grass, duff, loose surface litter, tree, or shrub roots, rotting wood, leaves, peat or sawdust that typically support combustion.

Habitat – The natural home or environment of an animal, plant, or other organism.

Hazard – The degree of flammability of the fuels once a fire starts. This includes the fuel (type, arrangement, volume, and condition), topography and weather.

Hazardous Areas – Those wildland areas where the combination of vegetation, topography, weather, and the threat of fire to life and property create difficult and dangerous problems.

Hazard Reduction – Any treatment of living and dead fuels that reduces the threat of ignition and spread of fire.

Herbicide – Any substance used to kill or slow the growth of unwanted plants.

Human-caused Fire – Any fire caused directly or indirectly by person(s).

Human-caused Risk – The probability of a fire ignition as a result of human activities.

Ignitability – 1: The condition of being able to burn (ignitable). 2: A measure of the extent to which something is able to burn (ignitable).

Ignition Probability – Chance that a firebrand will cause an ignition when it lands on receptive fuels.

Infrastructure – Man-made structures and/or facilities that support public and private operations including but not limited to distribution lines, streets, roads and highways, and telecommunication facilities.

Initial Attack – The actions taken by the first resources to arrive at a wildfire to protect lives and property and prevent further extension of the fire.

Internal Partners – Internal partners are within the CWPP advisory committee and may be able to assist in the implementation of Action Items by providing relevant resources to the coordinating organization.

Ladder Fuels – Fuels that provide vertical continuity allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease.

Mechanical Treatment(s) – Ways to reduce hazardous fuels using tools, machinery, or physical labor for the purpose of wildfire prevention.

Mitigation – Action that moderates the severity of a fire hazard or risk.

Ecosystems – A community of living and non-living organisms, where each component interacts together as a unit through biological, physical, and chemical processes.

Non-Impacted Forest Lands Zone (F-1) – A type of forest land zoning in Lane County pursuant to the land use regulations at Lane Code Chapter 16.210.

Non-response bias – A type of bias that can occur when the people who do not respond to a survey differ to those that are willing to respond. These differences can be due to the person's exposures or outcomes. As a result mistakes in estimating population characteristics can occur based on the underrepresentation of this group of people.

Noncombustible – A material that, in the form in which it is used and under the conditions anticipated, will not aid combustion or add appreciable heat to an ambient fire.

Overstory – The highest layer of vegetation in a forest, trees which form the upper or uppermost layer of a forest canopy.

Peak Fire Season – That period of the fire season during which fires are expected to ignite most readily, to burn with greater than average intensity, and to create damages at an unacceptable level.

Statewide Land Use Planning Goals – These 19 goals express Oregon's policies on land use and related topics, like citizen involvement, housing, and natural resources. The statewide goals are achieved through local jurisdiction's adopted comprehensive plan, zoning and land-division ordinances.

Preparedness – 1: Condition or degree of being ready to cope with a potential fire situation. 2: Mental readiness to recognize changes in fire danger and act promptly when action is appropriate.

Prescribed Burning – Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions, which allows the fire to be confined to a predetermined area, and to produce the fire behavior and fire characteristics required to attain planned fire treatment and resource management objectives.

Prescribed Fire – A fire burning within prescription. This fire may result from either planned or unplanned ignitions.

Property Protection – To protect structures from damage by fire, whether the fire is inside the structure, or is threatening the structure from an exterior source. The municipal firefighter is trained and equipped for this mission and not usually trained and equipped to suppress wildland fires. Wildland fire protection agencies are not normally trained or charged with the responsibility to provide structural fire protection but will act within their training and capabilities to safely prevent a wildland fire from igniting structures.

Protection Area – That area for which a particular fire protection organization has the primary responsibility for attacking an uncontrolled fire and for directing the suppression action. Such responsibility may develop through law, contract, or personal interest of the fire protection agent. Several agencies or entities may

have some basic responsibilities without being known as the fire organization having direct protection responsibility.

Response – Movement of an individual fire fighting resource from its assigned standby location to another location or to an incident in reaction to dispatch orders or to a reported alarm.

Risk Assessment – The process or method of identifying hazards that have the potential to cause harm, and evaluating the risk associated with the hazards.

Rural Fire District (RFD) – An organization established to provide fire protection to a designated geographic area outside or areas under municipal fire protection. Usually has some taxing authority and officials may be appointed or elected.

Rural Fire Protection – Fire protection and firefighting problems that are outside of areas under municipal fire prevention and building regulations and that are usually remote from public water supplies.

Early Seral Stage – The first stage in forest development following any disturbance, including wind, ice, fire or logging. This community is made up of the first colonizers of a forest opening: grasses, other herbaceous plants, broadleaf shrubs and tree seedlings along with remnants or legacy structures (snags, etc.) from the previous forest.

Slash – Debris left after logging, pruning, thinning, or brush cutting. Slash includes logs, chips, bark, branches, stumps, and broken trees or brush that may be fuel for a wildfire.

Slope – The variation of terrain from the horizontal; the number of feet rise or fall per 100 feet measured horizontally, expressed as a percentage.

Smoke – 1: The visible products of combustion rising above a fire. 2: Term used when reporting a fire or probable fire in its initial stages.

Structure Fire – Fire originating in and burning any part or all of any building, shelter, or other structure.

Structural Fire Protection – The protection of a structure from interior and exterior fire ignition sources. This fire protection service is normally provided by municipal fire departments, with trained and equipped personnel. After life safety, the agency's priority is to keep the fire from leaving the structure of origin and to protect the structure from an advancing wildland fire. (The equipment and training required to conduct structural fire protection is not normally provided to the wildland firefighter.) Various taxing authorities fund this service.

Suppression – The most aggressive fire protection strategy, it leads to the total extinguishment of a fire.

Surface Fire – A fire that burns leaf litter, fallen branches and other surface fuels on the forest floor, as opposed to ground fire and crown fire.

Surface Fuel – Fuels lying on or near the surface of the ground, consisting of leaf and needle litter, dead branch material, downed logs, bark, tree cones, and low stature living plants.

Tree Crown – The primary and secondary branches growing out from the main stem, together with twigs and foliage.

Uncontrolled Fire – Any fire which threatens to destroy life, property, or natural resources, and (a) is not burning within the confines of firebreaks, or (b) is burning with such intensity that it could not be readily extinguished with ordinary, commonly available tools.

Understory – Low-growing vegetation (herbaceous, brush or reproduction) growing under a stand of trees. Also trees in a forest stand with their crowns growing below the dominant tree canopy (see overstory).

Urban Interface – Any area where wildland fuels threaten to ignite combustible homes and structures.

Volunteer Fire Department – A fire department of which some or all members are unpaid.

Watershed – A land area that channels rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean.

Water Supply – A source of water for firefighting activities.

Wildfire Risk – The chance of a fire starting from any cause.

Wildfire – An unplanned and uncontrolled fire spreading through vegetative fuels, at times involving structures.

Wildland – An area in which development is essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered.

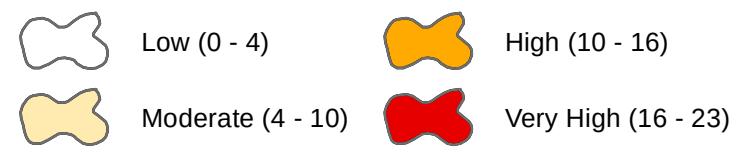
Wildland Fire Protection – The protection of natural resources and watersheds from damage by wildland fires. State and Federal forestry or land management agencies normally provide wildland fire protection with trained and equipped personnel. The equipment and training required to conduct wildland fire protection is not normally provided to the structural fire protection firefighter. Various taxing authorities and fees fund this service.

Wildland-Urban Interface – 1: Any area where wildland fuels threaten to ignite combustible homes and structures. 2: The zone where structures and other human development meets or intermingles with undeveloped wildland fuels where natural vegetation is typically less than 50 percent of the land area.

Wildland-Urban Intermix – An area of suburban or rural development which extends into predominantly wildlands; typically having greater than 50 percent natural vegetation cover.

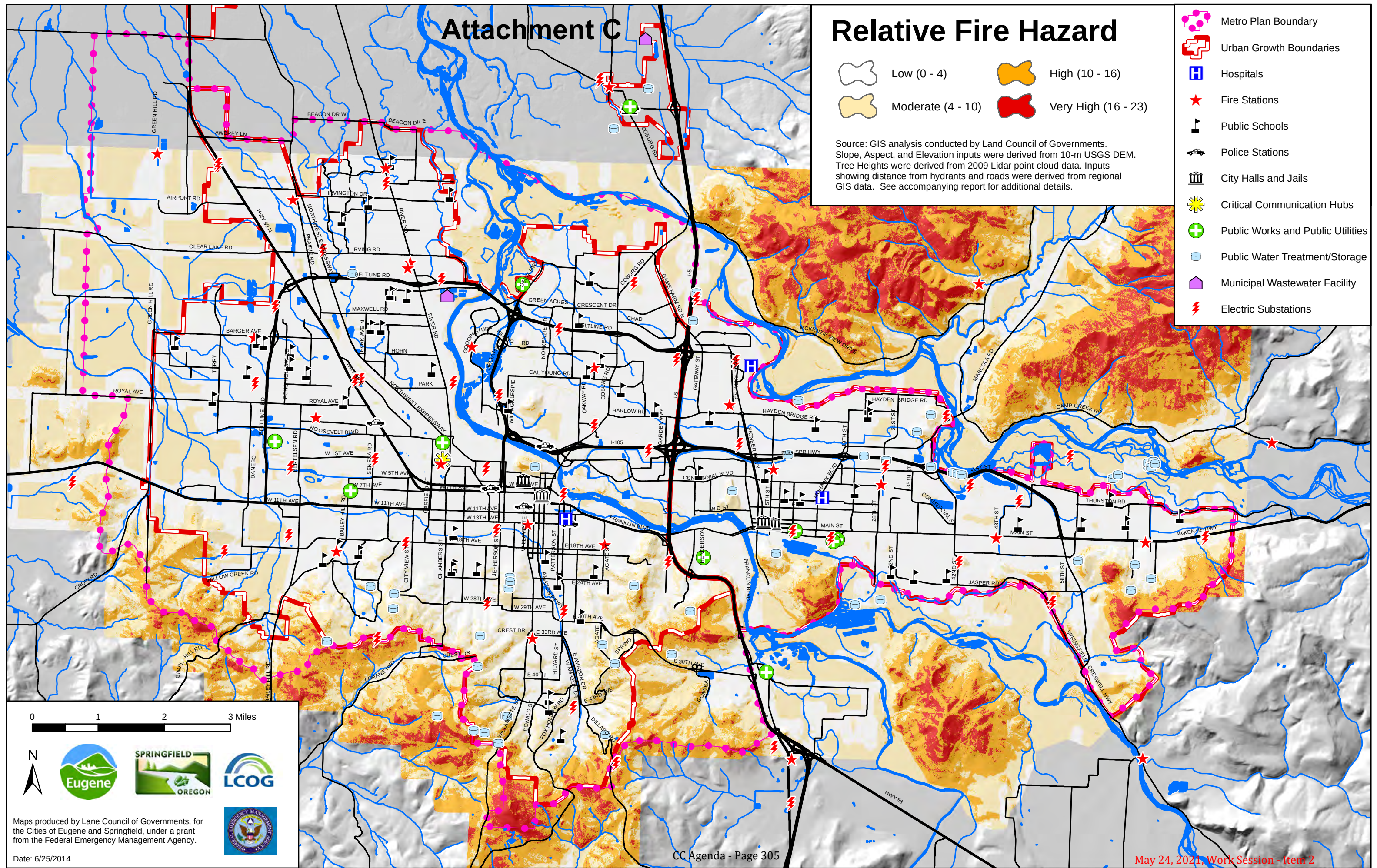
Attachment C

Relative Fire Hazard



Source: GIS analysis conducted by Land Council of Governments. Slope, Aspect, and Elevation inputs were derived from 10-m USGS DEM. Tree Heights were derived from 2009 Lidar point cloud data. Inputs showing distance from hydrants and roads were derived from regional GIS data. See accompanying report for additional details.

- Metro Plan Boundary
- Urban Growth Boundaries
- Hospitals
- Fire Stations
- Public Schools
- Police Stations
- City Halls and Jails
- Critical Communication Hubs
- Public Works and Public Utilities
- Public Water Treatment/Storage
- Municipal Wastewater Facility
- Electric Substations



0123 Miles

N

Maps produced by Lane Council of Governments, for the Cities of Eugene and Springfield, under a grant from the Federal Emergency Management Agency.

Date: 6/25/2014

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May 24, 2021, Work Session - Item 2



Eugene Springfield Fire

Eugene/Springfield, Oregon

COMMUNITY RISK ASSESSMENT REPORT

February 2020

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INTRODUCTION

In March 2019, Eugene Springfield Fire (ESF) retained ESCI to conduct a Community Risk Assessment. This effort was undertaken subsequent to the implementation of an interlocal agreement between the cities to facilitate the joint delivery of fire and life safety services. The new organization, now known as Eugene Springfield Fire, is tasked with providing Fire, EMS, and Life Safety services to both communities. As part of this consolidation, ESF realized that there was little data related to commercial occupancies in the City of Springfield, as well as incomplete and obsolete occupancy data for the City of Eugene. Subsequently, ESF was awarded an Assistance for Firefighters Fire Prevention & Safety (AFG FP&S) grant to conduct an occupancy survey in both cities and complete a Community Risk Assessment, which was performed by ESCI.

During the summer of 2019, ESCI representatives analyzed the consolidated ESF organization, including service delivery, current Fire Prevention Division resources, community demographics, and known hazards. As part of this effort, ESCI conducted a Hazard Vulnerability Assessment with representatives from ESF, City of Eugene Emergency Management, and City of Springfield Emergency Management. Subsequently, ESCI representatives conducted a site visit to further learn about ESF operations, community hazards, and response planning. Representatives from the City of Eugene, Lane County Emergency Management Division, Lane County Health Department, and Lane County 911 were interviewed as part of this effort.

The analysis of ESF operations, resource allocation, and community risk revealed several realities:

- The cities of Eugene and Springfield have a significant natural, human, and technological hazards and risks that require constant attention and allocation of mitigation resources and efforts.
- Lane County, and the public and private entities within, have developed contemporary and comprehensive plans for identifying and mitigating natural hazards throughout the region.
- ESF is a robust all-hazards fire department, with significant emergency operations resources and contemporary deployment strategies.
- The consolidation of Springfield Fire and EMS and Eugene Fire Department appears to have resulted in an enhanced and more efficient emergency services delivery system.
- The recently completed occupancy survey in both cities identified thousands of commercial occupancy hazards that were not previously inventoried (or identified).
- The current resources allocated to fire prevention and life safety code enforcement in both cities is likely not enough to ensure fire and life safety code compliance.
- Lack of **full** integration and coordination of internal ESF administration and operations may be an impediment in efficiently responding to, and managing, large-scale disasters.

ESCI was very impressed with the dedication and professionalism of the ESF personnel and others who participated in this project and hope this effort will result in an even more all-hazards resilient organization and community.

ACKNOWLEDGMENTS

Emergency Services Consulting International (ESCI) wishes to acknowledge the various members and leaders of the cities of Eugene and Springfield and other representatives who contributed, and without whose assistance, this project could not have been completed.

City of Eugene

Sarah Medary
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Lane County

Patence Wunningham-Melcher
Emergency Manager

Selena Jarmillo
Public Health Program Manager

***...and the public employees, firefighters, and
staff of Eugene Springfield, who daily serve
their community with honor and distinction!***

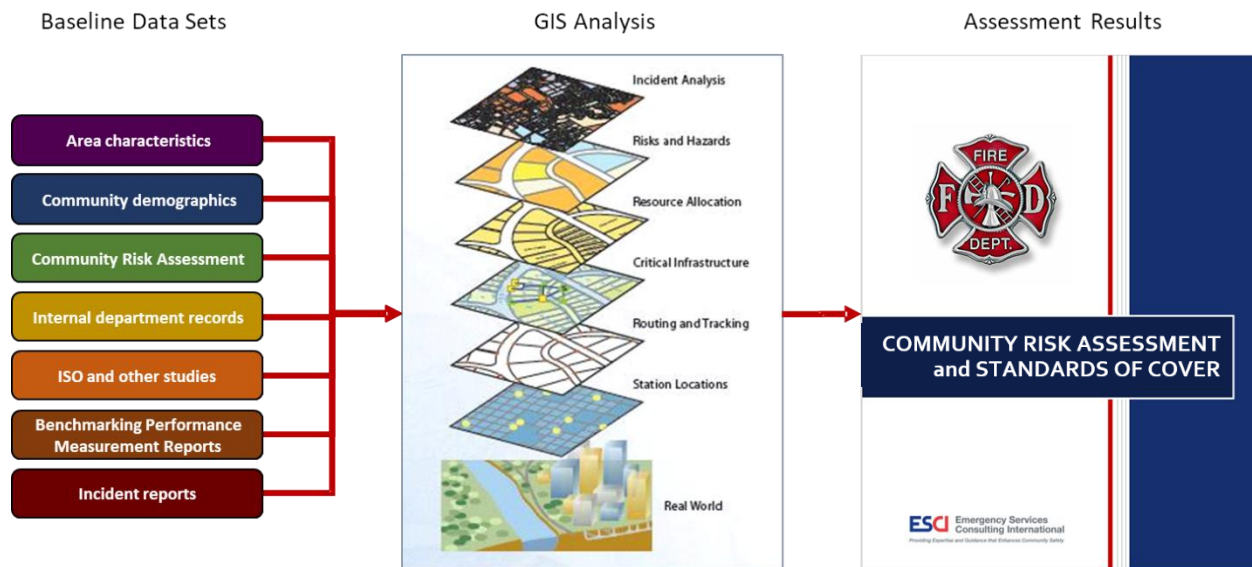
METHODOLOGY

ESCI used the information provided by Eugene Springfield Fire (ESF) to establish a baseline assessment of current hazard conditions and ESF service performance, along with an organizational analysis of basic operations and life safety services. The purpose of this evaluation was to assess the various hazards, risks, and vulnerabilities in the cities of Eugene and Springfield, assess current emergency management and preparedness capabilities in each city, assess existing fire prevention/code enforcement resources, and benchmark against industry standards and best practices—including comparisons with cities of similar size and demographics. It must be noted that this study summarizes the conditions evaluated during a “snapshot” in time, and some environmental or organizational changes may have taken place during the study period.

Additionally, ESCI paid particular attention to assessing and categorizing fire risk by building type/occupancy use in both cities. It is important to note there are uncertainties in any assessment of this type—incomplete data, scientific uncertainty, and the inherent simplification of information within the scope of this study. During this study, ESF initiated an effort to update the occupancy inventory in both cities to incorporate into its occupancy database.

The ESCI Planning Team also collected information, reviewed population and other community growth patterns, and then analyzed trends and expectations to provide a glimpse into future community conditions, land use, and fire protection risks to interpret their potential impact on emergency service planning and delivery. ESCI then used Geographic Information Systems (GIS) technology and historical reporting tools to visualize the data and provide additional information for strategic planning purposes. The following figure illustrates the conceptual GIS methodology as applied to this assessment.

Figure 1: GIS Methodology¹



SECTION 1:

COMMUNITY AND ORGANIZATIONAL OVERVIEW

THE CITIES OF EUGENE & SPRINGFIELD

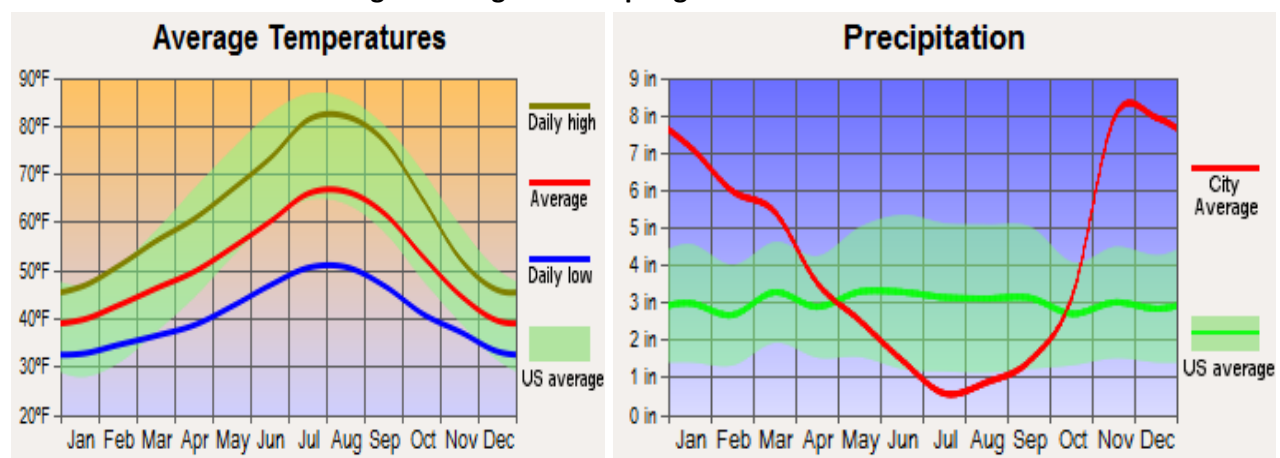
The cities of Eugene and Springfield are located adjacent to each other in west-central Oregon, at the southern end of the Willamette Valley, near the junction of the Willamette and McKenzie rivers. Located in Lane County, both communities have a long and storied past. Settlers first moved into the area in 1846, established lumber and flour mills, and platted, what was then known as Eugene City, in 1852. The name was changed to the City of Eugene upon incorporation in 1862, and the City of Springfield was platted and incorporated in 1885.^{2,3}

The communities of Eugene and Springfield have well-earned reputations as outdoor recreation and sports hubs. Eugene is the birthplace of the Nike Company and the University of Oregon, and is also known by the nickname "Track Town." The region hosts numerous regional, state, and national track and field events. Eugene was selected to host the Olympic Track and Field Trials in 2020, and for the first time in the U.S., the World Athletic Championships in August 2021. It is anticipated that over 2,000 athletes and 8,000 media representatives from around the world will participate and bring in thousands of spectators during this 10-day event. This seminal event, in no small part, compelled completion of this study to ensure ESF can prepare for the influx of spectators, athletes, and media, along with preparing for increased future growth, which may result from this event.

Weather & Climate

Eugene and Springfield experience a very temperate climate, with an annual average high temperature of 63.3°F, and an annual average low temperature of 41.7°F, with an overall average temperature of 52.5°F.⁴ The average annual precipitation (rainfall) is just over 46 inches, with an average annual snowfall of 5 inches.⁵ The following figures are graphic representations illustrating temperature and precipitation averages in Eugene and Springfield on a monthly basis.

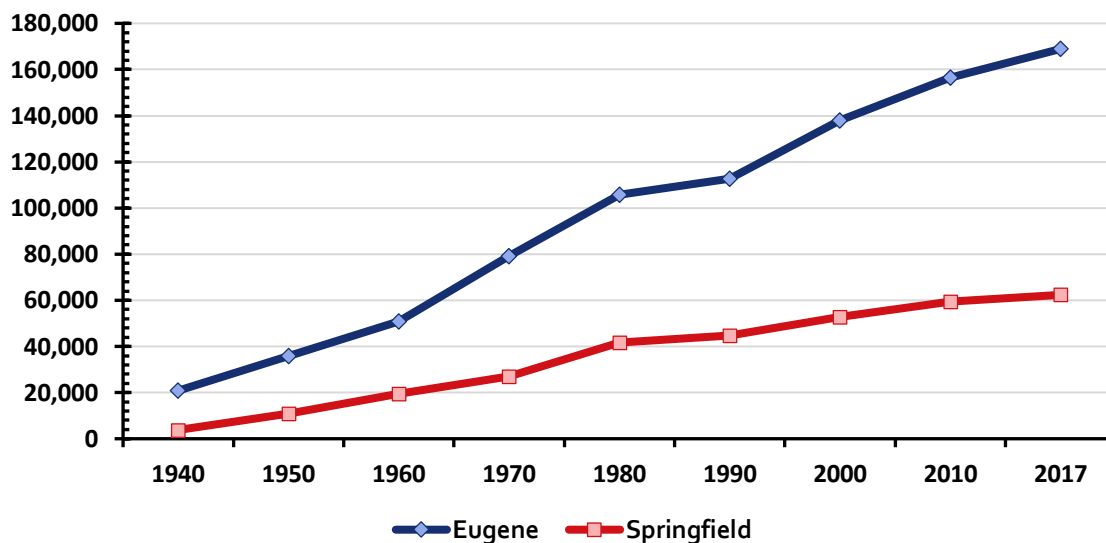
Figure 2: Eugene and Springfield Weather Data



Regional Demographics

At the time of this study, the current service area population for Eugene and Springfield was estimated at 231,272.⁶ This number reflects only the population residing inside the city limits. Approximately 36,000 additional residents are located within the contracted ESF service areas outside of the respective city limits.⁷ The populations in both cities have grown between 2000 and 2017, with an average annual growth rate of 3%. The following figure illustrates resident population growth since 1940.

Figure 3: Eugene and Springfield Population Growth, 1940–2017



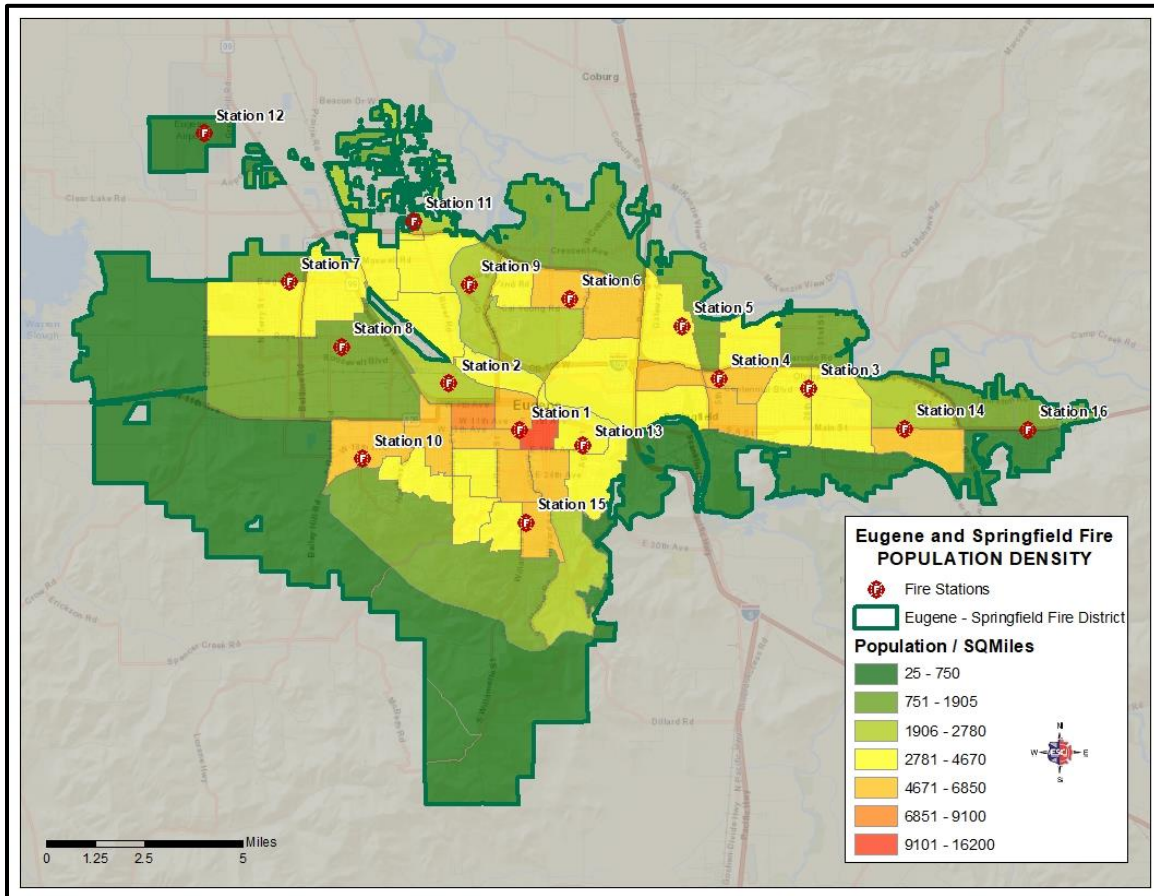
Population

The average population density in the urban/suburban service area is approximately 3,660 people per square mile in Eugene, and 3,840 people per square mile in Springfield. The population densities in the outlying contracted rural/suburban service areas range from 25 to 2,780 people per square mile.

The ESF service area has characteristics of urban, suburban, and rural areas of Lane County (specifically for EMS delivery). The urban areas are characterized by a large number of single-family neighborhoods, significant commercial and light industrial development, a large state university, dense neighborhoods including multi-family housing, large “big box” stores, and a mix of mid-rise or high-rise buildings—the highest is 19 stories tall.

The population density is highest in the Eugene and Springfield urban areas and diminishes with distance from the urban cores in each city. As expected, the areas of the highest population density correspond to the locations of multi-unit housing and older, centrally located neighborhoods. It also appears the areas displaying the highest population density correspond to the areas with the highest service demand as shown in Figure 4.

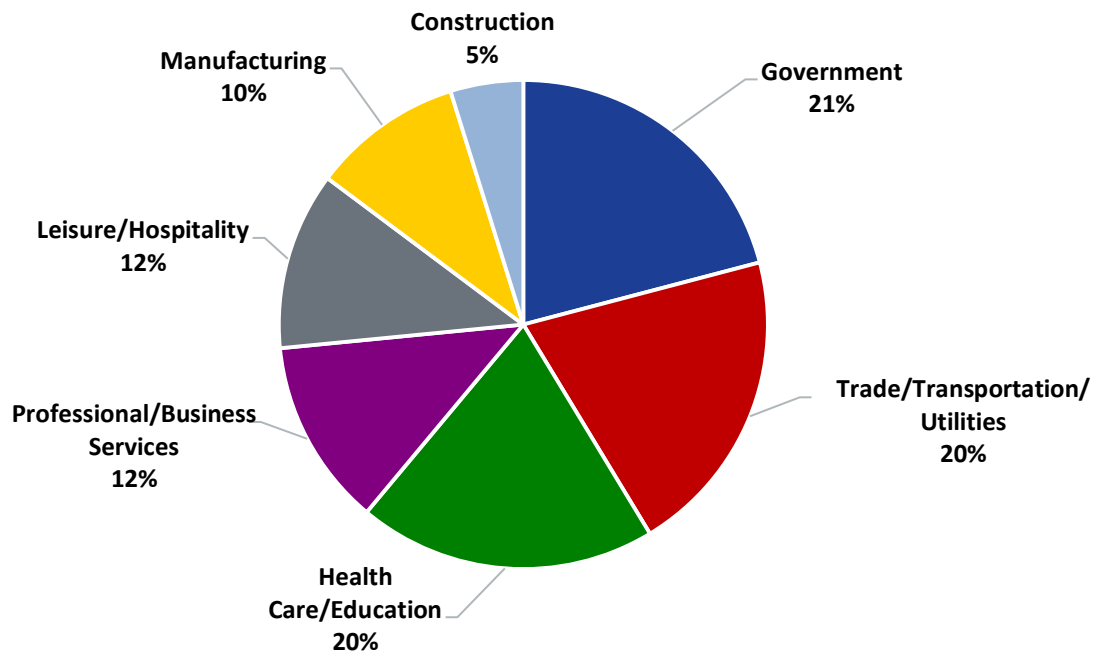
Figure 4: Population Density



Economic and Jobs Information

The Eugene and Springfield area labor market primarily supports the following economic sectors: Health care and education, trade/transport/utility services, leisure and hospitality services, manufacturing, and business/professional services.⁸ The following figure summarizes the number of jobs in the Eugene and Springfield area in each of these sectors, per the U.S. Department of Labor-Bureau of Statistics.

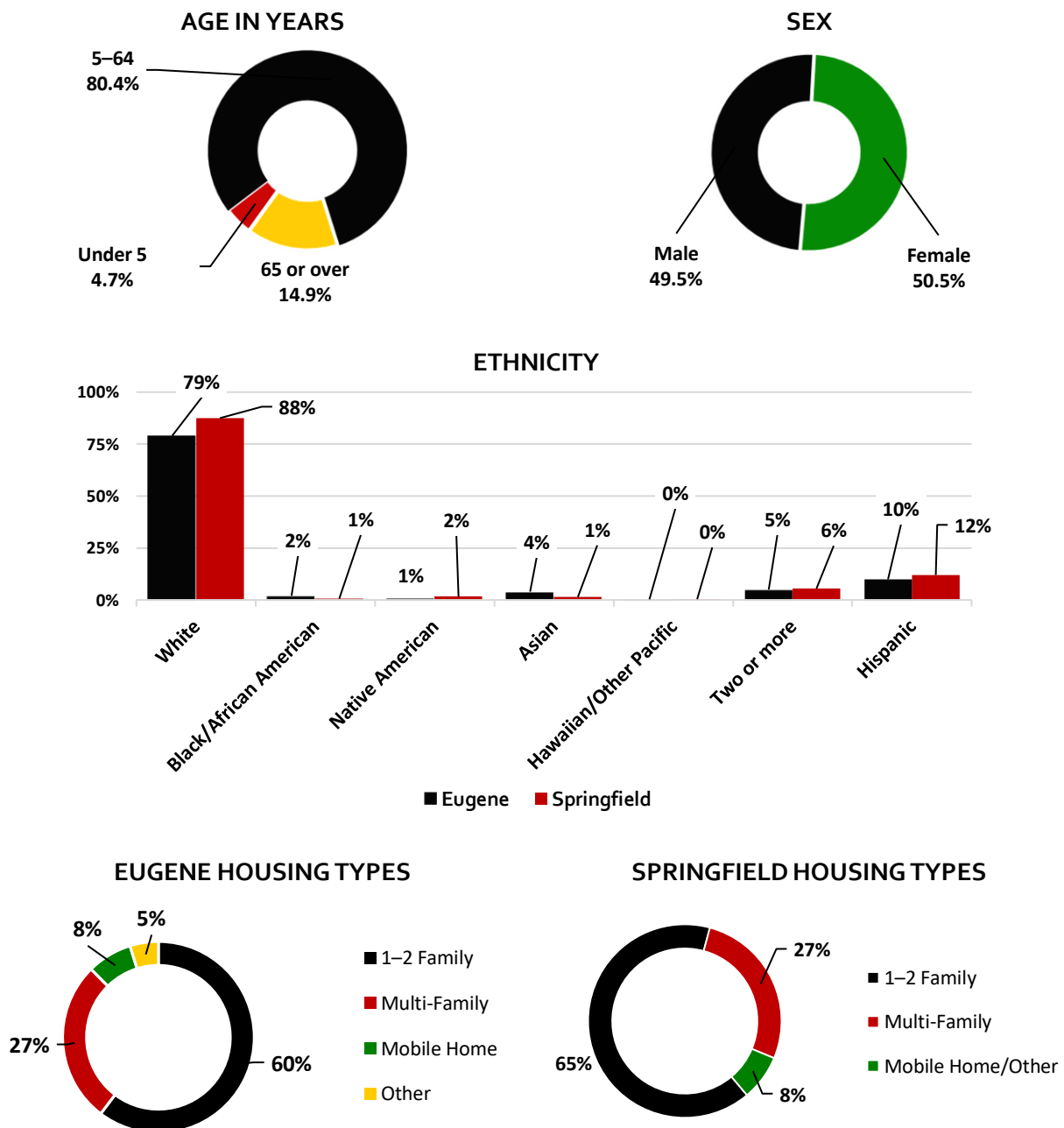
Figure 5: Largest Job Categories as of February 2019

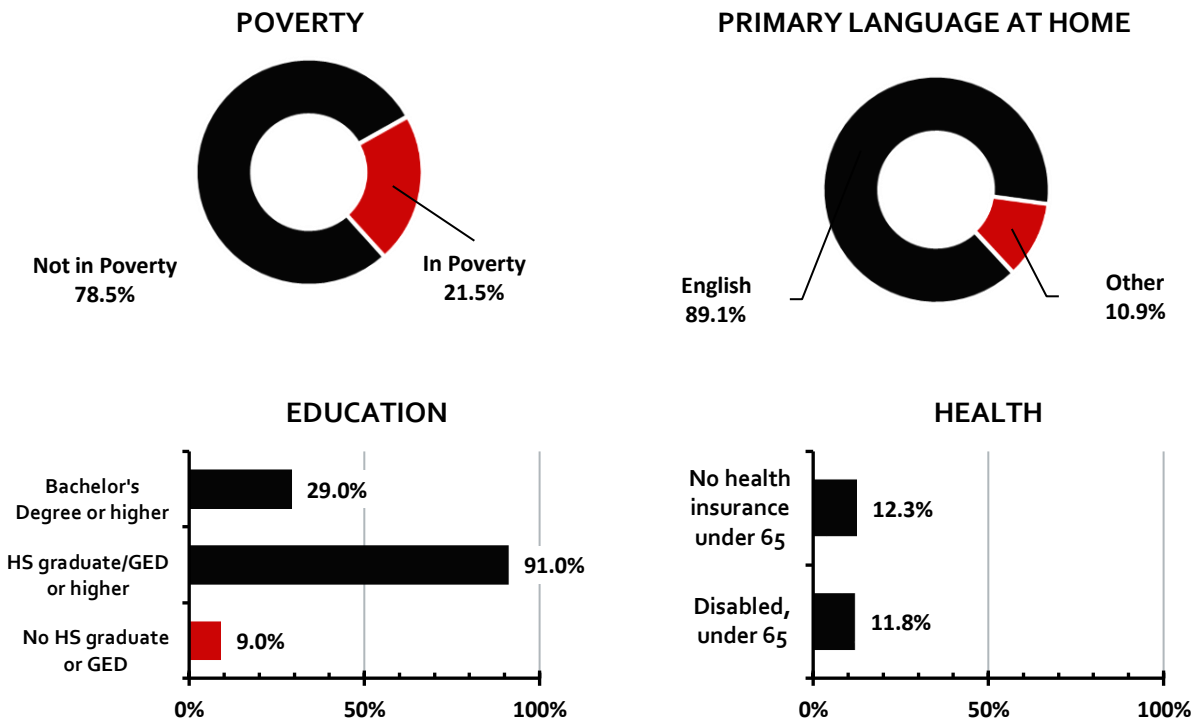


Select Demographics

Select demographics for Eugene and Springfield—age, sex, ethnicity, housing type, income level, primary language, education, health, and assessed property values—are shown in the following figures. For brevity purposes, ESCI averaged slight differences in demographic results between the two cities, where appropriate.

Figure 6: Select Demographics⁹





Demographics Discussion

In addition to the distribution of the population, population demographics can affect the nature of risk and emergency service demand. In urban cities, several factors have been identified that place certain groups of people at higher risk of being injured or killed in a fire. An NFPA report identified these groups as:¹⁰

- Children under 5 years of age;
- Older adults over 65 years of age;
- Lack of health insurance;
- People with disabilities;
- People with a language barrier; and
- People in low-income communities.

These segments of the population are also more likely to use fire department services, especially EMS, than other population groups. EMS incidents represent the overwhelming majority of service demand—over 70% of all responses in the ESF service area. The following is a further explanation of these special risk groups, and their impact on emergency services.

Age: The elderly may have difficulty escaping from fire due to physical limitations and diminished sensory perception (primarily hearing and vision). Quality of life issues, chronic illness, and the proliferation of assisted living/nursing home facilities also increase emergency medical service demand. The very young also represent a vulnerable population, as they cannot appropriately and quickly recognize and react when faced with an immediate danger situation.

Lack of Health Insurance: People under 65 years of age with no health insurance are more prone to chronic illness or exhibit poor physical condition simply because they do not seek prompt treatment. About 10% of the ESF population under age 65 do not have health insurance, which likely results in higher demand on the EMS system.⁶

Disabilities: People under 65 years of age with disabilities comprise almost 10% of the ESF population, and may be incapable of quickly recognizing an emergency and react appropriately.

Language Barrier: Segments of the population may have cultural differences or language barriers that inhibit their ability to call for help when needed or effectively communicate their needs and concerns. According to the NFPA, "Language barriers, cultural differences, and inexperience with unfamiliar home technologies are factors that mark the challenges of helping newcomers live safely from the threat of fire in the home."¹¹ Just over 8% of the Eugene and Springfield population is foreign-born, and 11.5% of the population speak a language other than English at home.

Low-Income: Those with low incomes use fire and EMS services more often than those with higher incomes. Over 21% of the Eugene and Springfield resident population lives below the poverty level. The U.S. Census Bureau 2018 poverty threshold is defined as \$13,064 for an individual and \$25,554 for a family of four. Low-income is often combined with other factors such as education or work status.

ORGANIZATIONAL OVERVIEW

The following is a brief description of each city's governance structure and their respective emergency management/response organizations.

City of Eugene

The City of Eugene is the second-largest city in Oregon, with an estimated population of 171,245 and an incorporated area of 43.9 square miles.⁶ The City of Eugene is governed by a City Council, comprised of eight Council Members and a Mayor, who serves as the Council Chairperson. An appointed City Manager is responsible for the administration of all city departments, including Central Services, Public Works, Library, Recreation & Cultural Services, Planning & Development, Police, and Fire & Emergency Medical Services.

City of Springfield

The City of Springfield is the ninth-largest city in Oregon, with a population of 62,353 and has an incorporated area of 15.7 square miles.¹² The City of Springfield is also governed by a City Council, comprised of six Council Members and a Mayor, who serves as the Council Chairperson. An appointed City Manager oversees eight city departments, including Development Services, Finance, Human Resources, Information Technology, Library, Police, Public Works, and Fire and Life Safety.

Eugene Springfield Fire

Fire and life safety services in both cities are delivered by a functionally consolidated organization known as Eugene Springfield Fire (ESF). In an effort to gain efficiencies between the two organizations, a 2010 interlocal agreement (IGA) was created between the two cities, resulting in a consolidation of Eugene and Springfield fire department administrative and support services. Subsequent additional support services consolidations occurred, culminating in full consolidation of emergency operations in August 2014, and the creation of Eugene Springfield Fire. ESCI notes that fire department employees in both cities technically retain employment in their respective cities, even though they operationally deploy as one department.

Programs & Services

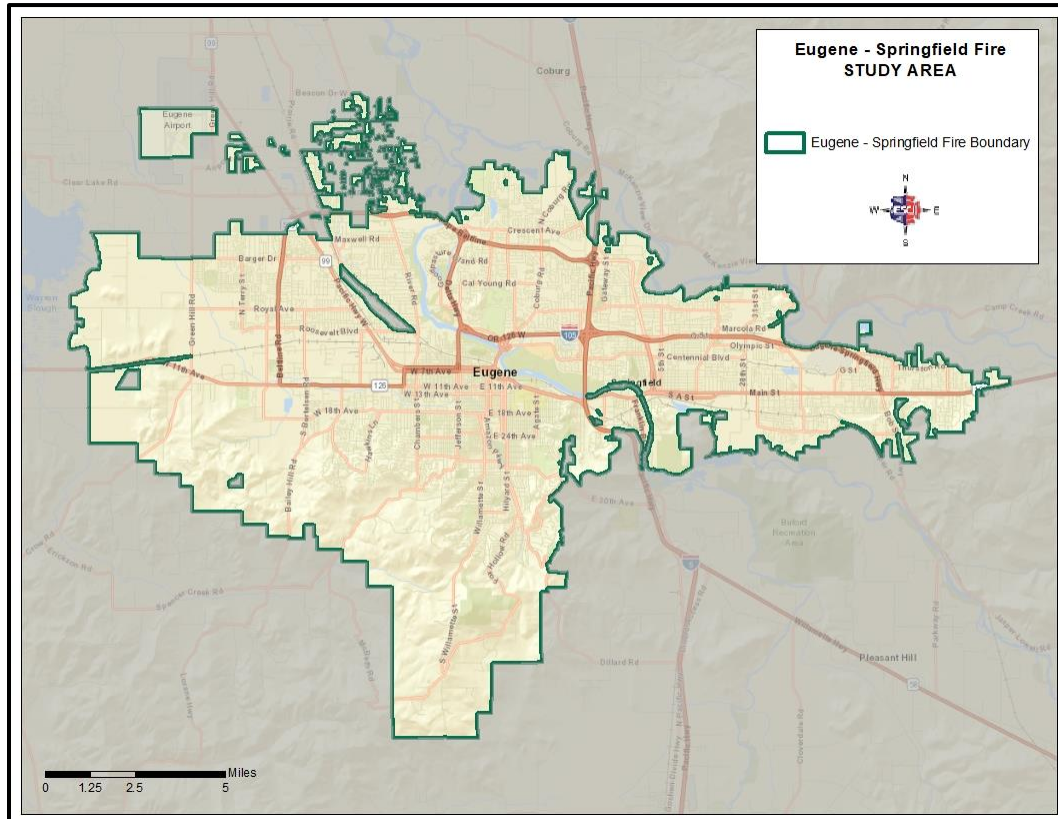
ESF operates under five functional divisions: Office of the Chief, Shift Operations, Special Operations, Fire Marshal's Office, and Administrative Services. Each Division is administered by a Division Manager, who reports directly to the Fire Chief.

Services include the following:

- Fire suppression: structural, marine, aircraft, wildland
- Specialized/technical rescue
- Hazardous materials management, response, and mitigation
- First response emergency medical care (EMS) and ALS ambulance transport
- Fire prevention, education, and life safety outreach education
- Risk reduction
- Code enforcement and plans review
- Fire/arson investigations
- Routine on-going and specialized training
- Logistical support, operations analysis, financial management, planning, and record-keeping
- Fleet & facility maintenance
- Other support services¹³

The ESF service area is shown in the following figure.

Figure 7: ESF Service Area



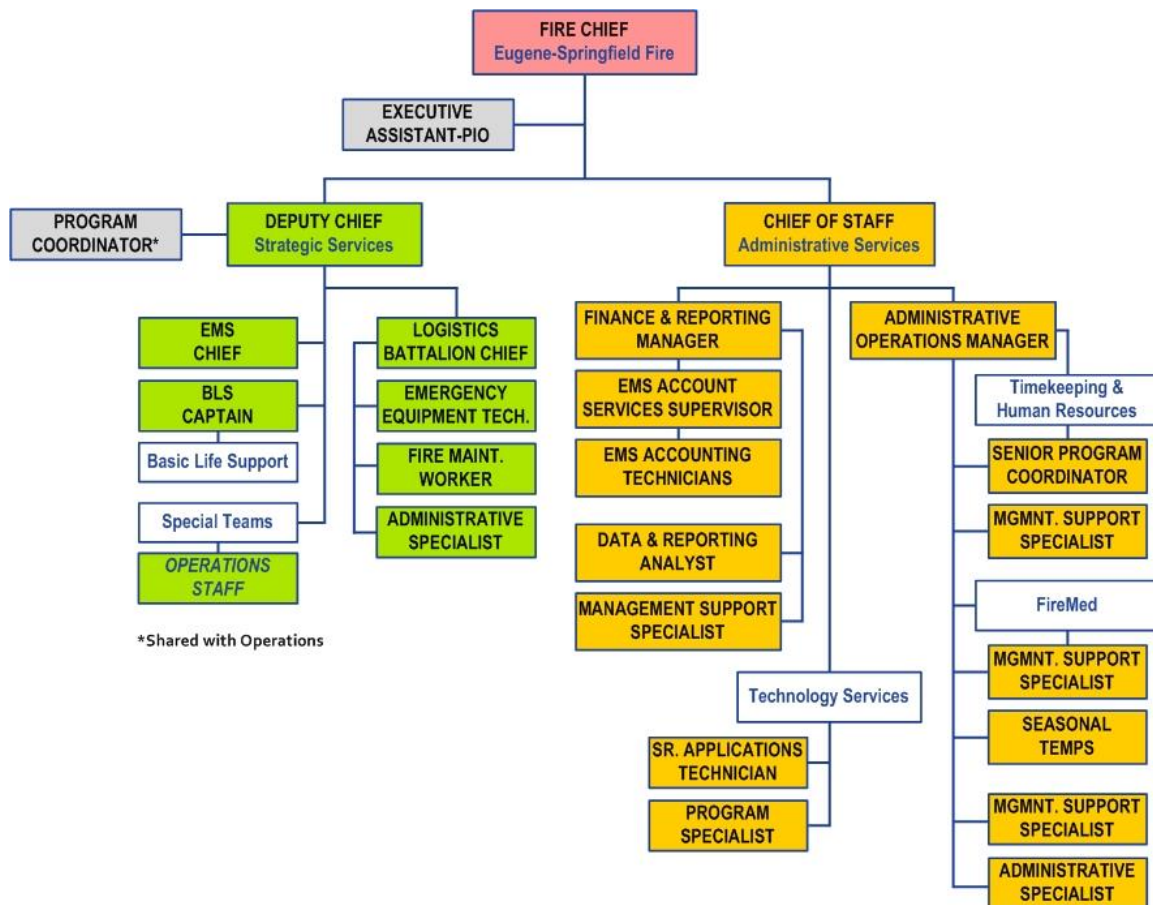
The service area includes several neighboring special districts served by ESF through intergovernmental contracts. The Department provides fire suppression and emergency response services to the following districts:

- Bailey-Spencer Rural Fire Protection District (RFPD)
- Eugene Fire District #1 RFPD
- Glenwood Water District
- Rainbow Water District
- River Road Water District
- Willakenzie RFPD
- Zumwalt RFPD

Organizational Structure—Administrative

The following figure illustrates the current ESF Strategic Services/Administrative Services structure:

Figure 8: ESF Strategic Services/Administrative Services Structure

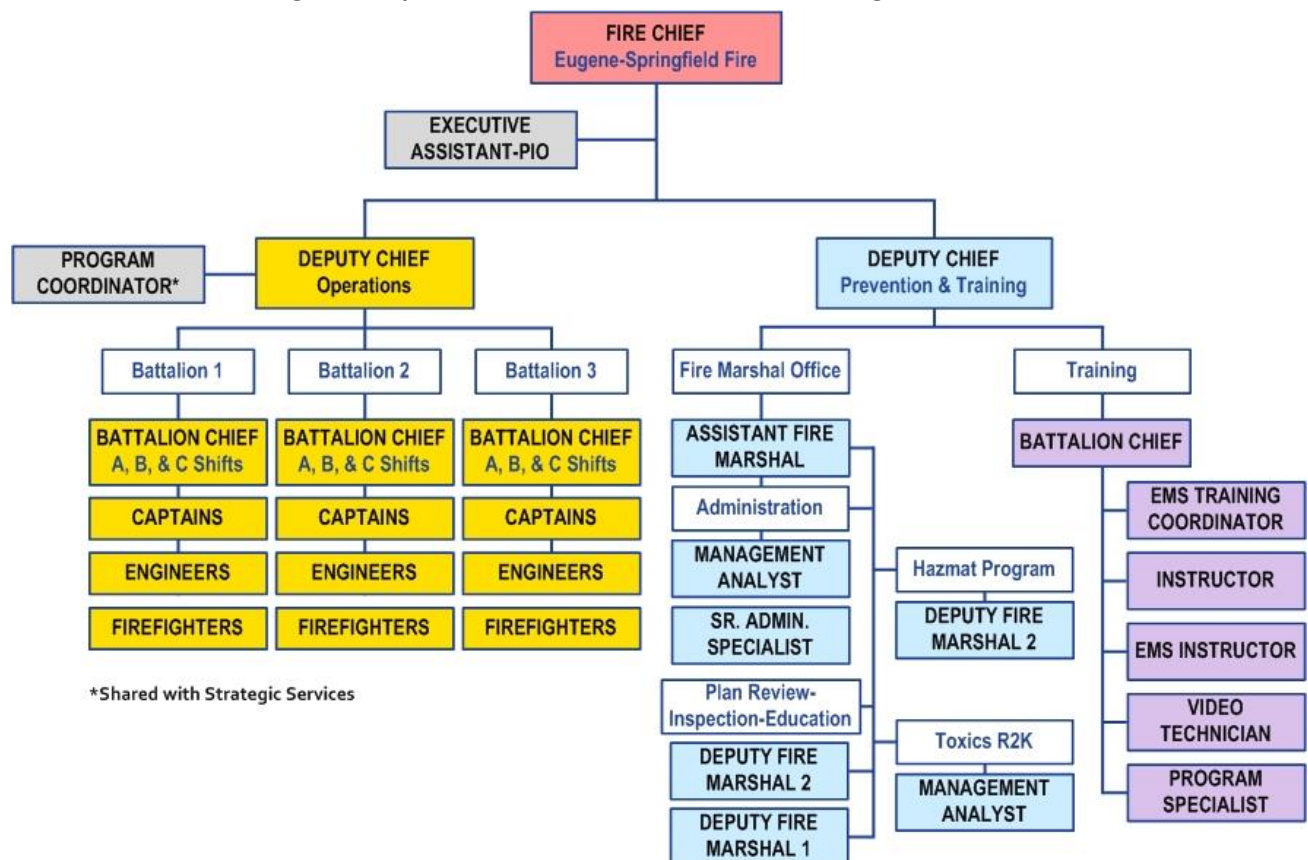


Due to the size of the organization, ESF provides a robust and wide range of administrative services related to human resources, payroll, information technology, accounting and EMS billing, logistical and equipment maintenance, and EMS operations. In many cities, some of the internal services shown in the preceding figure are often provided by other city departments (Information Technology and Human Resources, for example). ESCI noted the City's Central Services Department provides similar services to other City departments. This redundancy could be advantageous in the event ESF or Central Services experience a significant business disruption.

Organizational Structure—Operations/Prevention/Training

The following figure illustrates the structure and reporting relationships of the Operations, Fire Prevention, and Training Divisions.

Figure 9: Operations, Fire Prevention, and Training Divisions



Except for the Toxics Right to Know (R2K) program, the other positions are common in large urban fire departments. The Toxic R2K program, mandated by changes to the City's charter in 1996, is unique to the City of Eugene. The law requires that certain businesses within the City of Eugene that use federally listed hazardous substances provide public information concerning the use and disposition of these substances. The program is managed by a Management Analyst and funded through user fees.

Vision, Mission, & Values

The ESF 2015 Standards of Coverage Study identified the following core values and tenants guiding department operations:

MISSION

To serve our communities by preserving life, protecting property, and the environment through prevention, education, emergency medical services, rescue, and fire suppression services.

VISION

To deliver efficient and effective services by working together to maintain a progressive, caring, professional organization that remains flexible within a changing environment. We strive to be recognized for our leadership within the region and the state by fostering cooperative working relationships. We work to be innovative, fiscally responsible, and financially stable and secure.

VALUES

We value respect, integrity, accountability, teamwork, service, and adaptability. We measure our success by the satisfaction of the communities we serve, our personnel, and our strategic partners.

Emergency Management

Each city supports Emergency Management (EM) programs differently. In the City of Eugene, EM is located in the city's Risk Services Division of the Central Services Department. The Eugene EM program is staffed by an EM Coordinator and two EM Analysts.

EM responsibilities in the City of Springfield are located in the City's Development and Public Works Department. One full-time employee oversees the City's EM programs.

Eugene and Springfield EM programs closely coordinate with other community EM programs, including:

- Lane County Emergency Management
- Oregon Office of Emergency Management
- University of Oregon Safety and Risk Services Department
- Eugene Water and Electric Board (EWEB)
- Springfield Utility Board

ESF Fire Prevention Division

The Fire Prevention Division is overseen by an acting Fire Marshal. The division is also staffed with an acting Assistant Fire Marshal and six Deputy Fire Marshals (DFMs). Three DFMs are assigned to new construction and plan review responsibilities. Two FTEs are responsible for the City of Eugene, and 0.4 FTE is responsible for the City of Springfield. The remaining 0.6 FTE is responsible for land use and planning review in the City of Springfield. Currently, these three Deputy Fire Marshals have special funding limitations and are specifically assigned to and funded by new construction permit revenue from the Eugene and Springfield Building Departments.

The other three DFMs are assigned to handle complaints, maintenance inspections, event and hazardous material operational permitting, FPS maintenance tracking, public education, and the Juvenile Fire Setter program. In addition, all six Deputy Fire Marshals are also responsible for fire investigations. This additional assignment is based on an on-call rotation system.

The following figure shows the Fire Prevention completed workload for the Fiscal Year 2019 (FY 2019).

Figure 10: ESF Fire Prevention Division Completed Work, FY 2019

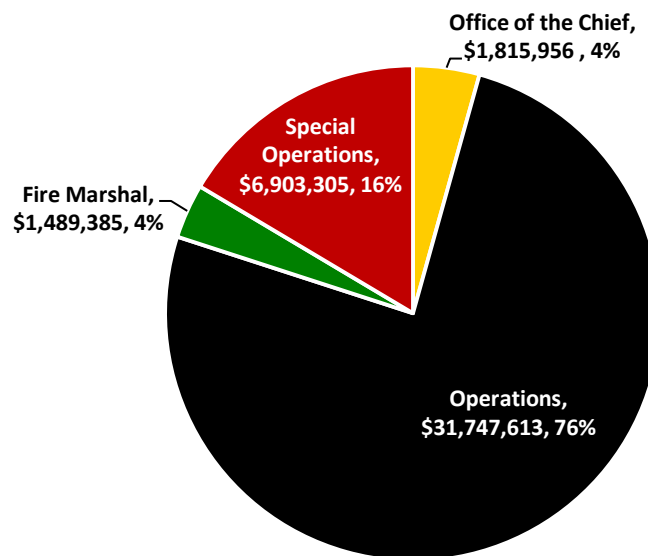
Fire Investigations	Total	Percent	Target
Total ESF responses to fires	770		
Fires Investigated by the Fire Marshal's Office	149	19%	
Fire Investigations where the cause was determined	86	58%	95%
Inspections	Total	Eugene	Springfield
New construction	615	444	171
Code enforcement	806	614	192
Operational permits	241	201	40
Hazmat permits	513	315	198
Total Inspections	2,175	1,574	601
Reviews	Total	Eugene	Springfield
Plans reviews	1,669	1,526	143
Land use reviews	190	70	120
Operational permit reviews	235	195	40
Total Reviews	2,094	1,791	303
Community Education/Outreach	Total	Ratio	
Public Education Events	125		
Number of people reached	5,811	46:1	

ESCI noted that the department does not currently use operations crews to conduct routine fire inspections. All fire inspections are conducted by Inspector-certified Fire Prevention Division staff.

Funding Sources

The City of Eugene's adopted 2019 operations expenditure budget for ESF is \$41,956,259, which was an increase of 2.8% over the FY 2018 Adopted Budget.¹⁴ The City of Springfield's adopted 2019 operations budget for ESF is \$19,977,430, which is an increase of approximately 5% compared to the amended 2018 budget.¹⁵

Figure 11: FY 2019 Eugene Fire Budget



In general terms, the proportion of each city's budget contribution is based on the number of fire battalions in each department—two ESF battalions and one Springfield battalion. As a result, Springfield's general fund contribution to ESF is approximately one-third of the overall ESF budget.

SECTION 2:

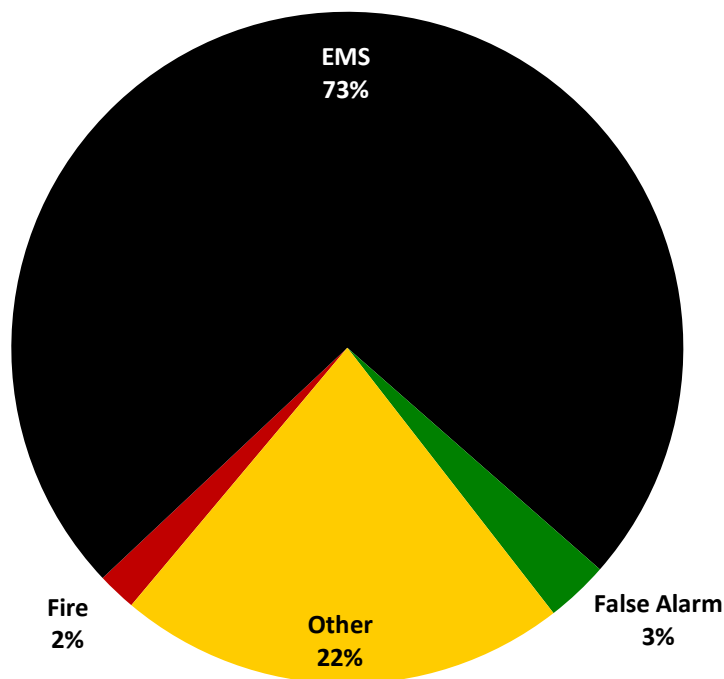
SERVICE DELIVERY

Responses by Incident Type

ESCI evaluated the last three complete years of incident data to identify service demand and trends, incident types, incident density within the service area, and response time performance. ESCI did not include FY 2019 year-to-date data in this analysis.

During 2018, ESF responded to 37,721 incidents, including mutual and automatic aid responses. The next figure shows responses by type of incident during 2018. Emergency medical services (EMS) responses, including motor vehicle accidents, are the most common at 73% of total responses.

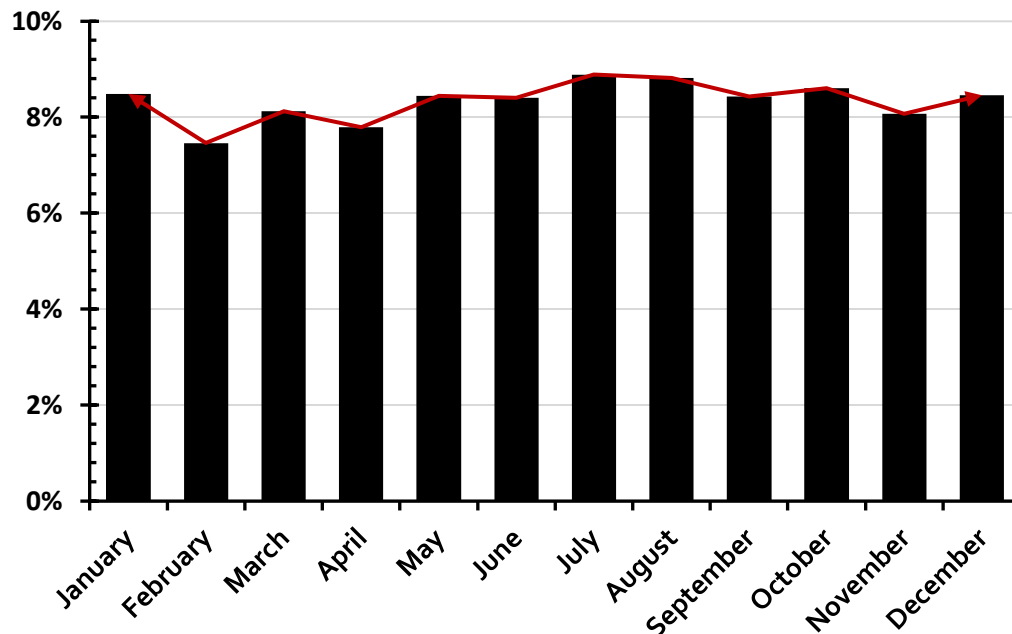
Figure 12: Responses by Incident Type, 2017–2018



Temporal Variation

ESCI analyzed incident data to identify specific service demand trends during certain periods. The following figure illustrates the monthly demand over the past three years.

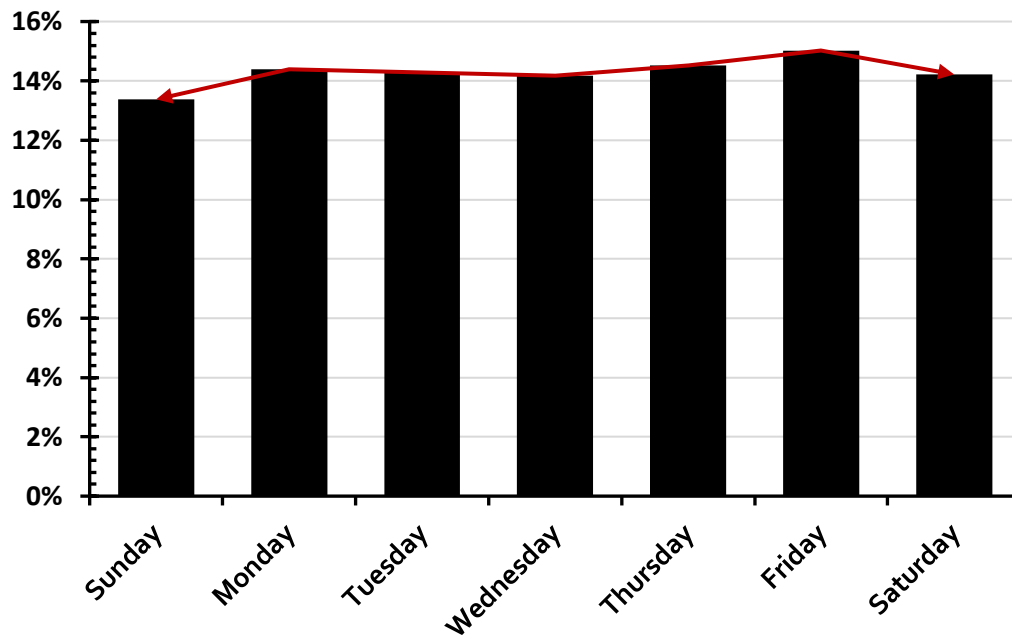
Figure 13: Service Demand by Month, 2015–2018



As shown in the preceding figure, monthly service demand remained relatively consistent throughout the year. The busiest month for ESF was July, which accounted for nearly 9% of the total incident volume (13,566 incidents) over the three years. February was the slowest month, accounting for 7.5% of the total incident volume (11,391 incidents). The range between the busiest month and the slowest month was only 1.4%.

The next figure illustrates service demand by day of the week.

Figure 14: Service Demand by Day of the Week, 2015–2018

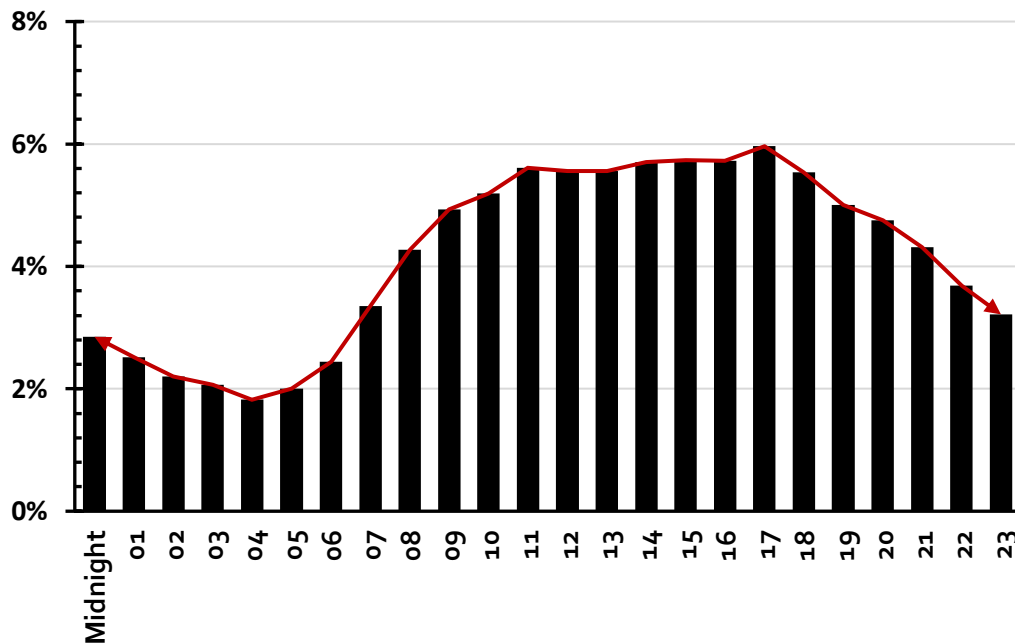


Similar to the analysis of the service demand by month, the service demand by day of the week remained relatively consistent. The most noticeable variation occurred during the weekends when service demand decreased. This is not surprising, as transient student and worker populations and business activity are greater during the workweek.

Friday was the busiest day for ESF, accounting for 15% of the total call volume (22,925 incidents) over the study period. Sundays were the slowest day accounting for just 13.4% of the total call volume (20,413 incidents). While demand varied from day to day, the percentage range (1.6%) between the busiest and the slowest day was insignificant.

Lastly, the following figure illustrates service demand by the hour of the day.

Figure 15: Service Demand by Hour of the Day, 2015–2018



Analysis of service demand by time of the day corresponds with the work and life rhythms of the general population. Human activity, and corresponding incident demand, increased during daytime hours and decreased at night. The incident activity was highest (60% of total incidents) between 9:00 a.m. and 7:00 p.m. The highest incident activity was in the 5:00 p.m. hour, which equaled 6.0% (9,099 incidents) of the total activity per day. The slowest hour for activity was 4:00 a.m., which accounted for 1.8% (2,779) of the daily incident activity.

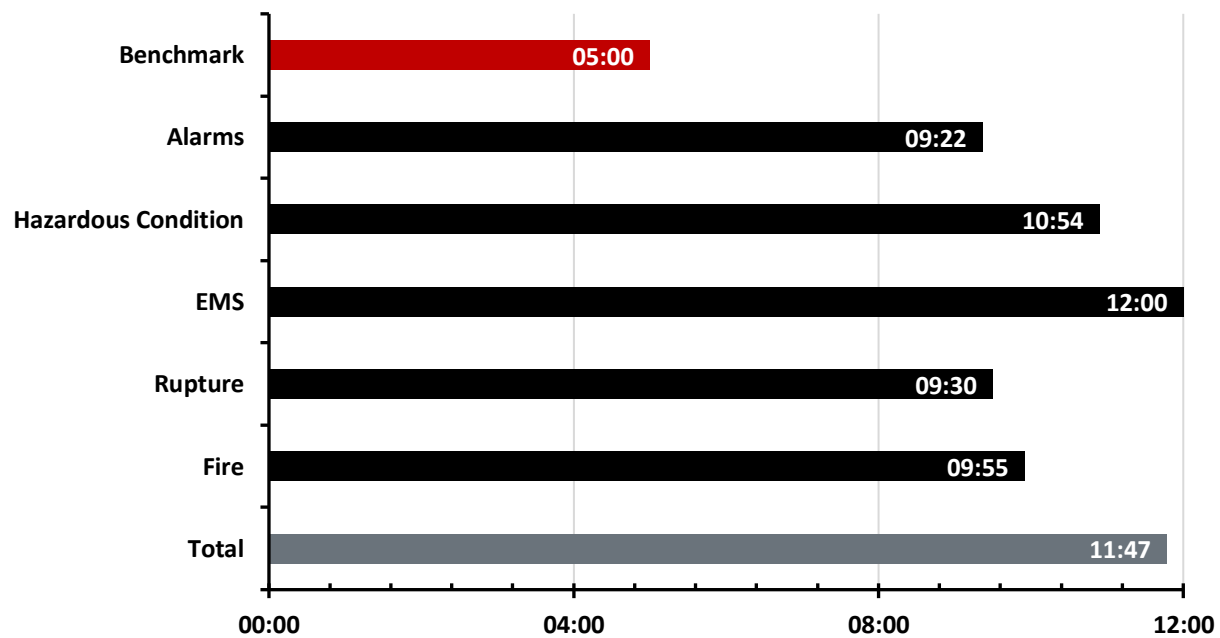
Note that while service demand is lower in the early morning hours, most residential fire fatalities occur late at night or in the early morning hours. From 2014 to 2016, residential fire fatalities were highest between 1:00 a.m. to 2:00 a.m. The 8-hour peak period (11 p.m. to 7 a.m.) accounted for 48% of residential fatal fires.¹⁶

Response Time Performance

Evaluating turnout and travel time is the most commonly used measure of fire department response time performance. Turnout time starts when fire personnel are notified of an incident (dispatch time) and ends when they begin traveling to the incident (en route time). Travel time starts when personnel begin traveling to the incident (en route time) and ends when they arrive on the scene (arrival time). The first arriving incident response data provided by Eugene Springfield Fire did not include the apparatus en route time, which prevented ESCI's ability to analyze apparatus turnout times. Therefore, ESCI could only evaluate overall apparatus response time performance (from time of dispatch until arrival on the scene).

The following figures illustrate ESF's emergency first arriving response time performance for 2017 through 2018.

Figure 16: All Incident Response Time Performance at 90th Percentile, 2017–2018

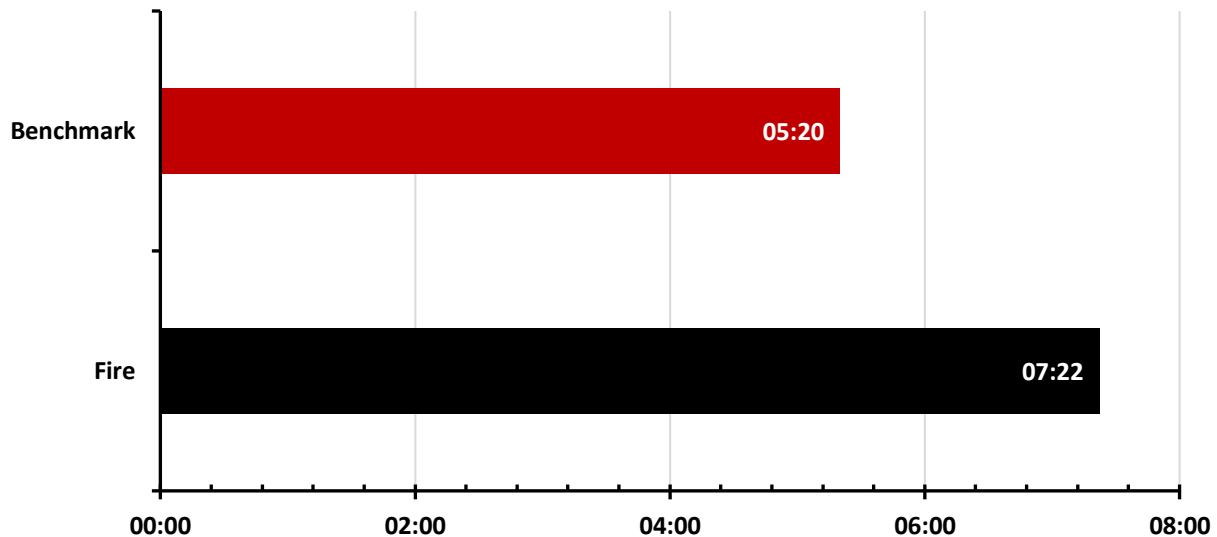


NFPA 1710 identifies 60 seconds for turnout time to EMS incidents, and 80 seconds for fire and special operations incidents, and 240 seconds for travel time for the first arriving fire unit to a structure fire or AED capable response unit to a cardiac arrest. For EMS incidents, this equals 300 seconds (5 minutes) for total response time. Measuring from the time of dispatch until the time of arrival is consistent with the NFPA response time benchmark, even though the turnout time is unknown. On average, Eugene Springfield exceeds the 5 minutes, 90th percentile benchmark by 5 minutes, 22 seconds (05:22).

In assessing response times, ESCI acknowledges that many incident types may not require a rapid, "lights and siren" response, which can affect overall response time performance. In an attempt to more accurately assess response time performance to the most critical incident types, the incident response data provided was filtered to focus only on Building Fire and Advanced Life Support incident types.

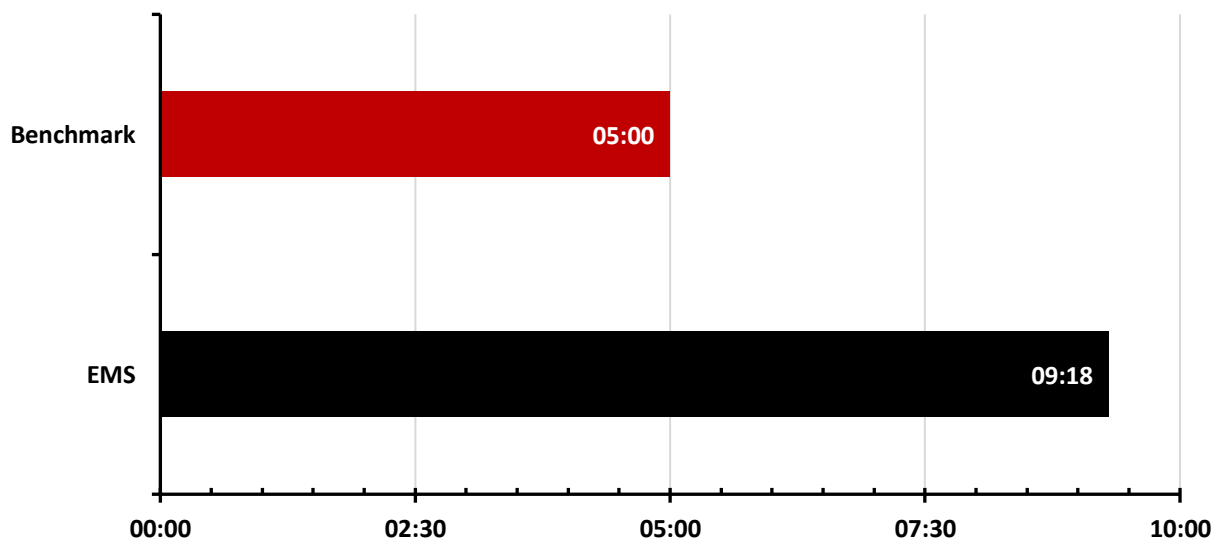
ESCI filtered the incident data in Figure 17 only to include building fires and fires in a structure other than a building (NFIRS Incident Type 111 and 112) where the initial incident action is “extinguish” (NFIRS Action Code 11).

Figure 17: Building Fire Response Time Performance, 2017–2018



ESCI filtered the incident data in Figure 18 only to include EMS incidents, traffic accidents with injuries, pedestrians struck by vehicles, and traffic accidents with entrapment (NFIRS Incident Types 321, 322, 323, and 352) where Advanced Life Support Care was provided (NFIRS Action Code 33).

Figure 18: ALS EMS Response Time Performance, 2017–2018

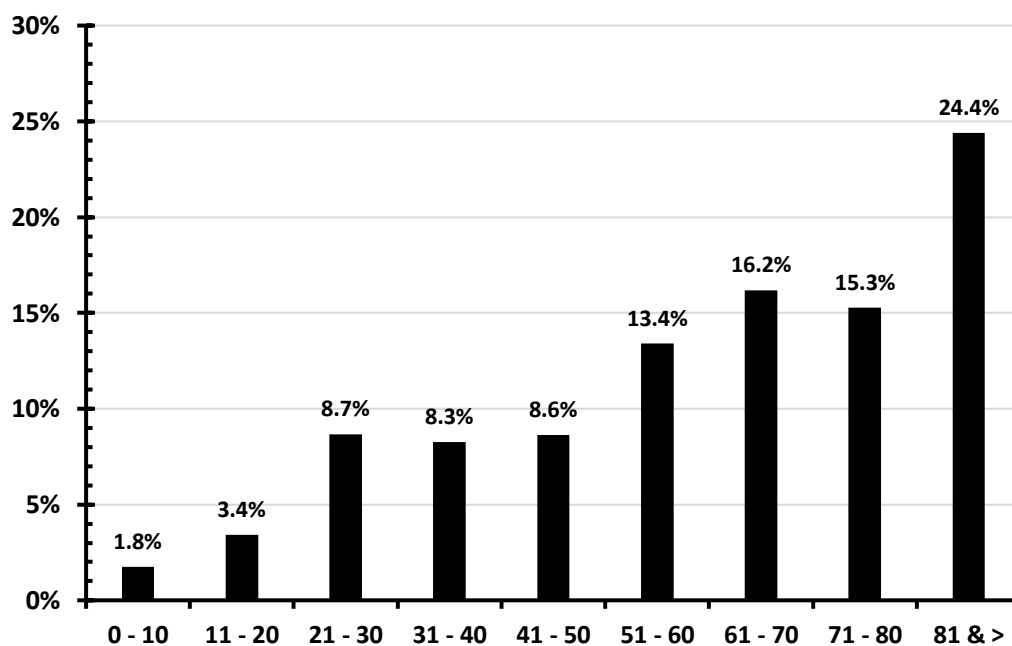


As apparent from the preceding figures, ESF does not meet the NFPA 1710 90th percentile benchmark times for responding to building fires or ALS EMS incidents. ESCI also noted that the response time to EMS incidents was significantly longer than the response to fire incidents, even though firefighters must don their protective clothing before beginning the response to the scene. This disparity may simply be the result of the significantly larger number of EMS incidents compared to structure fire incidents. It may also reflect non-lights and siren responses as initially triaged by emergency medical dispatch protocols, but required ALS intervention once on-scene.

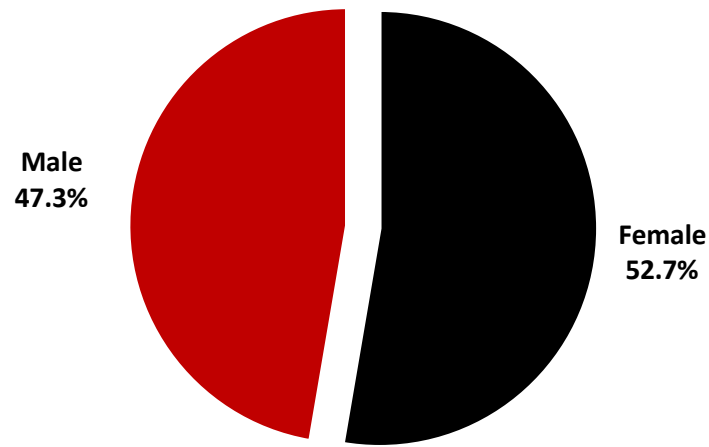
EMS Service Delivery

The following figure illustrates the age range of patients treated by ESF from 2014 to 2018.

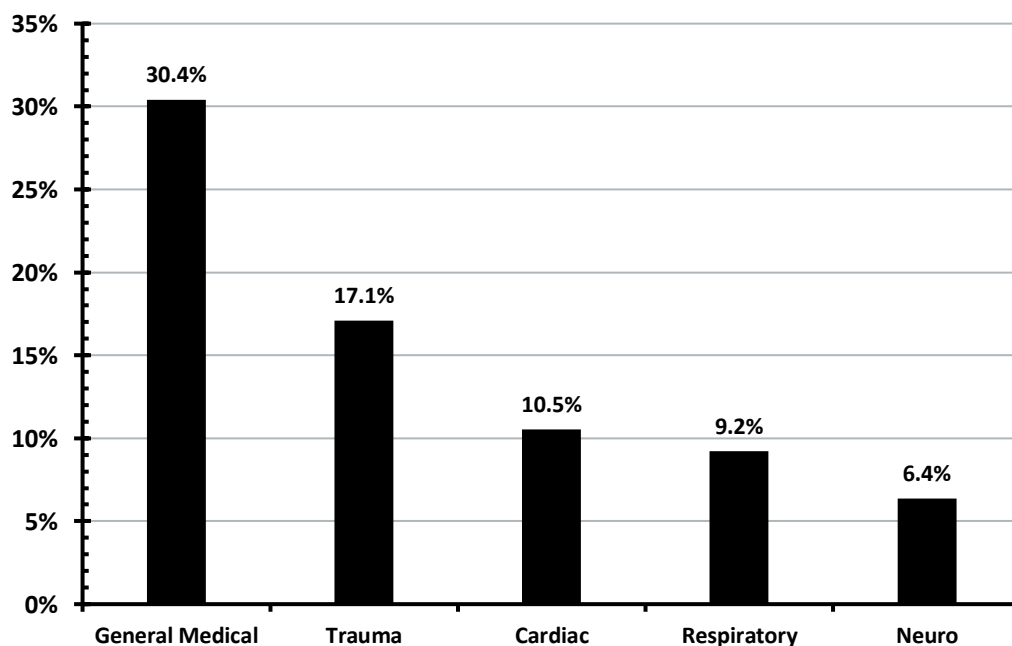
Figure 19: EMS Responses by Age, 2014–2018



A review of the data shows the majority of ESF's EMS incidents involved patients 61 years old and older (55.9%). Conversely, patients 10 years old and younger were just 1.8% of incident responses. The ratio of male and female patients evaluated is shown in the following figure.

Figure 20: EMS Responses by Gender, 2014–2018

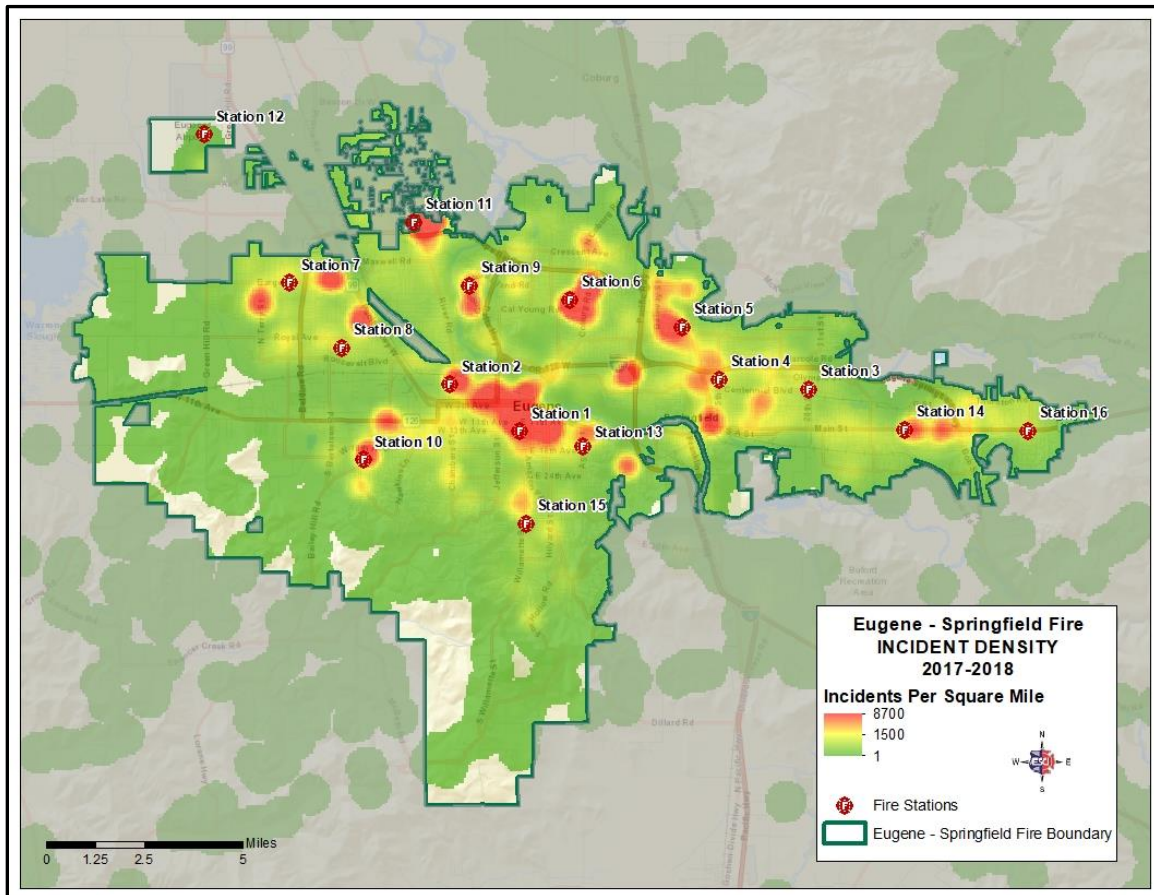
A review of ESF's top five primary medical impressions shows General Medical complaints constituted just over 30% of EMS calls for service, as shown in the following figure.

Figure 21: EMS Responses by Primary Impression, 2014–2018

Spatial Analysis of Service Demand

In addition to the temporal analysis of the current service demand, ESCI used GIS tools to analyze and geographically plot 2017 and 2018 incidents to identify service demand density throughout the ESF service area. The following figure illustrates the density for all incidents within the service area.

Figure 22: Incident Density, All Incident Types, 2017–2018

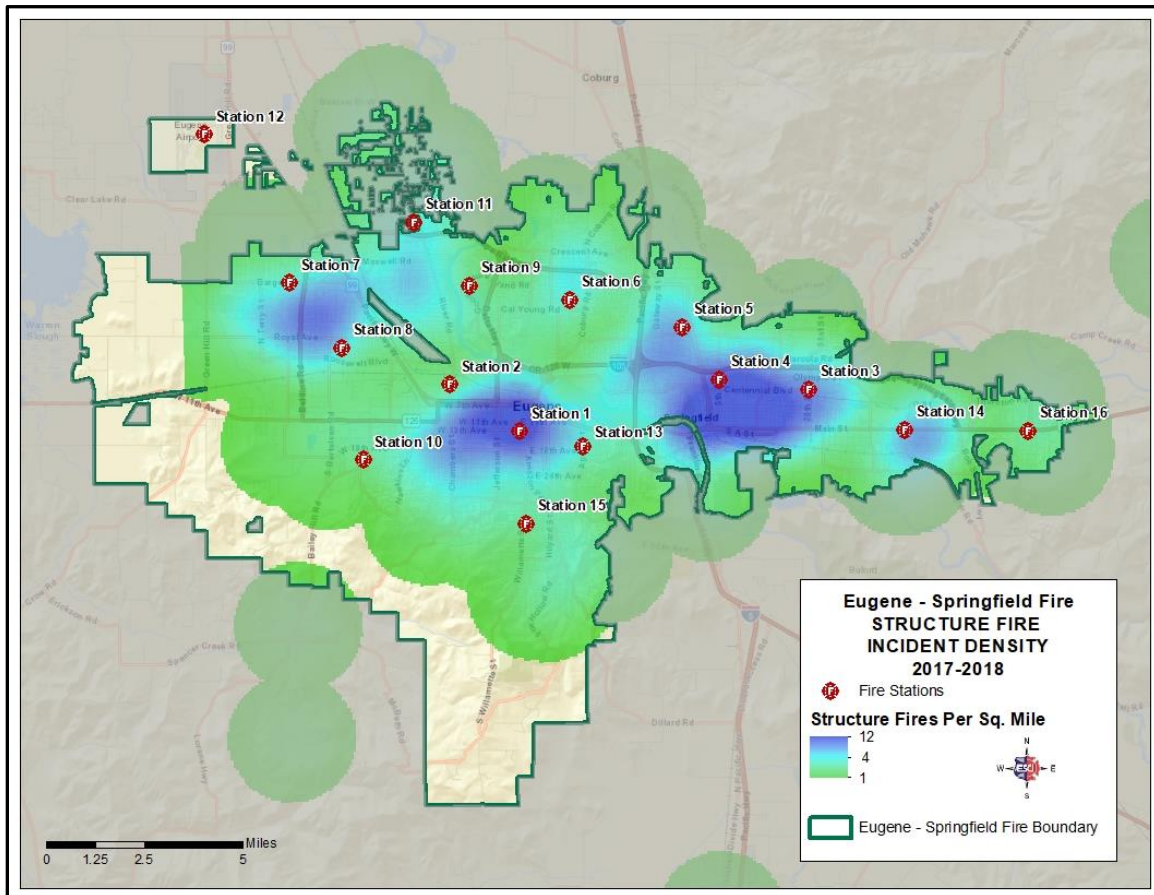


The preceding map shows incident service demand is unevenly distributed, with multiple areas of high call density. The most substantial service demand appears to be slightly east and north of Fire Station 1. This area is on the fringe of the University of Oregon and has a heavy retail footprint. As expected, areas of high incident density are linked to areas of higher permanent and transient population densities.

Fire Incidents

The following figure illustrates structure fire incidents as categorized in the NFIRS reporting system.

Figure 23: Incident Density, Structure Fire, 2017–2018

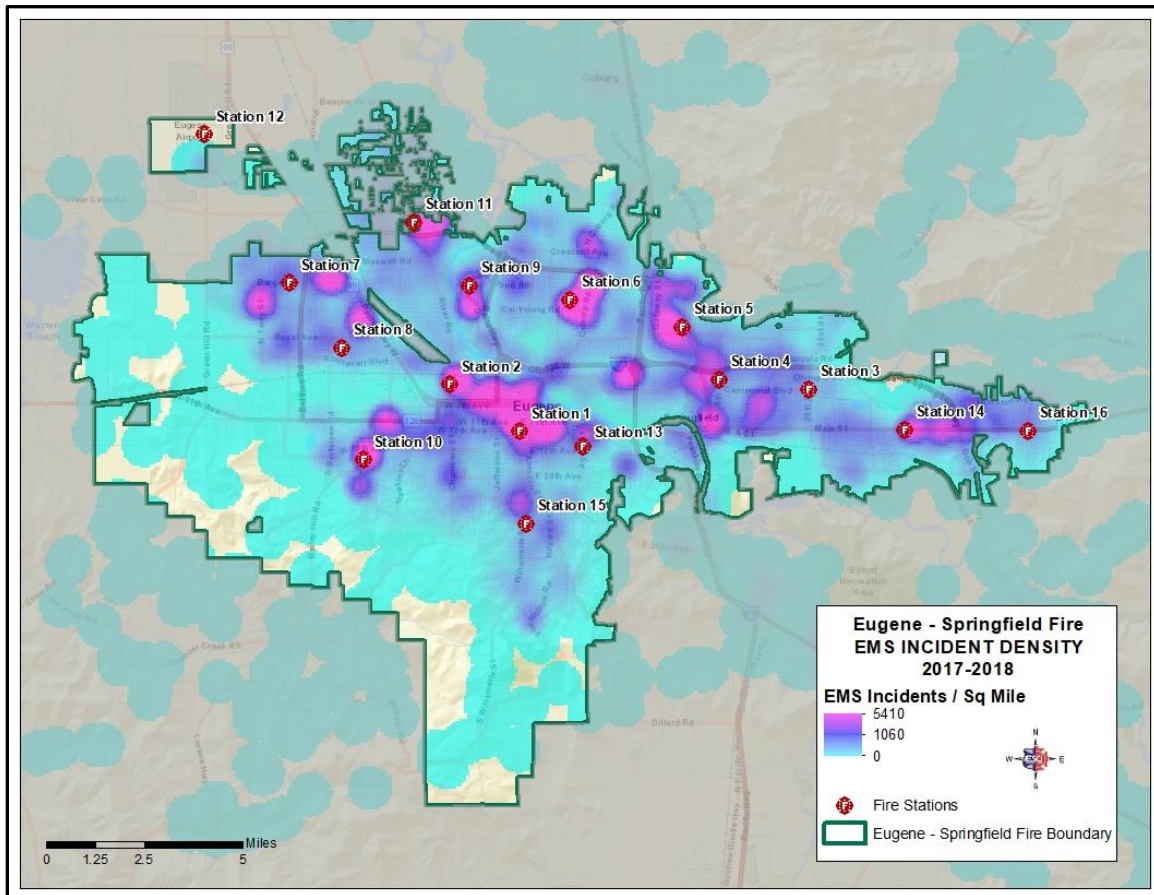


Unlike the all incident density map, fire incidents were grouped in three areas. The area around Station 1 shares a similar pattern to the overall incidents and EMS incidents. However, fire incident density is also shown in the areas between Station 3 and Station 4, along with slightly lower fire incident density between Stations 7 and 8. ESCI noted areas south of Station 11 and near Station 14 that should be monitored to determine if focused fire prevention and education efforts are warranted. Regardless of the distribution of fire incidents, maintaining an initial and effective fire response capability for the entire ESF response area is important.

EMS Incidents

The next figure displays the distribution of EMS incidents throughout the ESF service area.

Figure 24: Incident Density, EMS, 2017–2018



The preceding incident density map reinforces that EMS incidents are the primary driver of service demand in the ESF service area. There are multiple areas of high EMS demand, with the largest located in the Station 1 response zone. In addition, there are approximately 11 to 12 additional EMS “hot spots.” ESCI noted that most, if not all, of these areas have fire stations in proximity. Also, these high demand areas are either in or immediately adjacent to the highest population areas.

Other Incidents

The following figure illustrates the incident density for all call types, except fires and EMS. Examples of other call types include odor investigations, smoke alarm activations, hazardous materials spills, electrical hazards, false alarms, citizen assists, etc.

Figure 25: Service Demand Density, Other Call Types, 2017–2018

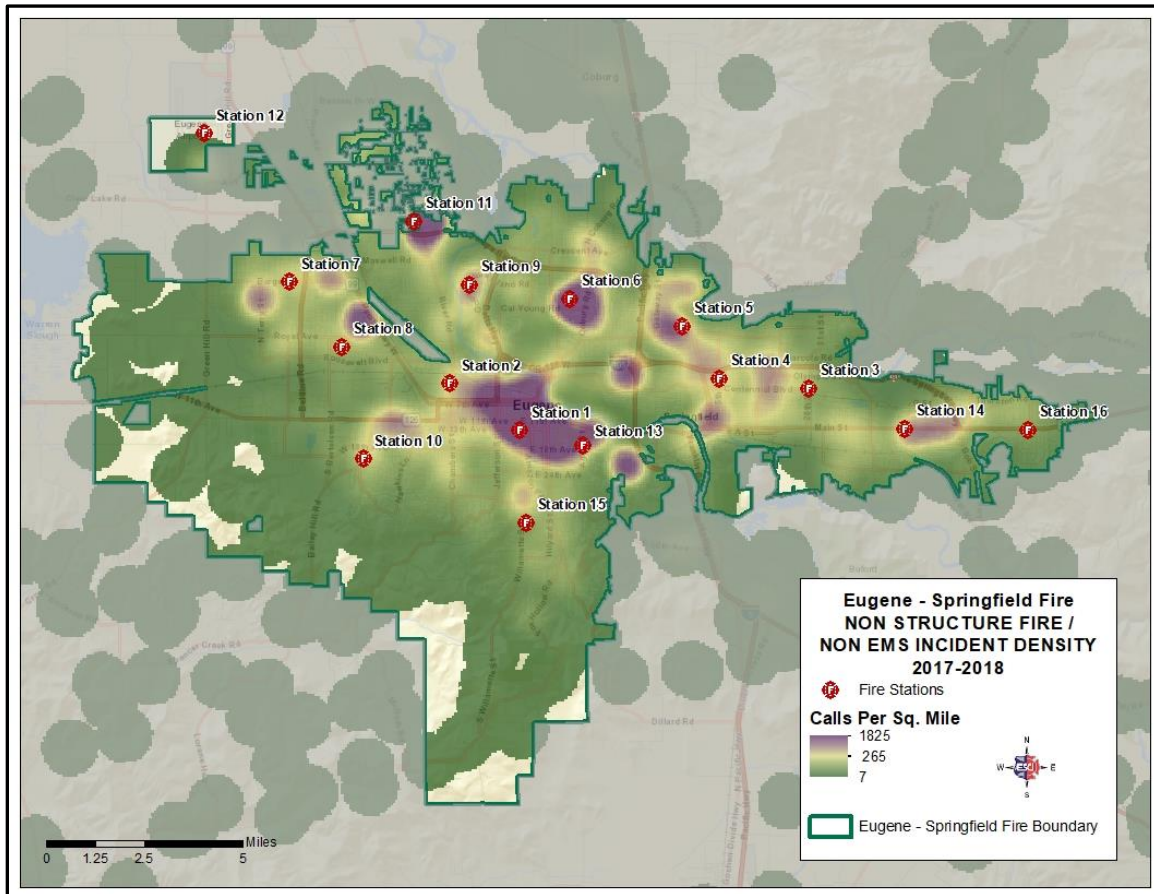


Figure 25 illustrates a similar pattern as the overall incidents and EMS incident maps. The greatest incident density is clustered in the areas between Station 1, Station 13, and southeast of Station 2. These incident density clusters are close to nearly every fire station except for a few outlying stations. Overall, the areas with the most significant number of incidents are incongruent with the structure fire density, yet is congruent with EMS incident density.

Fire Prevention Staffing Survey

Given the integration of delivery areas and built environments into the purview of ESF, ESCI surveyed regional fire departments serving similar-size communities to identify the staffing levels of the respective fire prevention divisions to provide a context in determining the adequacy of the ESF's Fire Prevention Division staffing levels in the newly expanded service area. ESCI created a 14-question web-based survey and sent invitations to 19 fire departments in Washington, Oregon, and California. Six fire departments completed the survey, and the results are summarized as follows:

Question 1: "Are you consulted on proposed new construction/occupancy changes/tenant improvements?"

All six respondents indicated they were consulted in any work of this nature.

Question 2: "Do your inspectors perform existing occupancy inspections?"

All six respondents indicated Inspectors conducted these inspections, and one respondent added their operations crews assisted in these inspections. In that particular department, new fire protection system installations and specialty inspections are performed solely by Fire Inspectors.

Question 3: "What is the frequency of commercial occupancy inspections?"

One respondent noted business inspections were conducted annually, and another indicated a three-year inspection rotation. Two indicated the frequency of inspection depended on the type of occupancy, hazard, and installed fire protection systems. One respondent noted an annual inspection frequency for all commercial structures, but it is not currently achievable.

Question 4: "How many commercial occupancies is your agency responsible to inspect?"

Two respondents have 3,000 inspections, one respondent has 4,000 inspections, and three respondents have 5,000 or more inspections.

Question 5: "List the number of FTEs for the position of Fire Marshal in your organization."

All six respondents indicated they had one FTE for the Fire Marshal's position.

Question 6: "List the number of FTEs for the position of Deputy Fire Marshal in your organization."

All six respondents indicated they had only one FTE for the Deputy Fire Marshal's position.

Question 7: "List the number of FTEs for the position of Fire Inspector in your organization."

One respondent indicated they had two Fire Inspectors, and three respondents indicated they had four or more Inspectors. Two respondents skipped this question.

Question 8: "List the number of FTEs for the position of Fire Investigator in your organization."

One respondent had three Fire Investigators, and three respondents indicated they had four or more investigators. Two respondents skipped the question.

Question 9: "List the number of FTEs for the position of Fire Inspector/Fire Investigator in your organization."

One respondent indicated they had four or more of these combined positions, and five respondents skipped the question. One of the respondents who skipped the question stated that their Deputy Fire Marshal position handles the responsibilities of Fire Investigator and Fire Inspector/Fire Investigator.

Question 10: "List the number of FTEs for the position of Plans Reviewer in your organization."

One respondent indicated they had one Plans Reviewer, and three respondents indicated they had two Plans Reviewers. Two respondents skipped the question. One of the respondents who skipped the question indicated that their Deputy Fire Marshal handles the responsibility of plans review.

Question 11: "List the number of FTEs for the position of Code Enforcement Officer in your organization."

Two respondents indicated they had four or more Code Enforcement Officers, and four respondents skipped the question.

Question 12: "List the number of FTEs for the position of Public Educator in your organization."

Four respondents indicated they had one dedicated Public Educator, and two respondents skipped the question.

Question 13: "List the number of FTEs for the position of Administrative Assistant in your organization."

Three respondents indicated they had one Administrative Assistant, one respondent had had two Administrative Assistants, and one respondent had three Administrative Assistants. One respondent skipped the question.

Question 14: Respondents were asked to indicate the fire/life safety programs delivered by their department.

Fire & Life Safety Course	Number of Depts Offering Courses
Exit Drills in the Home	4
Smoke Alarm Program	6
Carbon Monoxide Program	4
Fire Safety (Chimney, electrical, cooking)	4
Injury Prevention (Falls, burns, bike helmets)	1
Fire Extinguisher Use	4
Fire Brigade Training	0
Elderly Care & Safety	3
School Fire Safety Program	4
Babysitting Classes	0
Juvenile Fire Setter Program	4
Car Seat Inspections	1

Question 15: Open-ended question to solicit for any relevant additional information related to how the departments deliver fire prevention services.

This additional information is noted in the preceding answers.

Fire Prevention Staffing Discussion

A review of the survey found ESF's Fire Prevention Division is very similar in responsibilities and scope of work compared to the respondent departments. ESCI noted ESF had the second-lowest staffing compared to the six respondents, and the respondent with the lowest staffing (6 personnel) had a population 50% less than the ESF population, and a service area that is 154% smaller. **ESF fire prevention staffing is 27% lower than the department with the highest number of fire prevention assigned personnel (11).**

The merging of Springfield fire prevention responsibilities into the new ESF structure resulted in a tremendous increase in building inventory that is now the responsibility of the ESF Fire Prevention Division. A recently completed building inventory identified approximately 17,000 commercial occupancies that fall under the purview of the Division, which is an increase of approximately 10,500 occupancies. This includes Eugene occupancies that were previously unidentified, as well as all of the Springfield occupancies. However, ESCI noted that some of the occupancies listed may actually be individual living or business units within a single structure that should be considered a single large unit.

SECTION 3:

COMMUNITY RISK ASSESSMENT

COMMUNITY RISK ASSESSMENT

This section provides information about the principles and methodologies used in assessing community hazards and vulnerabilities, with the intent of assisting fire department officials in (1) Identifying fire/EMS-related hazards and risks within the communities; (2) Prioritizing risks to develop effective risk reduction strategies; and (3) Determining the appropriate resources necessary to reduce these risks and attain desired outcomes. This assessment relies on the use of both quantitative and qualitative data to identify hazards, risks, and mitigation capabilities in the community.

ESCI intends for this section to provide insight into *what* needs exist, *where* those needs exist, and *how* those needs are expected to change in the future. ESCI utilized physical, economic, and demographic data to assess the various types of hazards and risks that threaten the community, to include:

- Current hazard classification, planning, and mitigation measures from various sources;
- Specific information provided by ESF about target hazards and land use; and
- Planning zones established by ESF.

Methodology

A community risk assessment (CRA) is “the identification of potential and likely risks within a particular community, and the process of prioritizing those risks.” This concept is consistent with the FEMA concept of “whole community” and shared responsibility for emergency preparedness.¹⁷ CRA is a critical component of the core capabilities, or phases, of emergency management—prevent, prepare, respond, and recover, as shown in Figure 26.

ESF understands there are hazards in both communities, and these hazards pose a risk to life and property. Also, these hazards vary in likelihood and impact—both on the communities and ESF—and directly influence ESF’s planning and response activities.

ESF has expanded the basic risk analysis process to match the “all hazards—all risk” methodologies commonly used in emergency management organizations. In addition to the traditional characteristics of likelihood and community impact, this approach provides qualitative data about the probability and consequences of an incident, plus additional information about warnings, duration, and agency impact.

Figure 26: Emergency Management Components



Unique Community Risk Factors

Every community has risks that are unique to that community. These include population and demographics, natural hazards associated with climate and topography, infrastructure, technological and human-caused hazards, and the types of structures and their intended uses.

Physical Assets Protected

A physical asset is a tangible asset (one that can be seen or touched) that has value. A physical asset can be a parcel of land, a building or structure, personal property or inventory, and vehicles or machines. ESF protects a variety of physical assets. For the purpose of this report, physical assets are real property, buildings, and structures.

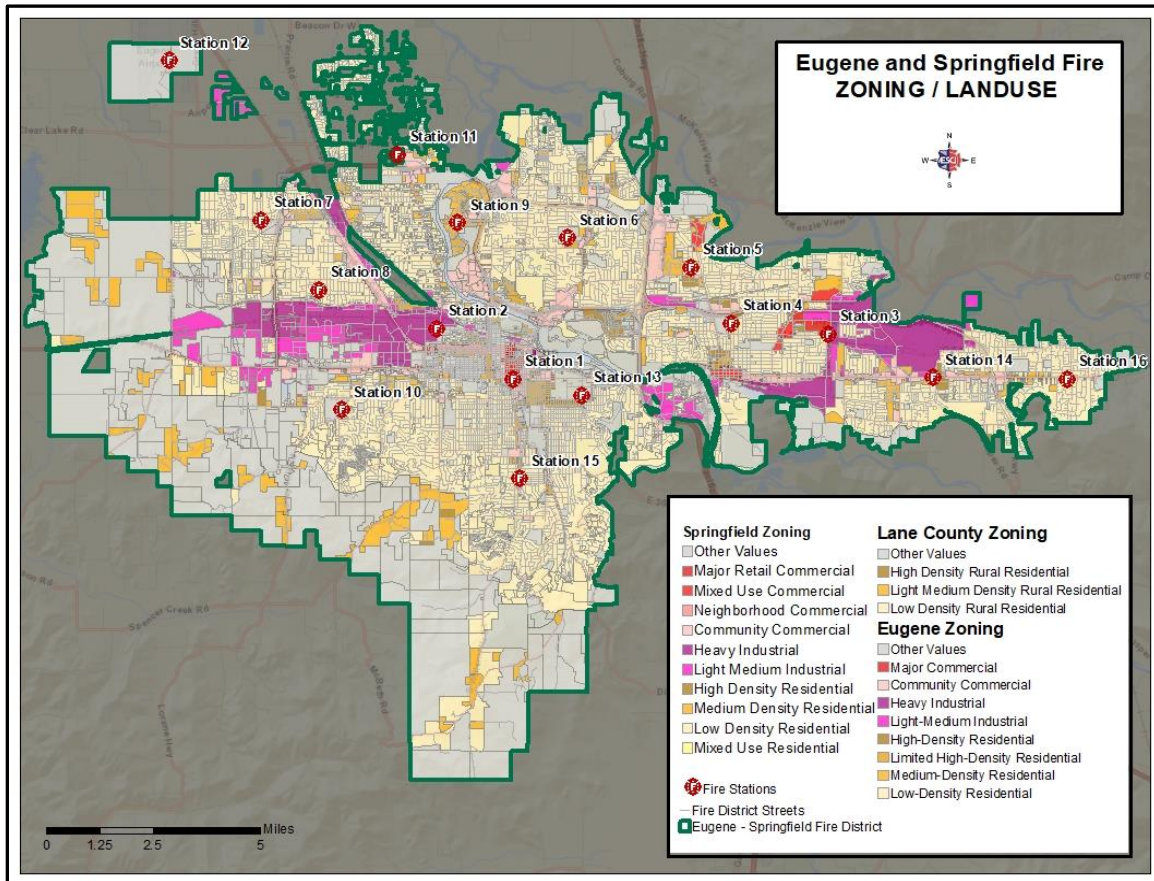
Risk by Land Use Designation

Current and future land use plans have a direct impact on determining the probability and risk of occurrence. Risk is assigned based on the intended use as follows:

- **Low-Risk:** Areas zoned for agricultural purposes, open space, low-density residential, and other low intensity uses.
- **Moderate-Risk:** Areas zoned for medium-density single-family properties, small commercial and office uses, low-intensity retail sales, and equivalently sized business activities.
- **High-Risk:** Higher-intensity business districts, mixed-use areas, high-density residential, industrial, warehousing, and large mercantile centers.

The following figure illustrates the current zoning areas for the cities of Eugene and Springfield.

Figure 27: Land Use/Zoning



As the preceding figure illustrates, low- to high-density residential zoning comprises the majority of the zoning in both cities. Light to heavy industrial zoning is mostly concentrated in the western area in Eugene, and the eastern area in Springfield. However, there are small pockets of industrial zones located in other areas in both cities as well.

Organizational Vulnerabilities

During ESCI's assessment of typical hazards and vulnerabilities in the ESF service area, two key organizational vulnerabilities were identified that could greatly inhibit ESF's ability. First, divergent department administrative and logistics support services and processes; and second, proprietary ESF communications infrastructure and radio system governance.

In identifying these issues, ESCI also referenced a 2009 ESCI consolidation feasibility study for Eugene and Springfield fire departments. Reviewing the overarching recommendation for the integration of the two departments, ESCI stated:

*Of all of the feasible options discussed above, our preferred choice is an IGA between EFD and SFLS. **This is seen as an intermediary step for a vision of a single fire agency via annexation to a fire district.** (Emphasis added)*

Department Structure & Processes

Employees from both Eugene and Springfield comprise the ESF administration and operations divisions. While they operationally deploy in a homogenized fashion and operate under a single set of operating guidelines and collective bargaining agreement (CBA), they are still subject to their respective employer's administrative support processes and rules. Additionally, different bargaining units represent the non-uniformed employees in each city. Local 1148, American Federation of State, County, and Municipal Employees (AFSME) represents Springfield administrative employees. AFSME Local 1714 represents Eugene employees. While the work rules, wages, and benefits for ESF non-uniformed employees are essentially the same, some differences complicate what would be considered normal business practices with a single employer.

A simple example of this is the fact that Eugene employees have a different payroll system and pay schedule than the Springfield employees. This acts as an impediment in the ability to cross-train employees in each organization to perform basic administrative tasks. As a result of these challenges, ESCI understands a Springfield employee was assigned to a newly created Chief of Staff position to help coordinate administrative complexities and needs between the two cities.

Currently, some of ESF's top positions are designated as interim or "Acting in Capacity" (AIC) positions, making it potentially challenging for the organization's leadership—and the department—to move forward in a cohesive, well-supported manner. ESF senior staff members have done an impressive job managing transitions affecting both cities and their respective organizations. ESCI noted both City Managers of Eugene and Springfield, the ESF Fire Chief, and ESF Fire Marshal recently retired. This resulted in the remaining supervisors being placed into "interim" roles and being tasked with additional programmatic responsibilities in addition to their original job duties. While ESCI notes that these personnel are performing admirably in these positions, we are concerned this current management environment may lead to employee burnout and/or confusion about lines of authority and responsibilities among the rank and file members. Adequate staffing is lacking in both the operational and prevention divisions, as noted in the recent (2017) ISO report, and ESCI's analysis.

Emergency Communications

The integration and coordination of fire department radio/data communication systems is another area of ESF organizational vulnerability. Discussions with ESF and Central Lane 911 Communications Center representatives revealed there is little to no coordination, oversight, or planning of the regional fire frequency radio system. ESCI understands that ESF is seeking to upgrade in-house radio communications systems and radio coverage, including securing grants for equipment improvements. However, these efforts are not regionally coordinated or implemented. This lack of coordination may impede expansion, interoperability, and improvements in overall fire radio infrastructure within the Central Lane 911 service area, and may impede effective radio communications in a large-scale disaster situation.

Conversely, ESCI understands regional law enforcement agencies have a strong oversight organization that operates a fully integrated, interoperable, and robust radio communications system, known as the Lane Regional Interoperability Group (LRIG).

DEFINING RISK

It is important to understand and agree upon the methodology of defining risk before a risk assessment may be conducted. For consistency, the following have specific meanings in the context of emergency management and community hazard vulnerability.¹⁸

Risk

Simply stated, *risk* is the potential that a hazard may become an emergency, and that there will be loss of life or property or damage to the environment.

Likelihood or Probability

Likelihood is the “chance of something happening, whether defined, measured, or estimated objectively or subjectively, or in terms of general descriptors, frequencies, or probabilities.”¹⁹

Consequence or Impact

In this context, ESCI uses the terms *impact* and *consequence* interchangeably. The CPSE definition of consequence is the “effect, impact, or outcome” of some significance; yet goes on to define impact in terms of “the drain effect on the community standards of deployment and coverage capacity when an emergency event occurs.” Note that “impact” refers to immediate or acute effects, and “consequence” refers to longer-lasting or chronic effects. Consequences affect one or more of the following aspects of community assets:

- **Human**—Injury, illness, or loss of life.
- **Economic**—Loss of income and costs to repair, rebuild, replace, or recover.
- **Social/cultural**—Damage or loss to sites of historical, cultural, social, or religious significance.
- **Environmental**—Pollution, loss of habitat.

Hazard

A *hazard* is a condition that presents the potential for harm or damage to people, property, or the environment. Hazards may be interrelated. For example, a hurricane may cause a tornado and flooding that results in a significant release of hazardous materials.

Threat

A *threat* is a hazard that is judged to be in a position to cause harm to people, property, or the environment.

Vulnerability

Vulnerability is an assessment of how well or how poorly protected you are against an event.²⁰

Vulnerability is influenced by the following factors:

- Predictability
- Temporal distribution
- Spatial distribution and extent
- Physical characteristics
- Shielding or hardening
- Magnitude
- Speed of onset
- Duration
- Resilience

Vulnerability may be reduced by diligent planning, preparation, and mitigation. Examples of these efforts include but are not limited to: Conducting hazard vulnerability assessments, creating emergency response plans, adopting and enforcing building codes, and delivering disaster preparedness public education programs.

A Hazard Vulnerability Assessment (HVA) was conducted with the operational leadership of ESF and the emergency managers of Eugene and Springfield to assist ESCI in quantifying the various hazard risks in the study area. This method was developed by Kaiser Permanente® for use in identifying various hazard risks and mitigation priorities in its health care facilities. Various public agencies and businesses have adopted this approach around the country. The methodology defines risk as a percentage of probability, severity, and preparedness (mitigation). The following figure broadly summarizes, as a percentage of risk, the various hazards found in the ESF service area.

Figure 28: Relative Risk by Hazard Type

	Structure Fire	Non-Structure fire	EMS/Medical	Rescue	HazMat	Natural Hazards	Tech Hazards	Human Hazards	Community Risk Total
Probability	.39	.50	.67	.44	.65	.40	.43	.40.	45%
Severity	.44	.47	.44	.43	.49	.54	.62	.50	49%
Relative Risk	17%	23%	30%	19%	30%	22%	27%	20%	22%

Not surprisingly, the preceding figure shows that EMS/medical situations have the highest probability of occurrence, followed by hazardous materials incidents. Structure fires were scored as having the lowest probability of occurrence. When assessing the impact severity, technology hazards were assessed as having the highest potential community impact, while rescue hazards were deemed to have the least severity. The scoring results for the specific hazards are listed in Appendix A.

In addition to the preceding hazard vulnerability assessment, another hazard assessment methodology was used by ESCI. A qualitative Priority Risk Index (PRI) rating method was used to characterize local risks. The PRI method rates several risk elements and determines an associated weighting factor.

The PRI Matrix used assigns the following categories and brief descriptions for each.

Figure 29: PRI Matrix

PRI Category	Level ID	Description	Index Value
Probability	<i>Unlikely</i>	Rare, with no documented history of occurrence	1
	<i>Possibly</i>	Infrequent occurrence, with at least one anecdotal historical event	2
	<i>Likely</i>	Frequent occurrences with at least two or more documented historical events	3
	<i>Highly Likely</i>	Common events with a well-documented history of occurrence	4
Severity	<i>Negligible</i>	<ul style="list-style-type: none"> Negligible property damage (less than 5% of critical/non-critical infrastructure) No permanent injury/illness disability or deaths Negligible quality of life impact Critical facilities off-line for less than 24 hours 	1
	<i>Limited</i>	<ul style="list-style-type: none"> Slight property damage (between 5% and 25% of critical/non-critical infrastructure) No permanent injury/illness disability or deaths Moderate quality of life impact Critical facilities off-line between one day and one week 	2
	<i>Critical</i>	Moderate property damage (between 25% and 50% of critical/non-critical infrastructure)	3
	<i>Catastrophic</i>	Severe property damage (between 50% of critical/non-critical infrastructure)	4
Warning	<i>Less than 6 hours</i>	Self-Explanatory	4
	<i>Less than 24 hours</i>	Self-Explanatory	3
	<i>Less than one week</i>	Self-Explanatory	2
	<i>More than one week</i>	Self-Explanatory	1
Duration	<i>Less than 6 hours</i>	Self-Explanatory	1
	<i>Less than 24 hours</i>	Self-Explanatory	2
	<i>Less than one week</i>	Self-Explanatory	3
	<i>More than one week</i>	Self-Explanatory	4

The PRI is meant to be utilized as an objective planning tool for classifying and prioritizing hazard risks based on standardized criteria. The application of the PRI results in numerical values that allow identified hazards to be quickly ranked against one another (the higher the PRI value, the greater the hazard risk to ESF). PRI values are obtained by assigning varying degrees of risk (probability, impact, spatial extent, warning time, and duration). Each degree of risk has been assigned a value (1 to 4) and a weighting factor, as summarized below. To calculate the PRI value for a given hazard, the assigned risk value for each category is multiplied by the weighting factor. The sum of all categories equals the final PRI value, as demonstrated by this equation:

$$\text{PRI} = [(0.45 \times P) + (0.3 \times S) + 0.15 \times W) + (0.1 \times D)]$$

P = *Probability* of the event

S = *Severity* or magnitude of the event

W = *Warning* time, speed of onset

D = *Duration* of event

ESCI also used the PRI rating method to summarize and prioritize the risk of various natural, fire, EMS, technological, and human hazards, as identified in the following sections.

NATURAL HAZARDS & VULNERABILITIES

Since 1955, there have been 16 federally-declared disasters in Lane County, all of which resulted from significant weather events (flooding, straight-line winds, winter storms). In addition, throughout the rest of the state, there were a total of 32 requests for federal disaster assistance, all of which were for drought or wildfire fire management assistance. Although many of these declarations did not directly affect the Eugene and Springfield area, the specific hazards that caused the disasters are present in the study area. The following summarizes the natural hazards present in the region and the ESF service area.

Earthquake

Earthquakes occur throughout the Western United States. Certain areas have a higher probability of experiencing damaging earthquakes. All of the ESF service area is extremely vulnerable to a Cascadia subduction zone earthquake. According to the most recent Eugene-Springfield Area Multi-Jurisdictional Hazards Mitigation Plan, Eugene and Springfield are categorized as having “moderate probability” of a Cascadia Subduction Zone (CSZ) event, a “low probability” of an intraplate event, and “low probability” for a crustal earthquake over the next 100 years.²¹ In any of these events, significant damage to community assets and public infrastructure/services, and injuries and fatalities may occur.

There are no known reports of earthquake damage in Eugene and Springfield in recent history. However, there is significant historical evidence of large earthquakes and damage. As a result of advances in earthquake research, and the study and analysis of known faults and related earthquake activity, the probability of the region experiencing a significant earthquake is a reality, and residents and emergency response agencies should plan and prepare for this eventuality.

The soils in the ESF service area present a very low to moderate risk of liquefaction, which may result in significant structural and transportation infrastructure damage due to failing foundations, and settling/collapsing roadways.

Given current earthquake research findings and predictions, along with the region’s history of seismic activity, Eugene and Springfield adopted several regulations and codes, most notably the Uniform Building Code Seismic Zone 2b construction practice. However, in 2007 the Oregon Department of Geology and Mineral Industries (DOGAMI) conducted Rapid Visual Surveys (RVS) of 174 structures in the Eugene-Springfield area.²² Using survey criteria created by FEMA, the survey categorized the collapse potential of a structure during a large magnitude earthquake, which is summarized in the following figure:

Figure 30: 2007 Rapid Visual Survey Results

Low Collapse Risk	Moderate Collapse Risk	High Collapse Risk	Very High Collapse Risk	Total Structures Surveyed
84	56	32	2	174

It is important to note that this information is dated, and some of the structures surveyed may have been seismically retrofitted, or may no longer exist. However, the number of structures found to have moderate and high collapse risk is most likely still significant.

According to the 2019 draft Eugene-Springfield Multi-Jurisdictional Hazards Mitigation Plan, several pre-historic Cascadia Subduction Zone earthquakes occurred off the Oregon coast during these approximate years: 1400 BCE, 1050 BCE, 600 BCE, 400 CE, 750 CE, and 900 CE.

Minor earthquake tremors occur in the Eugene-Springfield area fairly frequently, as noted in the following figure:

Figure 31: Recent Eugene-Springfield Earthquakes

Date	Magnitude	Distance from ESF (Miles)
6/24/2019	1.6	7.20
4/18/2019	1.0	5.99
9/28/2018	1.1	2.74
8/19/2018	1.3	12.93
7/29/2018	1.6	2.03
7/10/2018	1.4	4.62
6/26/2018	1.7	2.56
3/07/2018	1.0	5.49
8/11/2017	1.7	15.85
7/03/2017	1.5	15.05
4/21/2017	1.8	3.72
4/10/2017	1.6	3.50
10/18/2016	2.6	8.05
6/17/2016	1.6	4.94
4/11/2016	1.4	5.11
1/02/2016	1.8	8.71

The following figure summarizes the earthquake risk in the ESF service area.

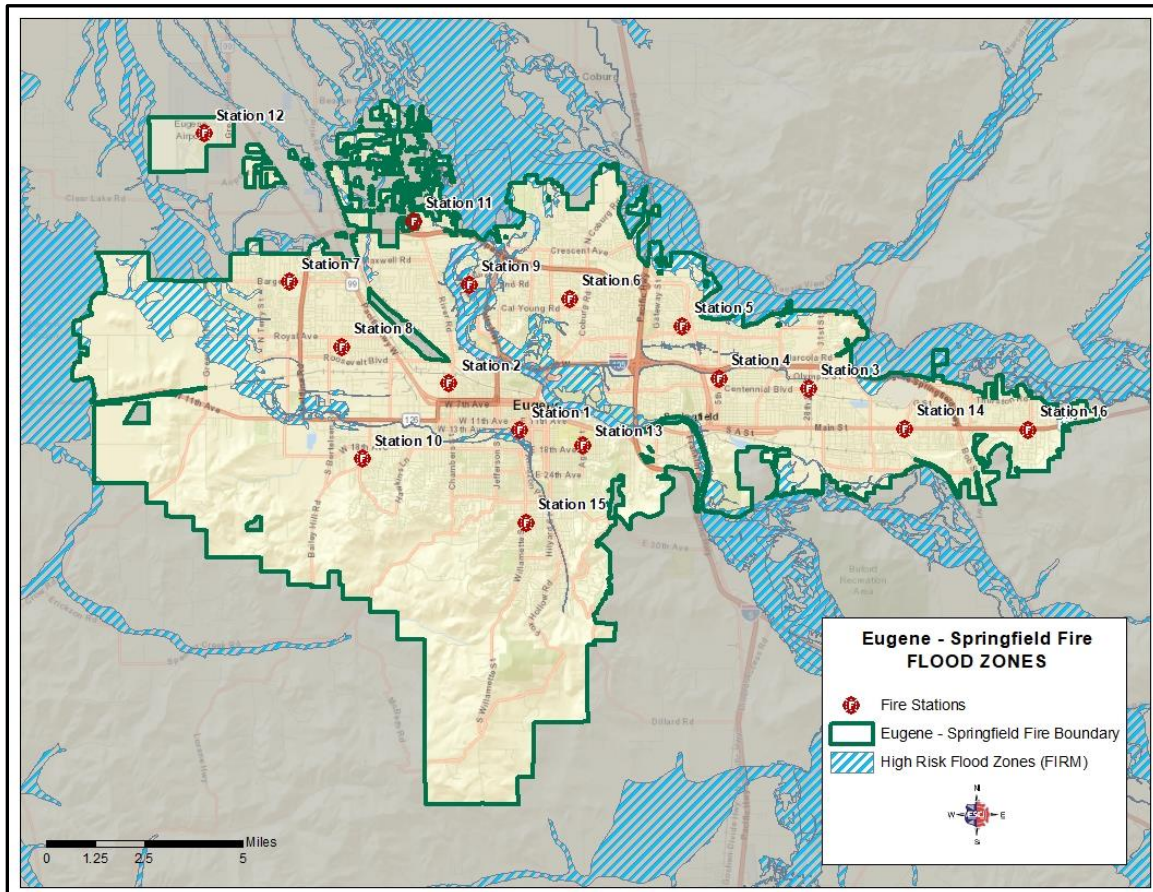
Figure 32: Earthquake PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Limited	Less than 6 hours	More than 1 week	2.5

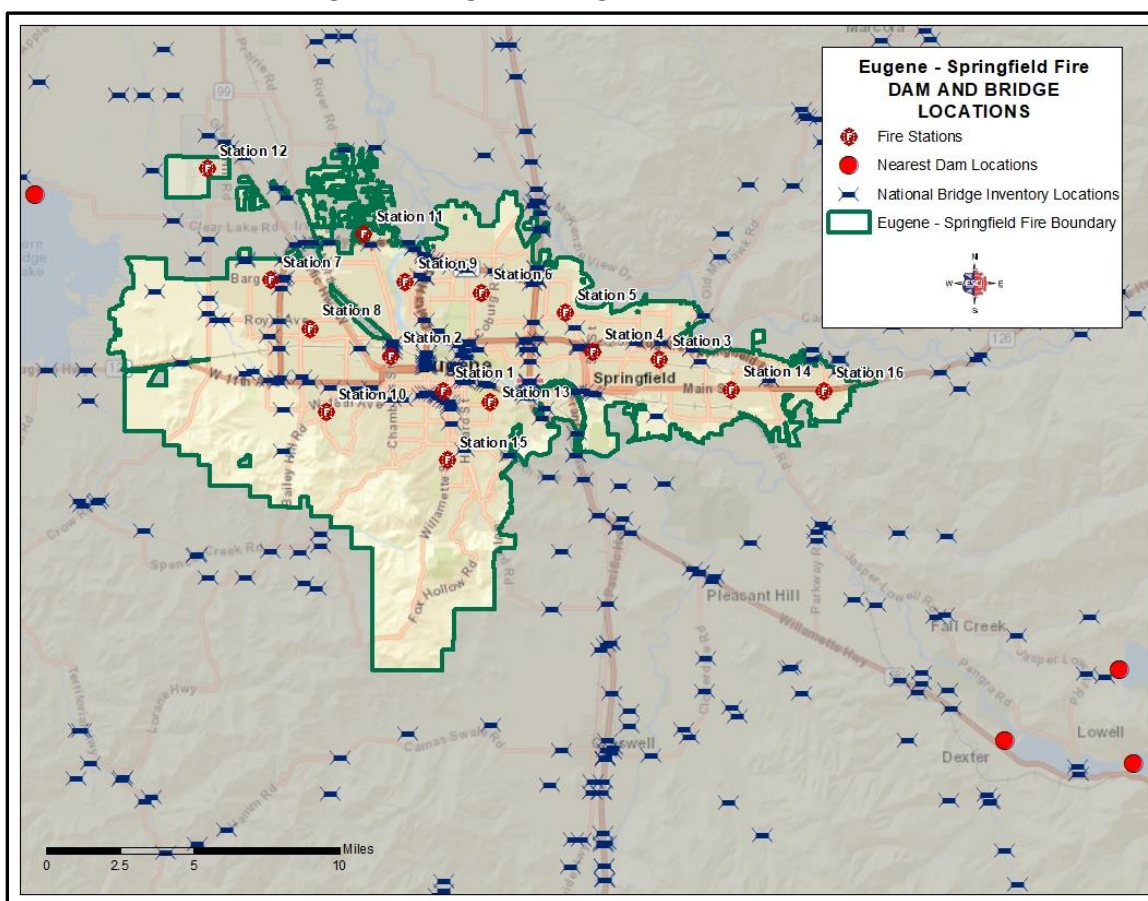
Flooding

Eugene and Springfield's location and seasonal weather patterns contribute to a significant flood risk, where heavy rains can cause flash flooding and mudslides associated with remnants of tropical storms and post-wildfire conditions. The topography of the study area is comprised of primarily sloping terrain that drains well when exposed to excessive rain and runoff, except in flat, built-up areas. Several creeks, washes, and gullies flow through the ESF service area. The following figure, derived from national flood hazard zone data, illustrates the areas of historical and potential flooding. The light blue striated areas highlight vulnerable areas for significant (100-year) flooding.

Figure 33: Eugene Springfield Flood Zone



Although the likelihood of dam or levee failure is remote, there is flood risk downstream from each of the dams on the outflow sides. Likewise, bridge locations may be the site of flood-related incidents due to high water—road closures, washouts, or risk of people being swept into rising or swift water. The locations of these dams and bridges are shown in the following figure.

Figure 34: Regional Bridge and Dam Locations

Landslide/Mudslide

Landslide is the generic term used to describe the downslope movement of earth materials due to gravity. Landslides may be triggered by earthquakes, extreme precipitation, flooding, or otherwise removing support from the slope. Critical facilities most vulnerable to landslides/mudslides are the roadways, bridges, and culverts along known debris flow areas and hillside cuts. Facilities located downhill of intensely burned wildfire areas are also at an elevated risk to debris flows and mudslides. Underground utility lines are also vulnerable to landslides.

The probability of landslide is moderate in Eugene and moderate in Springfield. Springfield's probability rating is lower because Springfield has fewer dramatic changes in elevation; vulnerability to landslide is low in both cities.²³ The following figure illustrates the landslide/mudslide PRI rating in the ESF service area.

Figure 35: Landslide/Mudslide PRI Rating

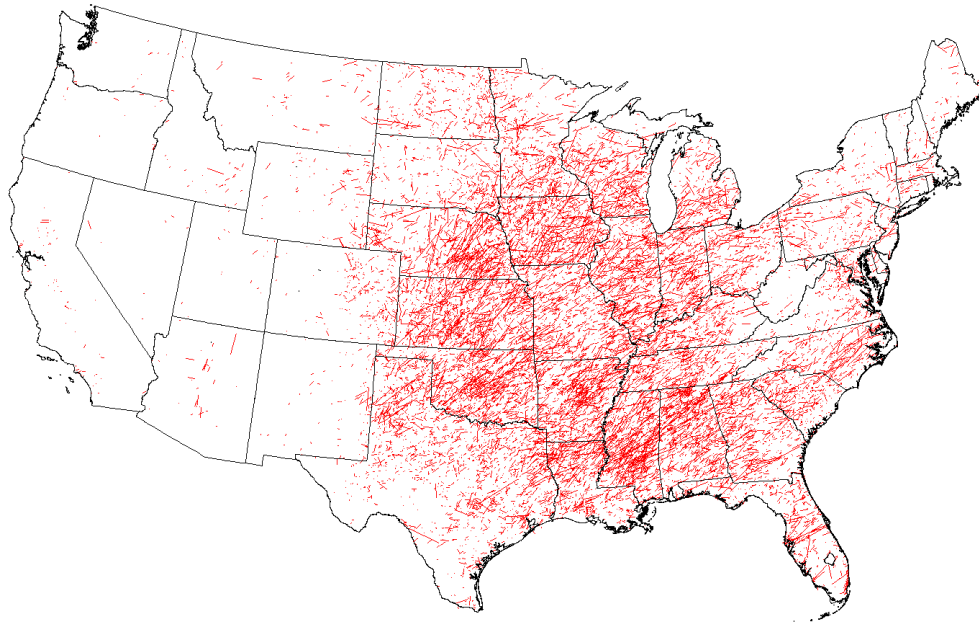
Probability	Severity	Warning	Duration	Rating
Possible	Negligible	6–12 hours	Less than 24-hours	1.7

Severe Wind Events

In Eugene and Springfield, severe winds are usually associated with thunderstorms that occur in the spring and summer months, during the transition of cold fronts, or with the passage of the remnants of tropical storms. Damaging winds can take the form of microbursts, straight-line winds, or tornadoes. Of these, tornadoes are the least frequent.

Tornadoes are created when warm, moist air near the ground interacts with cooler air above and rapidly increasing winds that change direction. South Florida, for example, averages about three tornadoes each year. The expectation of a tornado in Eugene and Springfield is very-rare, almost 33 times lower than the U.S. average.²⁴ However, tornadoes can occur in the broader Pacific Northwest coastal region. For example, an EF-2 tornado touched down in Port Orchard, Washington, in December 2018, causing almost \$2 million in damage. Fortunately, there were no injuries or fatalities.²⁵ The following figure shows the history and paths of tornadoes over the past several decades.

Figure 36: Tornado Activity in the U.S., 1950–2017



The following figure notes the PRI Rating for significant wind events.

Figure 37: Significant Wind Event PRI

Probability	Severity	Warning	Duration	Rating
Possible	Limited	12–24 hours	6–12 hours	2.15

Wildfire

Wildfire is defined as an uncontrolled fire spreading through wildland vegetative fuels, urban interface areas, or both, where fuels may include structures. Wildfires are classified as natural hazards, mostly started by lightning, but many are caused by human factors as well. The proximity of development near wildland areas, along with landscaping with indigenous plants in the area creates what is commonly known as the wildland-urban interface, which places these structures at significant risk from an approaching wildfire. Also, the secondary effects of smoke and ash can pose significant threats to air quality and health.

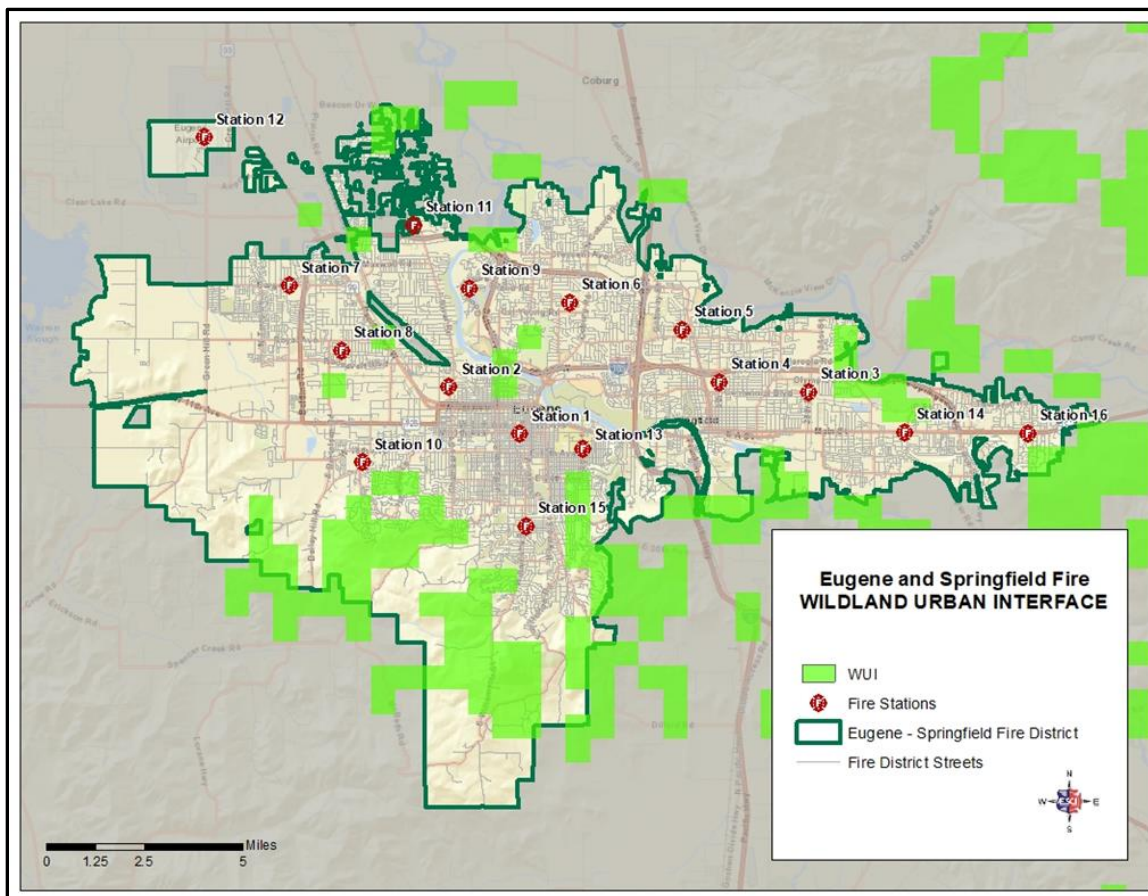
The Eugene-Springfield Multi-Jurisdictional Hazards Mitigation Plan divided wildfires into three categories: Interface, Wildland, and Firestorms.

- Interface fire occurs where wildland and developed areas come together at the wildland-urban interface, with both vegetation and structural fuels.
- A wildland fire's main fuel source is natural vegetation. Often referred to as forest or rangeland fires, these fires often occur in national forests and parks, private timberland, and on public and private rangeland. A wildland fire can become an interface fire if it encroaches into developed areas.
- Firestorms are events of such extreme intensity that effective suppression is virtually impossible. Firestorms often occur during dry, windy weather and generally burn until conditions change, or the available fuel is consumed.

Wildland-Urban Interface Areas

Almost the entire ESF area surrounding the central, developed city cores is in the wildland urban interface. Generally, wildfire vulnerability is greatest in the interface areas with the highest number of houses per acre.

Figure 38: Eugene Springfield Wildland/Urban Interface



Wildland fires are becoming more prevalent in Oregon, along with the rest of the Pacific Northwest, and present an ever-increasing threat to the Eugene Springfield service area. While small wildfires have occurred in the ESF service area, no large wildfires have occurred. However, the cities have significant vulnerable areas of wildland/urban interface, including the southeastern portion of Springfield, and the south hills and southwestern portions of Eugene. These areas have residential development with narrow steep streets intermingled with heavy fuel/forested areas. During the hot summer months when fine dry fuels cure and live foliage moisture drops, these interface areas pose a significant threat for rapid fire growth and potentially catastrophic loss of property and lives.

With that said, a catastrophic wildfire may only affect a relatively small area and population of the overall ESF service area. However, prevailing winds may move heavy smoke into the metro area, potentially affecting many more people, including those with pre-existing respiratory conditions. The following figure identifies the vulnerability related to wildfires in the ESF service area.

Figure 39: Wildfire PRI Rating

Probability	Severity	Warning	Duration	Rating
Likely	Catastrophic	12–24 hours	6–24 hours	3.2

In an attempt to mitigate wildfire risk, the federal government created the Firewise USA® program. This program supports homeowner wildfire prevention and mitigation education, as well as provides funding for fuels reduction efforts. ESCI understands that Lane County supports and participates in this program. However, ESF does not currently deliver or participate in Firewise USA.

Winter Storms

Winter storms can include snow, sleet, and freezing rain. Winter precipitation in the region is the “lifeblood of water supply” for Eugene and Springfield. However, severe winter storms that directly impact the ESF service area can cause significant transportation, supply chain, and business disruption, as well as injuries and deaths.

Heavy snowfall and icy conditions can close roads, leaving motorists stranded, and cause multiple-vehicle accidents. These storms can also delay emergency services responses, cause damage to structures and powerlines, and increase the risk of exposure and starvation to livestock and wildlife. Examples of recent winter storm events are summarized in the following figure.

Figure 40: Winter Storm Events

Date	Location	Comments
February 23–26, 2019	Northwest Oregon	Snow and ice event. Federal Disaster Declaration (DR-4432).
February 6–24, 2014	Northwest Oregon	Reports of up to 0.75 inches of ice in Eugene. Federal Disaster Declaration (DR-4169).
January 17–21, 2012	Northwest Oregon	Snow and ice event. Federal Disaster Declaration (DR-4055).
December 2008–January 2009	Southern Willamette Valley	Heavy snow/ice event. Federal Disaster Declaration (DR-1824).

The following figure quantifies the winter storm risk assessment for the ESF service area:

Figure 41: Winter Storm PRI Rating

Probability	Severity	Warning	Duration	Rating
Likely	Limited	12–24 hours	Less than 1 week	2.7

Other Natural Hazards

The risk associated with other natural hazards—avalanche, animal disease outbreak, tsunami, and volcanic eruption—are considered negligible and are not included in this risk assessment.

HUMAN-CAUSED HAZARDS & VULNERABILITIES

Medical Hazards

Hazards related to the human condition and activities are the most common and frequent hazards encountered in a community. The following categories summarize the most common human-caused hazards and associated PRI ratings for each.

Typical EMS Response

A typical EMS response refers to pre-hospital medical care rendered on-site by pre-hospital trained specialists. Examples of typical EMS incident types include heart attacks, strokes, respiratory difficulty, vehicular accidents with injury, and other trauma or illness. Typically, medical care is rendered to one patient. However, in the case of a motor vehicle collision, EMS care may be rendered to more than one patient. Some patient conditions require only basic first aid care, while others require basic life support (BLS) or advanced life support (ALS) care. Overall, EMS responses accounted for approximately 75% of all ESF calls for service. The following figure summarizes the typical EMS risk in the ESF service area.

Figure 42: Medical Hazard, EMS Response PRI Rating

Probability	Severity	Warning	Duration	Rating
Highly Likely	Critical	Less than 6 hours	Less than 6 hours	3.4

Mass Casualty Incidents (MCI)

Mass casualty incidents are the result of an incident that creates multiple victims that require a significant emergency response to identify, prioritize, treat, and transport victims efficiently for definitive care. Examples of MCI incidents include commercial transportation accidents, passenger train derailments, passenger aircraft crashes, and hazardous materials releases in public areas. The following figure summarizes the MCI risk in the ESF service area.

Figure 43: Medical Hazard, Mass Casualty PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Critical	Less than 6 hours	Less than 6 hours	2.5

Pandemic/Infectious Disease

The threat of infectious diseases is present throughout the Eugene Springfield area. Relatively new diseases, such as West Nile Virus, Zika Virus, and SARS are examples of the evolution and migration of diseases around the world. Two terms are used to define the proliferation of disease: *Epidemic* and *Pandemic*. An epidemic is a disease that has spread among a large number of people in a community—or number of communities/regions—in a short time frame. A pandemic is defined as the spread of a disease around the world. A relatively recent example of a pandemic was the 2009 H1N1 “Swine Flu” Pandemic, a novel virus that is estimated to have killed between 151,700–575,400 people worldwide.²⁶

Disease impacts all populations in areas of the world, and all areas are vulnerable to epidemics. The probability of an epidemic or pandemic infectious disease that affects the population in Eugene and Springfield is possible due to the mobility enabled by regional and international travel. However, due to robust public health surveillance, education, and subsequent mitigation efforts, most infectious disease outbreaks would likely remain small, and not pose a major threat to the entire ESF populace. Mitigation strategies include focused public messaging and education, practicing basic personal hygiene and isolation techniques, and diligent public health department surveillance. The following figure summarizes the pandemic/infectious disease risk in the ESF service area.

Figure 44: Medical Hazard, Pandemic/Epidemic PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Critical	More than 24 hours	More than 1 week	2.5

Structure Fires

Residential Structure Fires

This category refers to fires located in one- or two-unit buildings constructed for single-family living. Fires in these types of structures are well within ESF response capabilities. Residential structures include, but are not limited to, the following:

- Mobile homes and manufactured housing
- Single-family dwellings
- Duplexes

The following figure summarizes the residential structure fire risk in the ESF service area.

Figure 45: Structural Fire Hazard, Residential PRI Rating

Probability	Severity	Warning	Duration	Rating
Likely	Limited	Less than 6 hours	Less than 6 hours	2.65

Large Structure Fires

This category refers to fires located in large buildings constructed for public and business use, manufacturing, storage, and multi-family residential living. The ample square footage, number of occupants, and nature of use increase the potential for the large loss of life and property damage. Large structure fires require a significant number of firefighters, apparatus, and other resources to extinguish, and may require additional resources beyond what is typically available through ESF. The large structure fire category includes, but is not limited to, the following occupancy types:

- Places of Assembly (e.g., theaters, meeting and dance halls, bars, clubs, and restaurants with 50+ occupants, conference centers, stadiums, churches, auditoriums, arenas, etc.)
- Shopping centers/malls
- Mid and high-rise office buildings
- Multi-family dwellings
- Assisted living facilities
- Hotels
- College dormitories
- Hospitals
- Schools

The following figure summarizes the large structure fire risk in the ESF service area.

Figure 46: Structural Fire Hazard, Large Structures PRI Rating

Probability	Severity	Warning	Duration	Rating
Likely	Limited	Less than 6 hours	6–12 hours	2.75

High-Risk Structure Fires

This category refers to fires associated with specialized industrial, manufacturing, or storage operations in which large amounts of hazardous materials, lumber, or other flammable/combustible materials are present. Significant involvement in this structure type may exceed ESF's capacity and capabilities, and require additional outside resources. High-risk structures include, but are not limited to, the following:

- Manufacturing facilities
- Chemical storage facilities
- Bulk fuel facilities
- Tire storage facilities
- Large vacant buildings

The following figure summarizes the high-risk structure fire risk in the ESF service area.

Figure 47: Structural Fire Hazard, High-Risk Structures PRI Rating

Probability	Severity	Warning	Duration	Rating
Likely	Limited	Less than 6 hours	Less than 6 hours	2.65

Urban Conflagration

An urban conflagration is a very large, rapidly spreading fire involving multiple structures. In the ESF service area, the risk of this type of fire is highest in the wildland-urban interface around the ESF service area, and dense older commercial and residential neighborhoods with combustible buildings that do not meet contemporary fire codes and do not have built-in fire protection systems. The urban conflagration vulnerability for the service area is summarized below.

Figure 48: Structural Fire Hazard, Urban Conflagration PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Critical	Less than 6 hours	6–24 hours	2.6

Special /Complex Hazards

Complex Extrication/Heavy Rescue

This is most commonly associated with motor vehicle incidents that involve trapped patients. Industrial accidents may also require this type of response, both of which require specialized training and equipment.

Figure 49: Technical Rescue Hazard, Extrication PRI Rating

Probability	Severity	Warning	Duration	Rating
Highly Likely	Critical	Less than 6 hours	Less than 6 hours	3.4

Structure Collapse

This is predominantly a problem in older communities where several large structures predating modern building codes are still in use by the public. It also includes abandoned buildings that have not been secured or torn down, and buildings under construction, remodeling, or demolition. Significant roof loading due to standing water or snow may also cause structural collapse.

Response to these types of incidents often requires specially trained personnel, equipment, and outside expertise (structural engineers, for example). The following table summarizes the risk of structural collapse in the ESF service area.

Figure 50: Technical Rescue Hazard, Structural Collapse PRI Rating

Probability	Severity	Warning	Duration	Rating
Unlikely	Limited	Less than 6 hours	Less than 1 week	1.95

Other Technical Rescue

This refers to the specialized rescue of victims from a wide range of situations and environments, including elevators, swift water, water, confined spaces, elevated locations and terrain (low and high-angle), or any combination. Specially trained responders must utilize various specialized equipment specific for the type of situation encountered. ESF has the necessary trained personnel and equipment to complete a successful rescue in these scenarios. If needed, additional specialized equipment could be requested through mutual aid. Examples of specialized rescue include:

- Multiple rising or swift water rescues during floods
- Large-scale evacuations during earthquakes, severe weather, or other large incidents
- Elevator, trench, agricultural, or confined space
- High-angle rope rescue
- Urban or rural search and rescue

The following figure summarizes the PRI Rating for various other technical rescue risks in the ESF service area.

Figure 51: Technical Rescue Hazard, Other PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Critical	Less than 6 hours	Less than 6 hours	2.5

Deliberate Violent Acts

Unfortunately, in today's world, terrorism, violence, or deliberate criminal act is a reality that must be considered. A significant attack can occur at any time in businesses, places of worship, schools, public buildings, factories, or sports venues.

Attractive targets for terrorism include critical facilities, communication systems, water and utilities, monuments, and areas where large groups congregate (e.g., University of Oregon sports complexes, Autzen Stadium, performance venues, religious venues, and the Lane Events Center). Mitigation strategies include consistent public awareness/education efforts, planning, continuous surveillance and intelligence gathering by law enforcement and homeland security officials, and periodic drills and deployment of law enforcement and other public safety assets.

Fortunately, federal, state, and local law enforcement agencies, along with ESF and other emergency response organizations have a long history of large-scale sporting event planning and execution. This has resulted in well-established plans and interagency relationships that result in fairly uneventful operations during these events. The following figure summarizes the terrorism risk in the ESF service area.

Figure 52: Deliberate Violent Act: Terrorism-Related PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Critical	Less than 6 hours	More than 1 week	2.8

Infrastructure Emergencies

Dam/Levee Failure

The primary risk associated with dams and levees is a failure due to extreme water flow and poor maintenance. While dam and levee failures often occur slowly, providing ample warning time, a significant earthquake may cause immediate and catastrophic failure with little to no warning. The locations of dams, levees, and bridges that may impact the ESF service area is shown in Figure 34. The following figure shows the dam/levee failure vulnerability in the ESF service area.

Figure 53: Dam/Levee Failure PRI Rating

Probability	Severity	Warning	Duration	Rating
Unlikely	Catastrophic	More than 24 hours	Long	2.2

TECHNOLOGICAL HAZARDS & VULNERABILITIES

Transportation Emergencies

Aircraft Crash

Eugene Airport, also known as Mahlon Sweet Field, is a public airport located 7 miles to the northwest and is owned and operated by the City of Eugene. Eugene Airport is the fifth-largest airport in the Pacific Northwest and features a terminal, ticketing, and baggage claim. The airport has an expanded air cargo facility and three fixed-base operators to handle general aviation. The airport is the second busiest airport in Oregon for commercial passengers.

A crash involving a large passenger aircraft may create a mass casualty incident with potentially hundreds of injuries or deaths. Hazardous materials releases may also result due to fuel spills and dangerous cargo container damage. The crash of a military aircraft with munitions or classified material presents special challenges and may require the support of explosive ordinance disposal teams and military security personnel. The following figure summarizes the aircraft crash risk.

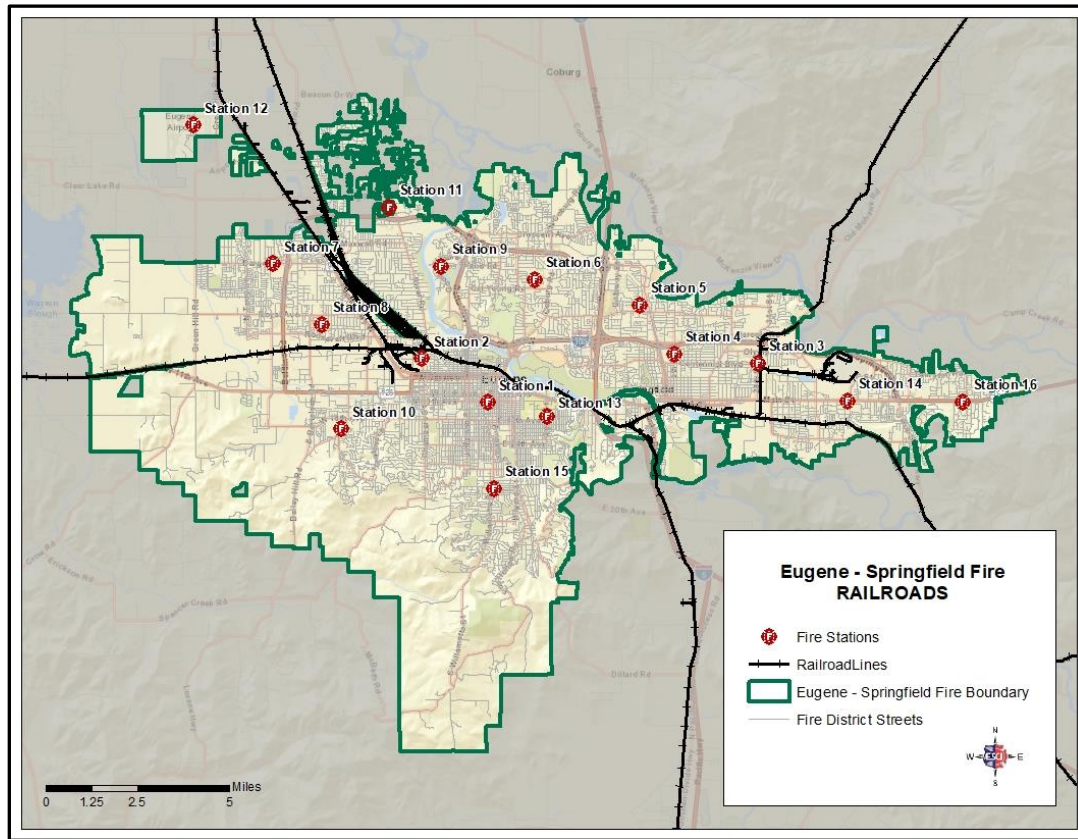
Figure 54: Aircraft Crash PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Critical	Less than 6 hours	Less than 6 hours	2.5

Train Derailment

Freight and passenger rail lines crisscross the ESF service area. The greatest risk associated with freight trains is a large spill of dangerous hazardous materials. Examples of the large quantities of dangerous cargo carried by rail include liquified petroleum gas (LPG), chlorine, acids, and crude oil.

Amtrak passenger trains also travel through the ESF service area. Derailment or collisions with other transportation vehicles may result in a large-scale mass casualty incident. The following figure maps the location of the rail corridors in the ESF service area.

Figure 55: Railroad Network

The following figure summarizes the train derailment risk in the ESF service area.

Figure 56: Train Derailment PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Critical	Less than 6 hours	Less than 1 week	2.70

Pipeline Emergency

Two large natural gas and liquid petroleum pipelines pass through the ESF service area. The Williams high-pressure natural gas pipeline feeds the region, and the Kinder Morgan pipeline provides fuel and other petroleum commodities to their tank farm. Smaller low-pressure natural gas distribution lines are present in commercial and residential areas. The Williams Pipeline that crosses over the McKenzie River is a special concern for emergency planners, as it is thought to be vulnerable to rupture during a significant earthquake. However, most damage and rupture of underground pipelines are the result of third-party damage during excavation work. The following figure summarizes the underground pipeline emergency risk in the ESF service area.

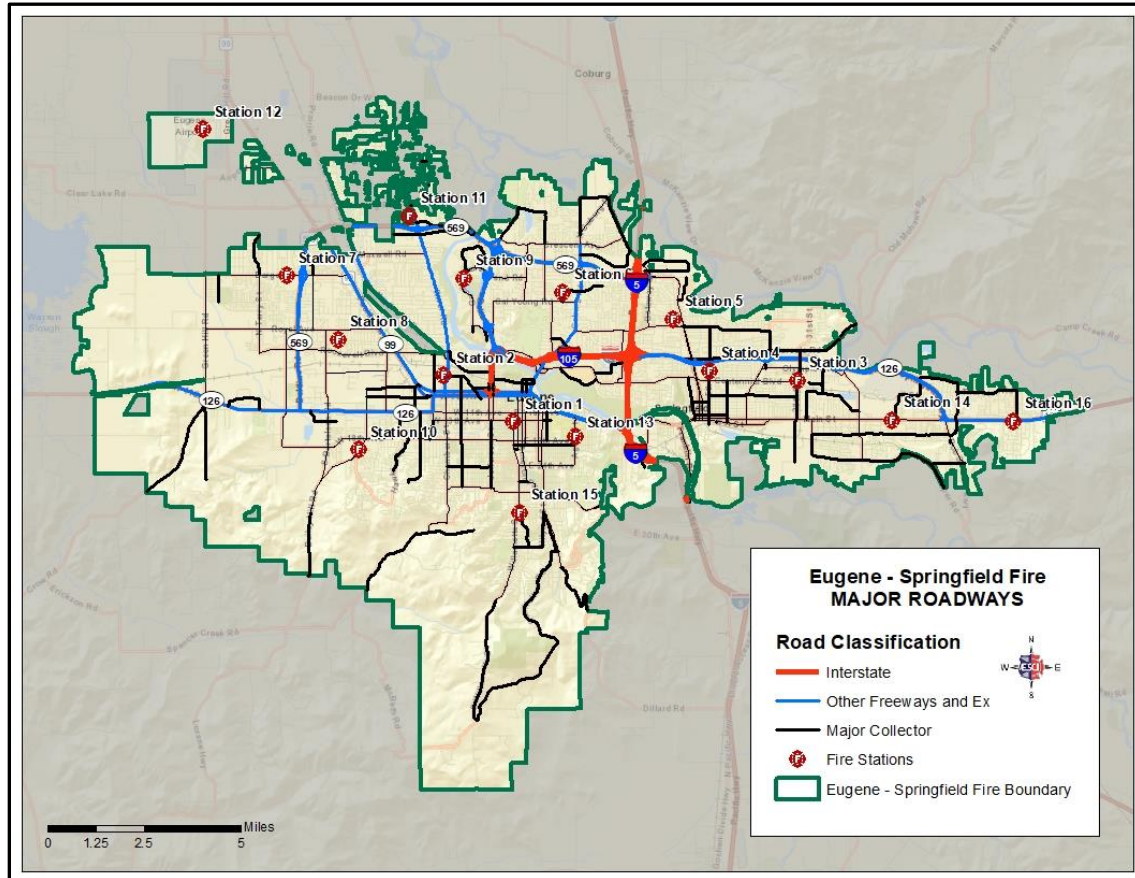
Figure 57: Pipeline Emergency PRI Rating

Probability	Severity	Warning	Duration	Rating
Unlikely	Critical	Less than 6 hours	6–24 hours	2.15

Vehicle Incident/Fire

The Eugene Springfield service area has a major freeway, highways, and thoroughfares. The following figure illustrates these major routes.

Figure 58: Major Roadway Corridors



- Interstate 5:** Interstate 5 forms much of the eastern city limit, acting as an effective, though unofficial, boundary between Eugene and Springfield. To the north, I-5 leads to the Willamette Valley and Portland. To the south, I-5 leads to Roseburg, Medford, and the southwestern portion of the state. In full, Interstate 5 continues north to the Canadian Border at Blaine, Washington and Vancouver, British Columbia, and extends south to the Mexican border at Tijuana and San Diego. Oregon Route 126 is routed along the Eugene/Springfield Highway, a limited-access freeway. The Eugene portion of this highway begins at an interchange with Interstate 5 and ends two miles (3 km) west at a freeway terminus.
- Delta Highway:** The Delta Highway forms a connector of fewer than 2 miles (3.2 km) between Interstate 105 and Beltline Highway.
- Oregon Route 99:** Oregon Route 99 forks off Interstate 5 south of Eugene and forms a major surface artery in Eugene. It continues north into the Willamette Valley, parallel to I-5. It is sometimes called the "scenic route" since it has a great view of the Coast Range and stretches through many scenic farmlands of the Willamette Valley.

Traffic is heavy throughout the service area, so the likelihood of a collision or vehicular fire is high. Incidents can range from a minor “fender bender” to a multi-vehicular incident with fire, injuries, and fatalities. The vehicle incident/fire vulnerability for the ESF service area is shown in the following figure.

Figure 59: Vehicle Incident PRI Rating

Probability	Severity	Warning	Duration	Rating
Highly Likely	Critical	Less than 6 hours	Less than 6 hours	3.4

Infrastructure Failures

Water Supply Failure

Widescale water supply failure is generally a consequence of a large disaster, such as a hazardous materials contamination of the water source. Given that a large portion of the ESF service area obtains its potable water from the McKenzie River, there is significant concern about contamination due to an adjacent transportation accident involving hazardous materials that migrate into the river. When this type of emergency occurs, citizens will need significant assistance to ensure access to a safe water supply. Water supply failure is a major concern for ESF, Eugene, and Springfield emergency managers.

Figure 60: Water Supply Failure PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Catastrophic	Less than 6 hours	Less than 1 week	3.0

Power Failure

The power grid in Eugene and Springfield is considered fairly robust, with many inherent redundancies. However, given the complexity and presence of this system in all facets of the ESF community, local, short-term outages are not uncommon, especially during severe weather. Region-wide failures are less common but often result in greater long-term impacts on citizens, health care, businesses, and public safety. This is especially true during severe winter storms that impact the entire Willamette Valley region. The following figure summarizes the power outage risk in the ESF service area.

Figure 61: Power System Failure PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Critical	Less than 6 hours	Less than 1 week	2.7

Internet/Data Transmission Failure

Today, government, business, and public infrastructure depend on reliable and robust internet and data transmission capabilities to conduct business. There are several information technology and data transmission providers in the ESF service area, including cable companies, telecommunication/voice providers, and satellite network providers, all of whom provide essential hardwire and wireless communication capabilities for the community, as well as emergency personnel. The following figure summarizes the data transmission risk in the ESF service area.

Figure 62: Data Transmission Failure PRI Rating

Probability	Severity	Warning	Duration	Rating
Possible	Limited	Less than 6 hours	6–24 hours	2.3

Operational Failures

HazMat Release

The release of dangerous chemicals can occur throughout the ESF service area, either during transport or while being used or stored for industrial purposes. Hazardous materials spills and releases require specially trained and equipped personnel to contain, control, and remove the materials safely.

Each day, over the road trucks, rail cars, and delivery vehicles carry tons of dangerous chemicals throughout the ESF service area, as well as the large diameter Williams underground natural gas pipeline and the Kinder Morgan liquid petroleum product pipeline.

In addition, 37 facilities have been identified in the City of Eugene with sufficient quantities of hazardous materials to require filing of a Tier II report and monitoring by the Eugene Toxics Right-To-Know Program.²⁷ Some retail outlets, notably “big box” stores and wholesale outlets, carry quantities of hazardous materials packaged for consumer purchase. Safety Data Sheets (SDS) and related information are required to be available on-site. In addition, some companies also list SDS information on the company’s website. The following figure lists the hazmat release risk in the ESF service area.

Figure 63: Hazardous Materials Release PRI Rating

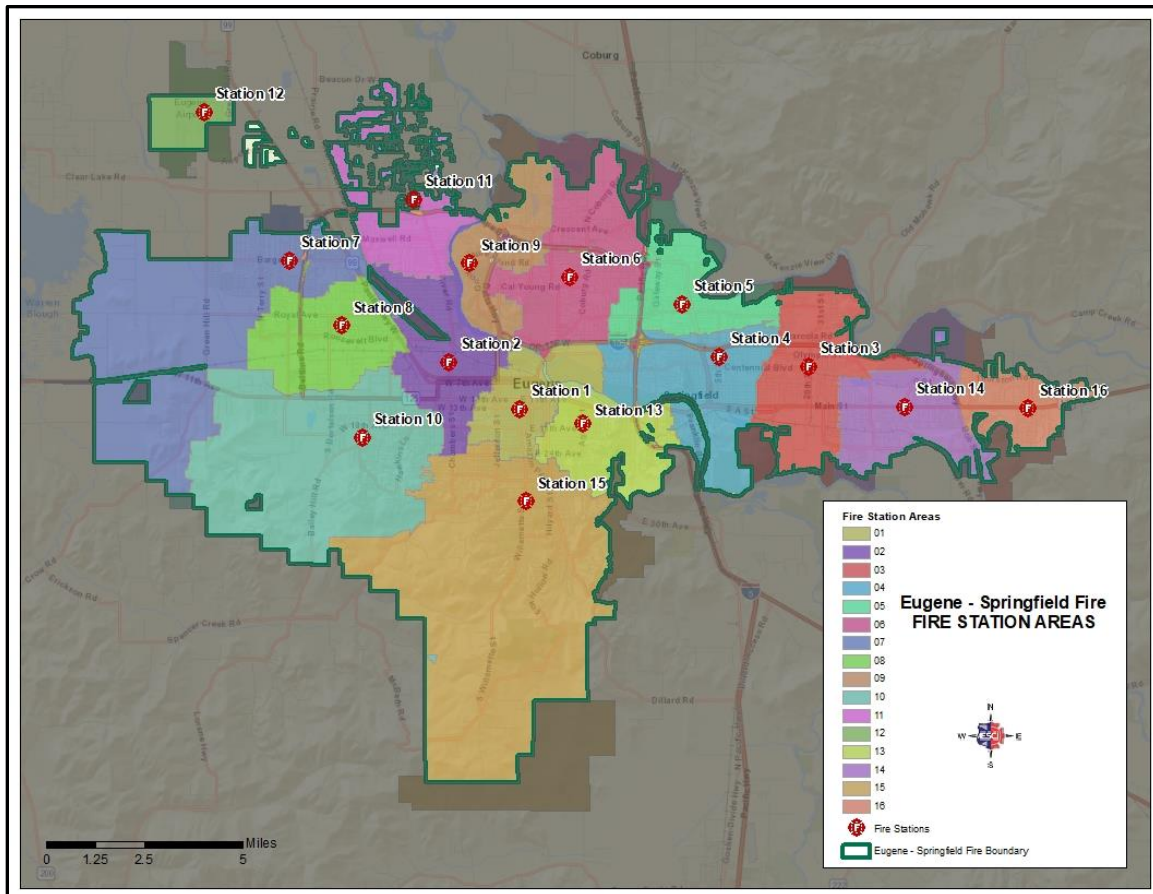
Probability	Severity	Warning	Duration	Rating
Likely	Limited	Less than 6 hours	6–24 hours	2.75

RISK BY GEOGRAPHICAL PLANNING ZONE AND INCIDENT TYPE

Fire Planning Zone Methodology

For fire and EMS emergency response, ESF created response/planning zones, as shown in the following figure. For the purposes of this study, ESCI used these planning zones to assist in quantifying risk, response resources, and historical incident data and trends.

Figure 64: Fire Planning Zones



Target Hazard Locations

Risk by IBC Occupancy Group (Risk-Based Occupancy Model)

Individual buildings or building complexes are categorized by the risk associated with the intended use of the building(s) as defined by the International Building Code (IBC). The following figure summarizes the IBC occupancy categories and associated PRI Risk.

Figure 65: IBC Occupancy Categories and PRI Risk

PRI Risk	IBC Group	Examples
High	A-1, A-2 A-3, A-4, A-5 H-1, H-2, H-3, H-4, H-5 B E I-1, I-2, I-3, I-4 M R-1, R-3 Special Risk (Target hazard)	Nightclub, restaurant, theater, airport/cruise ship terminal Arenas, museums, religious Hazardous materials sites (Tier II) All government & public buildings, other office buildings over 2 stories Schools, day care centers Hospitals, assisted living centers, correctional Strip centers, closed-air shopping malls, big box stores Hotels, motels, dormitories, apartments, board & care Railroads, Interstate highways, airports Any building with life safety risk beyond reach of preconnected hose lines > 200 feet
Moderate	B F-1 M I-2, R-4 S-1	Outpatient clinics, general business, offices < 3 stories Fabrication or manufacturing of combustible materials Mercantile, free-standing Foster group homes, assisted living homes Storage of combustible materials, car repair, hangars
Low	F-2 R-1, R-2 S-2 U	Fabrication or manufacturing of non-combustible materials 1- and 2-family dwellings, foster homes Storage of combustible materials Barns, silos, other unclassified

Specific Structural Target Hazards

A **target hazard** is a location where the type and use of the building presents a greater hazard and risk to life, property, or the environment. High occupancy buildings, facilities providing care to vulnerable populations, industrial buildings housing high-risk operations, and hazardous materials storage facilities are just a few examples of target hazard locations that may present significant safety issues and control challenges during an emergency response. ESF has identified several target hazard buildings, including places of public assembly, schools and childcare centers, medical and congregate-care facilities, residential care facilities, high-rise apartment buildings, high-rise office buildings, and critical public infrastructure/utilities. Information provided by the recently completed occupancy inventory was reference by ESF in developing this section of the study.

Vulnerability Impact Assessment

For this report, ESF analyzed the impact of a large fire on each category of target hazard as follows:

- **Human:** Significant injuries and deaths.
- **Physical:** Property damage to buildings, infrastructure, and other physical property.
- **Social:** Interruption of social services, and psychological effects.
- **Economic:** Interruption of business, cascading effect on the community and economy.
- **Environmental:** Effects on environmental quality.

Each vulnerability was rated:

- **Low:** Minor consequences, no significant injuries, slight impact on core functions and processes for a short period.
- **Moderate:** Moderate to serious consequences, few significant injuries or deaths, impairment of core functions and processes for up to 1 year.
- **High:** Severe consequences, with large loss of life or severe injuries, interruption of primary services, or major loss of core processes and functions for an extended period.
- **Catastrophic:** Extremely severe consequences, with very high loss of life and significant community impact or permanent loss.

Examples of identified target hazards, along with vulnerability assessment observations by the ESF assessment team, appear in the following figures.

The following information and figures are not intended to list all buildings of a given type or occupancy. Rather, the locations included here have been identified by ESF for a potentially significant vulnerability in one or more of the vulnerability factors listed previously (human, physical, social, economic, or environmental). This list is subject to change given specific characteristics as determined by ESF.

Critical Infrastructure and Key Resources

The term *critical infrastructure and key resources* (CIKR) describes resources essential for the functioning of a society and economy. Critical infrastructure is defined as a sector “whose assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof.” There are sixteen defined Critical Infrastructure Sectors (CIS):²⁸

- Chemical
- Commercial Facilities
- Communications
- Critical Manufacturing
- Dams
- Defense Industrial Base
- Emergency Services
- Energy
- Financial Services
- Food and Agriculture
- Government Facilities
- Healthcare and Public Health
- Information Technology
- Nuclear Reactors, Materials, and Waste
- Transportation Systems
- Water and Wastewater Systems

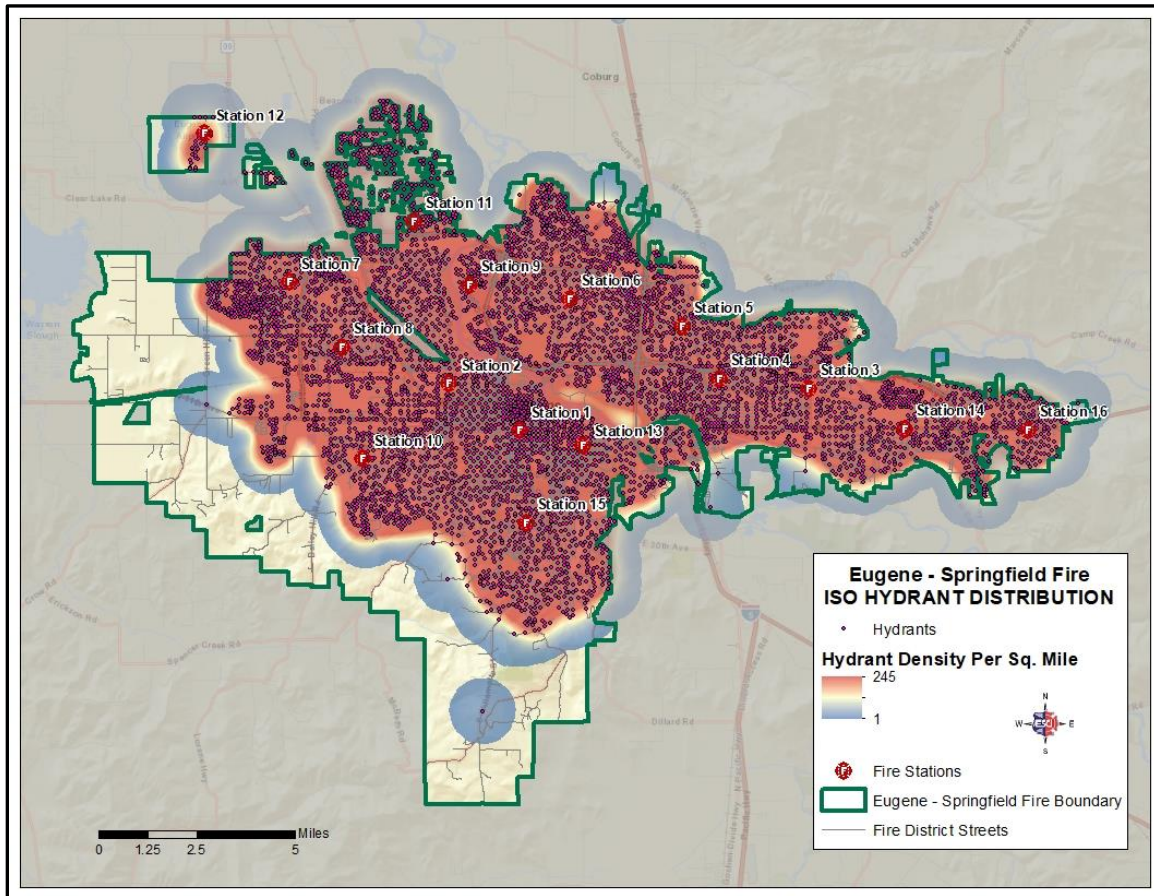
Examples of CIKR locations include, but are not limited to hospitals, congregate-care facilities, schools, airports, government offices, telephone exchanges, data centers, public safety buildings, water and sewage treatment plants, petroleum refineries, ions centers and communications systems, hazardous materials sites, and water/sewage treatment facilities. In some instances, the detailed information of these facilities is kept appropriately confidential for security reasons.

In this section, ESCI discusses other types of infrastructure critical to a community in general terms. It is important that the fire department plan for emergencies at any of these facilities.

Water Distribution

The most obvious concern to the fire department is the water reservoir, water main, and fire hydrant system. Providing enough storage, distribution, and access to this valuable firefighting resource through well-distributed fire hydrants is very important. As shown in Figure 66, hydrants are well-distributed through much of the city except in sparsely populated, mountainous areas. As illustrated in the figure, there are areas in the south and southwest portions of the service area where few to no hydrants are available. This is a vulnerability as growth and development encroach into these areas.

Figure 66: Fire Hydrants



Communications

Emergency communication centers and the associated transmitting and receiving equipment are essential components of emergency response. The Central Lane 911 Center, operated by the Eugene Police Department, provides call receipt and dispatch service to the cities of Eugene and Springfield, and the region. This center receives and interrogates all 911 calls for help, dispatches fire and other emergency responders, and provides incident management support as necessary. There are other communication facilities and equipment that are equally important to the community and government operations. These include; Telephone company central offices, and associated telephone transmission lines, television and radio stations, internet and fiber optic service providers, and cellular communication systems and towers. Several television, radio, and important government radio and microwave transmission towers and systems are located in two main areas: Blanton Heights, approximately two miles south of Eugene, and Coburg Ridge, approximately two miles to the northwest of Eugene.

Figure 67 illustrates the location of communication antennas and infrastructure throughout the ESF service area.

Based on the number and locations, Figure 68 lists the fire impact on communication systems.

Figure 67: Communication Infrastructure

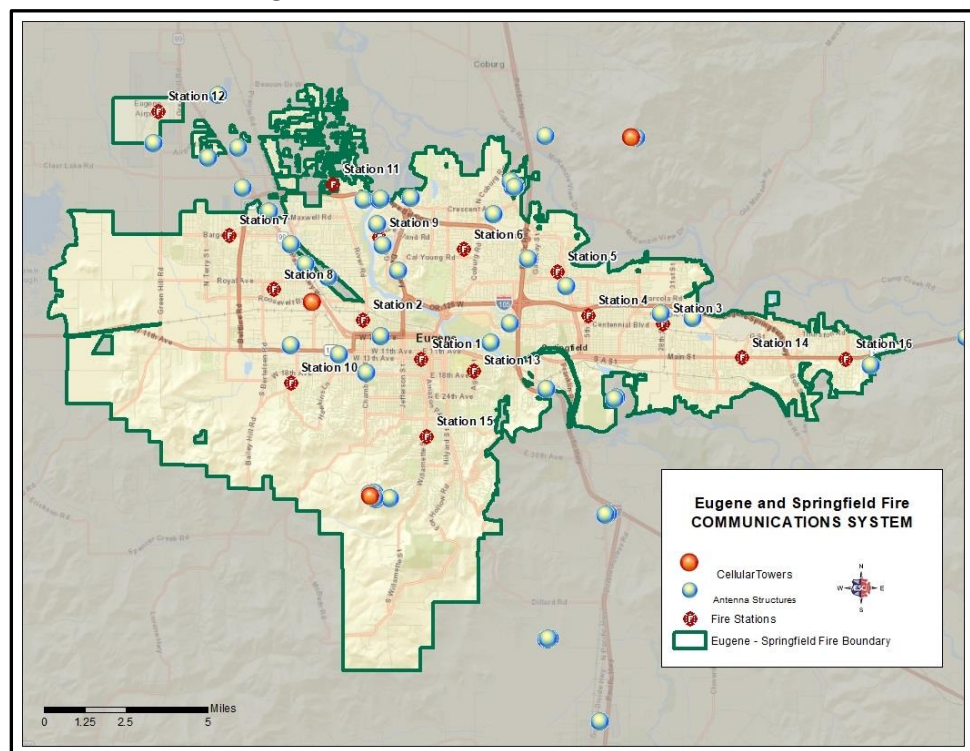


Figure 68: Likely Fire Impact, Communication Facilities

Vulnerability	Impact
Human	Moderate
Physical	High
Social	Catastrophic
Economic	High
Environmental	Low

Government Facilities

Emergency and governmental services include critical first responder and other government-service locations. There is a higher potential risk at these locations due to the interruption of essential services and social impact.

Figure 69: Government Facilities

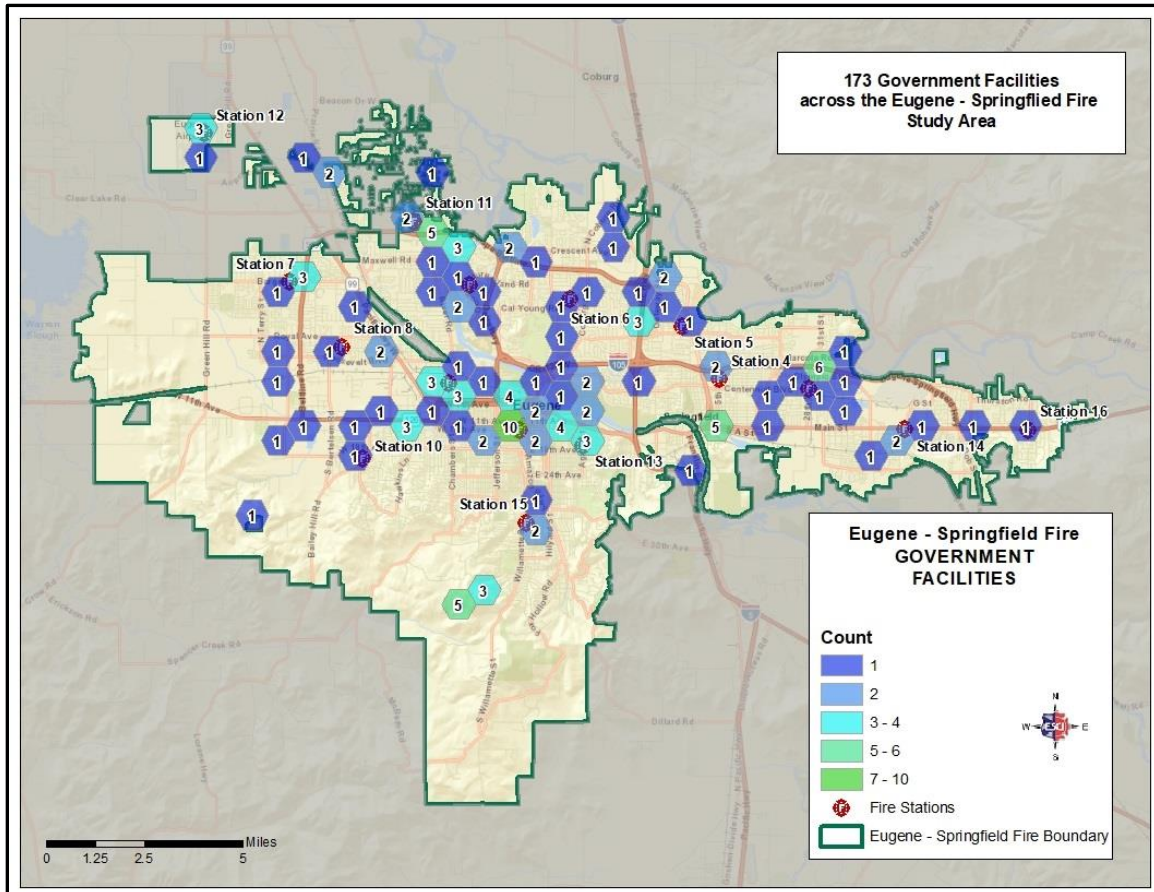


Figure 70: Likely Fire Impact, Government Facilities

Vulnerability	Impact
Human	Low
Physical	High
Social	High
Economic	High
Environmental	Low

Public Assembly Occupancies

Numerous buildings lie within the cities in which large numbers of people gather for entertainment, worship, and other special events. A variety of nightclubs, theaters, and other entertainment venues exist. Also included in this category are recreational, religious, and cultural sites and places where people gather for entertainment, sporting or cultural event, historical purpose, or a similar reason. These occupancies present additional risk due to the large number of people and the economic and social impacts on the community. These sites may also pose greater risks to first responders due to size and configuration. Fire, criminal mischief, and potentially terrorism could cause a major medical emergency requiring significant emergency service resources. The following figure shows the locations of buildings identified as public assembly facilities within the ESF service area.

Figure 71: Public Assembly Facilities

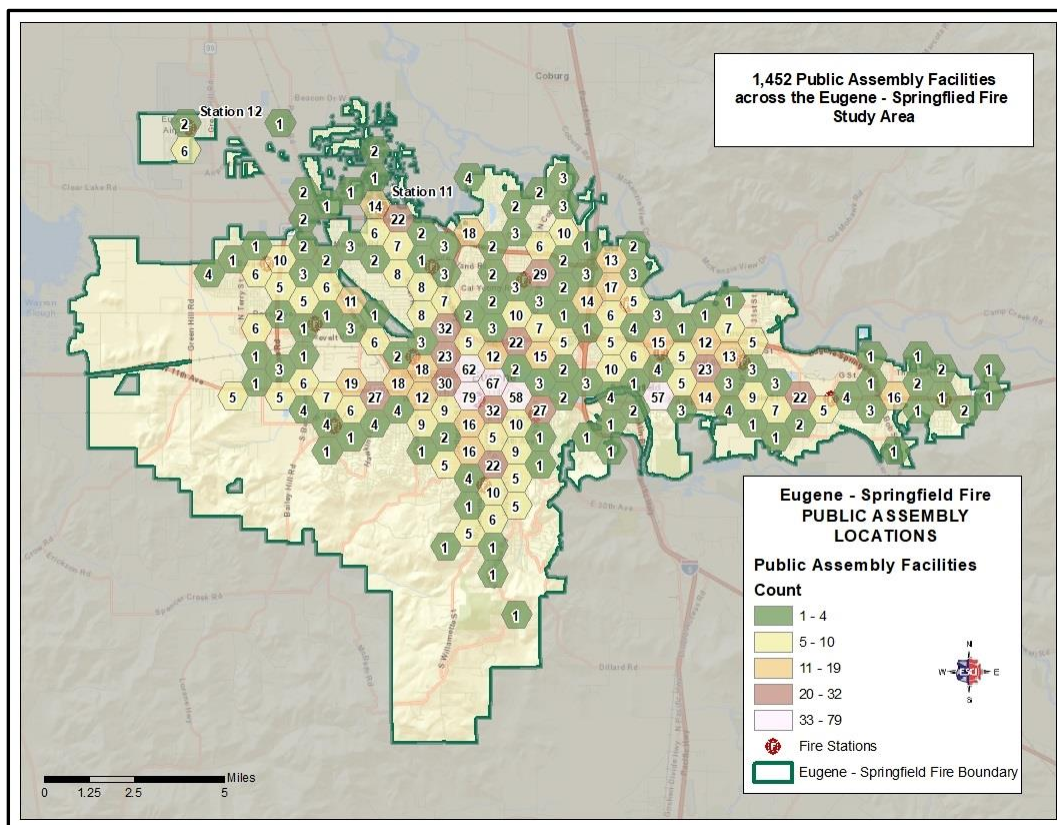


Figure 72: Likely Fire Impact, Assembly Occupancies

Vulnerability	Impact
Human	High
Physical	High
Social	Moderate
Economic	Moderate
Environmental	Low

Educational Occupancies

The Eugene School District has 25 campuses located throughout the ESF service area. There are 14 elementary schools, seven middle schools, and four high schools. The District also support and oversee the operation of five charter schools. The Springfield School District operates eight elementary schools, three middle schools, and one high school. Total enrollment between the two districts is approximately 27,000 students.²⁹ Several private institutions provide education to the cities' children. The following figure shows the locations of the public and schools and colleges. ESCI has not included all commercial educational facilities.

Figure 73: University, College, and School Locations

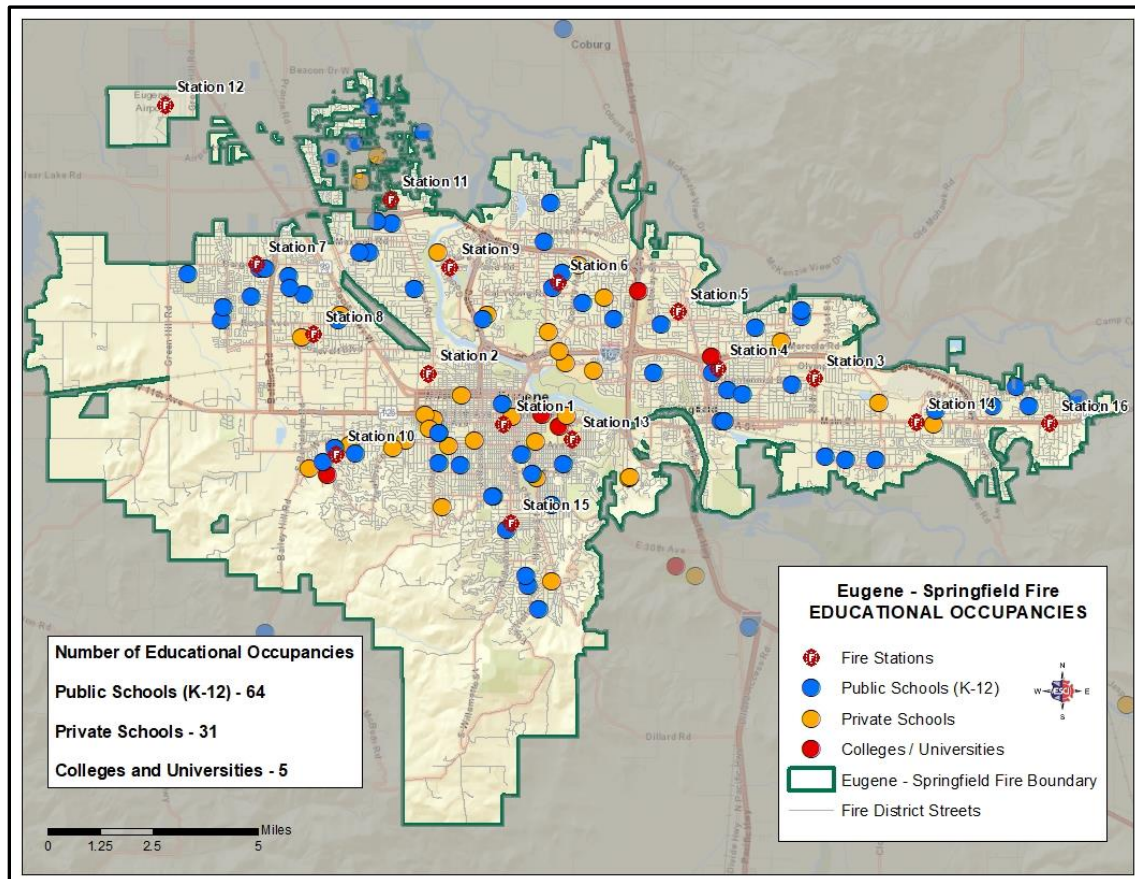


Figure 74: Likely Fire Impact, Educational Occupancies

Vulnerability	Impact
Human	High
Physical	Moderate
Social	High
Economic	Moderate
Environmental	Low

Hospital and Medical Care Facilities

Caring for the sick and injured, and those otherwise needing medical monitoring, is a fundamental service provided in every community. Medical and congregate-care occupancies include facilities such as hospitals, clinics, skilled nursing facilities, and assisted living facilities. Many of the patients in these facilities have special needs and require special assistance in conducting their daily lives. This presents unique and substantial life safety risks, often resulting in substantial reliance on EMS services. Although these facilities are generally required to meet stringent building and fire codes and must have built-in fire suppression systems, even a small fire or another emergency may require the rapid evacuation of patients. The following figure shows the location of hospitals and other medical care facilities, including physician and dental offices, clinics, and medical laboratories and testing facilities.

Figure 75: Medical Care Facilities

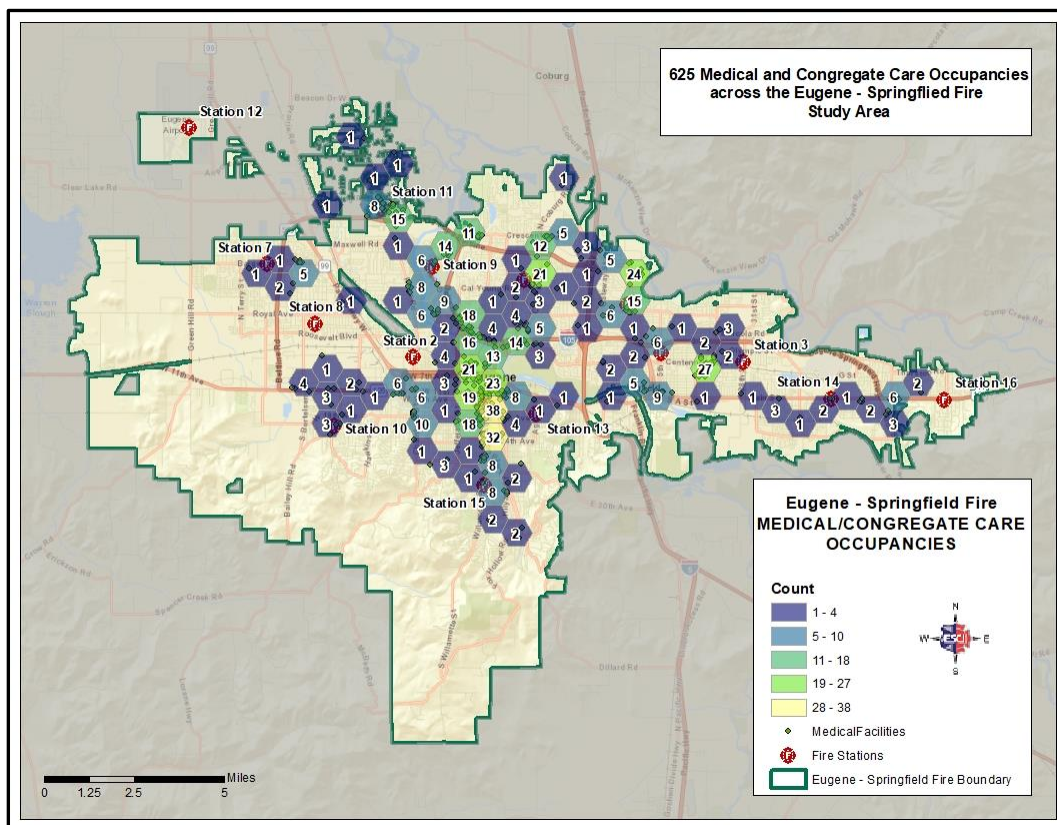


Figure 76: Likely Fire Impact, Health Care Facilities

Vulnerability	Impact
Human	Catastrophic
Physical	High
Social	High
Economic	High
Environmental	Moderate

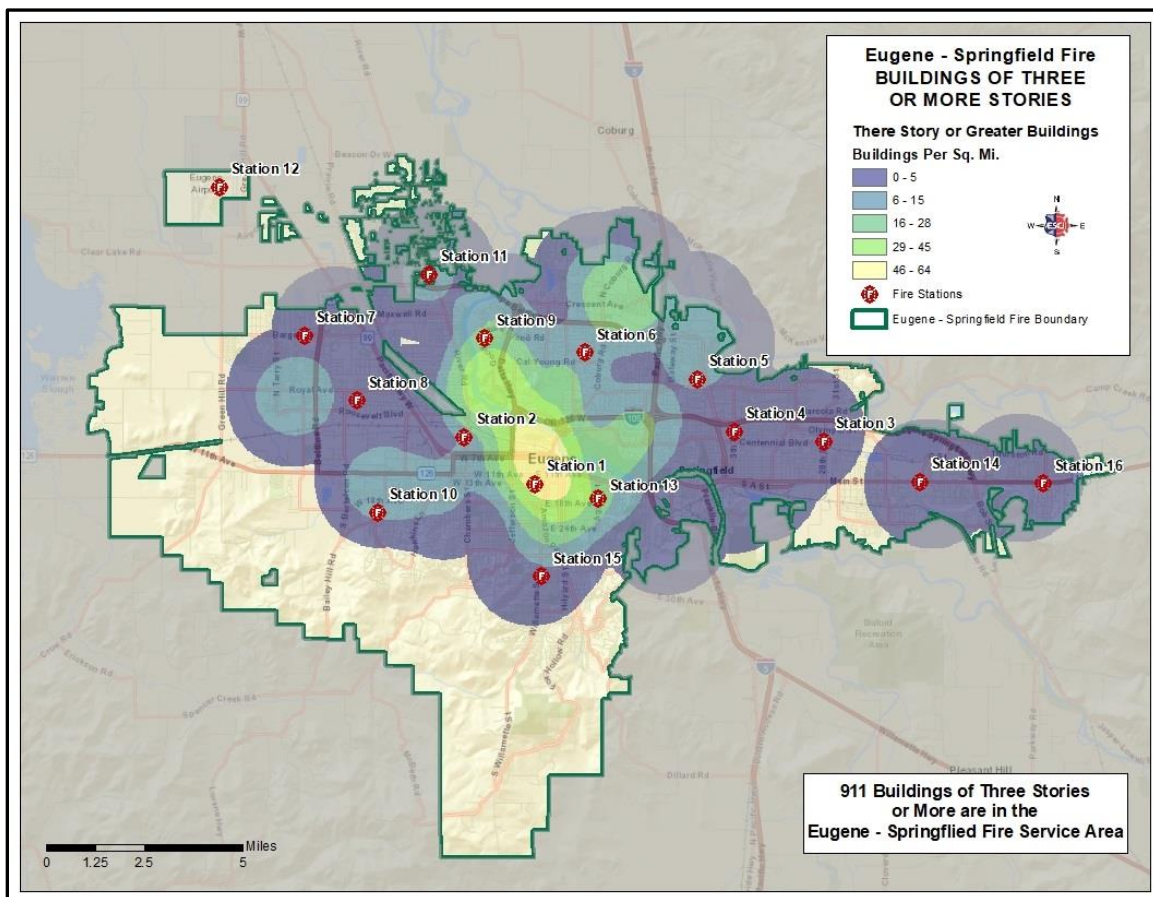
Structural or Operational Risks

Certain buildings, their contents, operational functions, and size present a greater firefighting challenge and require special equipment, operations, and training. Information for this section has been drawn from a recently completed ESF occupancy inventory survey. ESCI noted that the accuracy of the data collected is still under review by ESF. Upon reviewing the data, ESF and ESCI noted the difficulty in differentiating individual occupancies from individual buildings. For example, a strip mall with 10 occupancies may have 10 individual addresses, even though the occupancies are located in one large building.

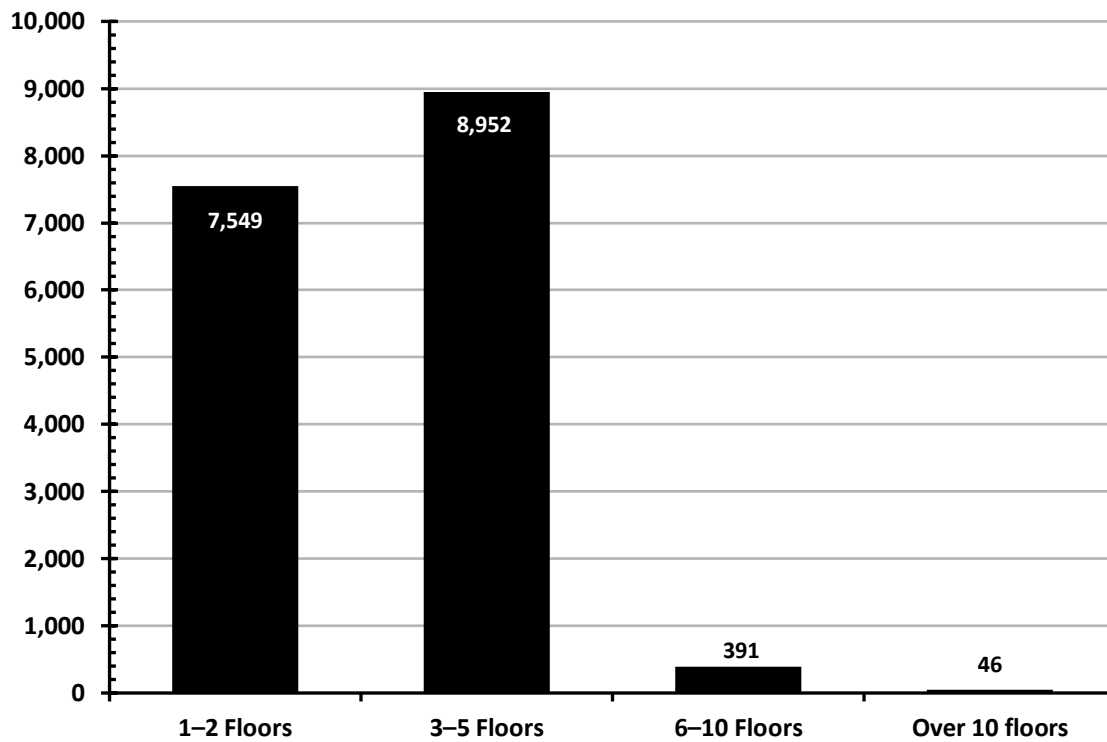
Occupancies in Buildings Three or More Stories in Height

The Insurance Services Office (ISO) rating criteria assesses whether a ladder truck is stationed within 2.5 miles from buildings three or more stories in height. Accessing the upper floors and roof of these buildings typically requires aerial ladder capability, as standard fire service ground ladders may not be sufficient. The following figure shows the locations of occupancies that are located in buildings three or more stories in height.

Figure 77: Occupancies in Buildings, Three or More Stories



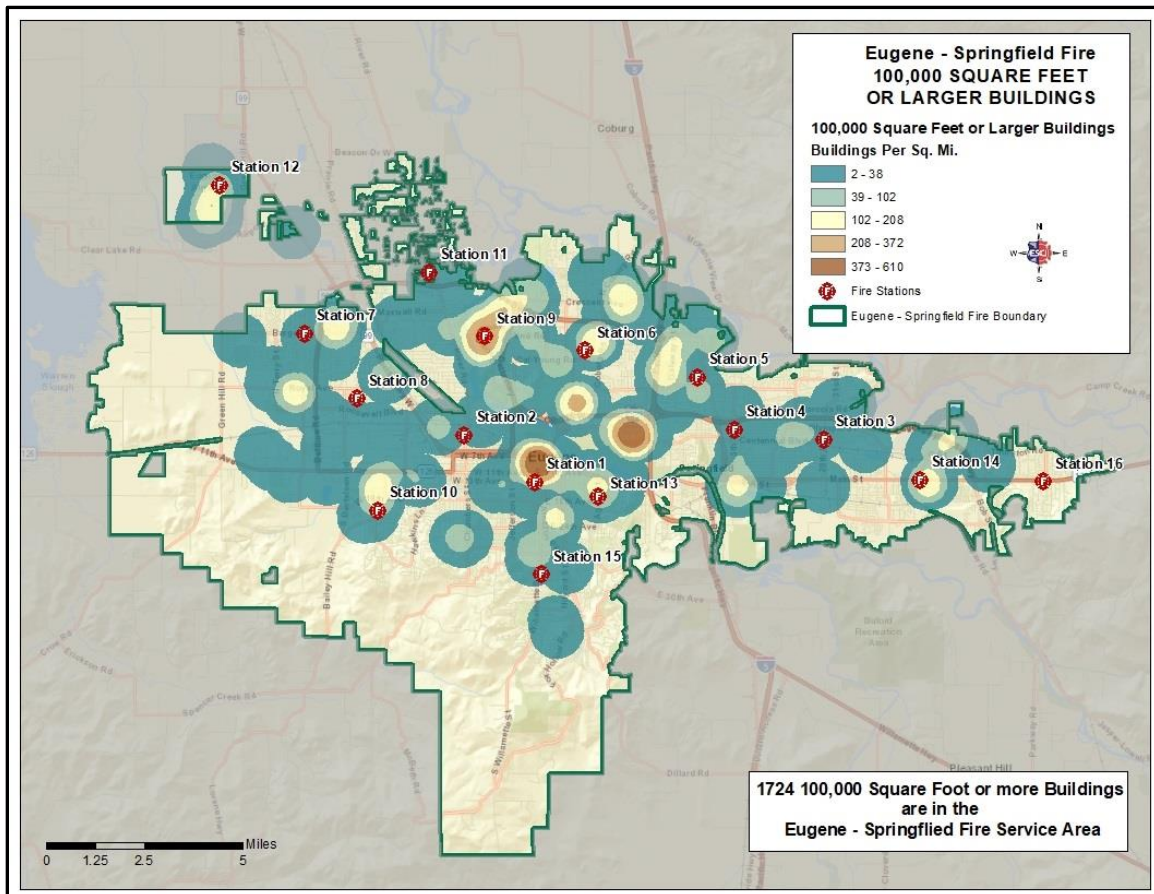
The following figure summarizes the number of occupancies in buildings with multiple stories.

Figure 78: Number of Occupancies in Buildings with Multiple Stories

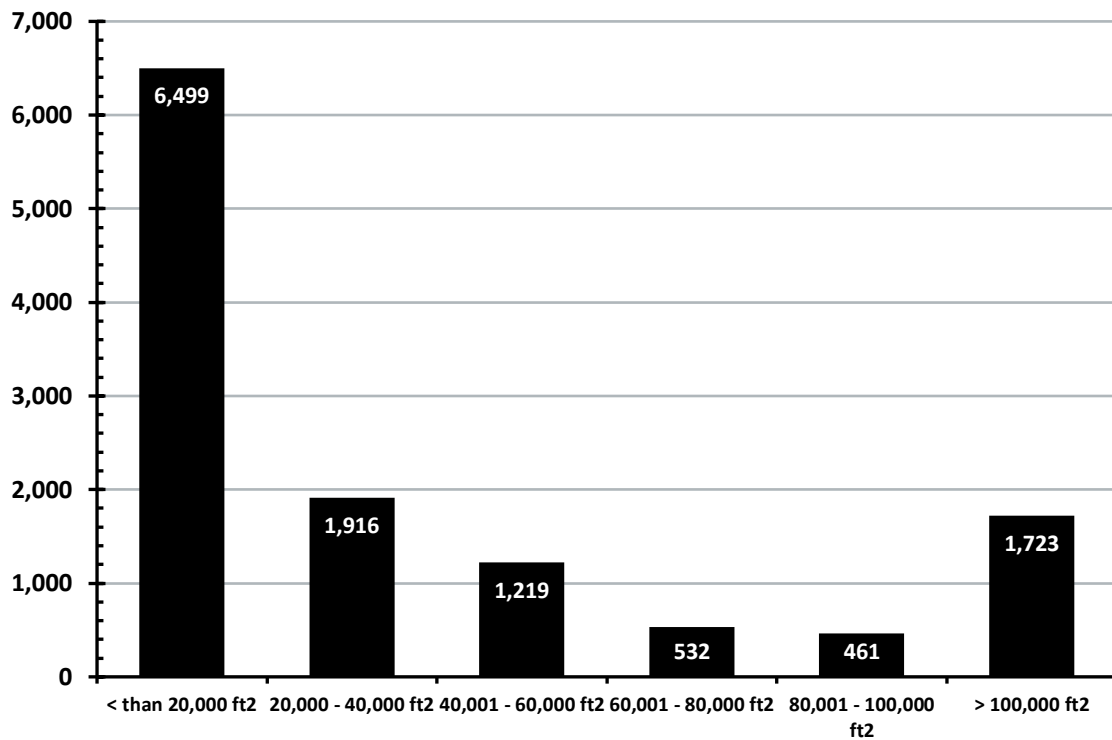
Occupancies in Large Square Footage Buildings

Large buildings, such as warehouses, factories, malls, and large “box stores” require greater volumes of water for firefighting and more firefighters to advance hose lines long distances into the building. The following figure shows the locations of occupancies in buildings 100,000 square feet and larger.

Figure 79: Occupancies in Buildings, 100,000 Square Feet and Larger



ESCI also quantified the number of occupancies located in buildings with various square footage footprints. The following figure summarizes the number of occupancies in various sized buildings.

Figure 80: Number of Occupancies per Building Square Footage**Figure 81: Likely Fire Impact, Large and Multi-Story Buildings**

Vulnerability	Impact
Human	High
Physical	High
Social	High
Economic	High
Environmental	Moderate

Multi-Family Dwellings

Multi-family dwellings pose specific risks to civilians and firefighters alike. Densely occupied living spaces have the potential for large losses of life and property. Often, older structures have limited fire department access, dangerous electrical issues, fire code violations, and a lack of automatic sprinkler systems. In addition, many older buildings have large, open attic spaces, or have compromised fire separation walls that can allow a fire to spread throughout these spaces quickly. Multi-family dwelling fires require additional firefighting personnel to perform timely evacuations, search and rescue, and delivery of medical care to those injured by fire or smoke exposure.

Figure 82: Likely Fire Impact, Multi-Family Dwellings

Vulnerability	Impact
Human	High
Physical	High
Social	Moderate
Economic	Moderate
Environmental	Low

COMMUNITY RISK REDUCTION

An emerging trend in the fire service nationally is a concept called Community Risk Reduction (CRR). CRR is an integrated approach to risk management that marries emergency operations and prevention strategies into a more cohesive approach to reducing risks in any community. It includes the fire department partnering with the community, non-profit organizations, and private sector agencies with a nexus to an identified community risk.

Analyzing a community's *actual* data is crucial and can be revealing. Some communities have been surprised by their findings, with the highest actual causes of injuries or death varying widely from previously held perceptions. Working together, fire operations and prevention staff along with other members in the community (as appropriate) can effectively identify actual threats that are supported by the community's data, change damaging outcomes, strengthen their community overall, and reduce the use of emergency resources. Some fire departments have found that by partnering with other entities, they can reduce some calls for service that might be better handled by a more appropriate resource.

"Preparation through education is less costly than learning through tragedy."

Max Mayfield, Director, National Hurricane Center

The CRR process is a creative approach, and successful strategies may include the fire department partnering with other groups or individuals, health districts, sports teams, non-profit organizations, and private sector agencies with a nexus to identified community risks. This can greatly reduce the stress on any single organization or fire department thinking it must handle a CRR effort on its own. In this approach, the larger CRR group similarly works to identify and prioritize community risks, developed mitigation strategies and a CRR plan, which integrates resources across the fire department, partner agencies, and the community. After plan implementation, the results are reviewed to determine progress in minimizing risk impacts, adjustments are made as necessary, and the improved plan is re-implemented. The CRR process approach has had several successes, has gained acceptance, and been adopted by many fire departments across the country.

The most recent ESF ISO analysis and report (2017) identified several areas for improvement, including hiring practices, training, etc. ESF noted that ISO credit was given to ESF's limited CRR activities helped to push the jurisdiction's classification from a Class 3 to the improved Class 2 designation.

As noted throughout this document, the inherent risks in the ESF service area are not limited to structure fires, nor are they evenly distributed. Pockets of unique and high consequence risks are spread throughout the area. Risk can also be localized by station area. Fire prevention staff have the resources and expertise in overseeing and delivering public education programs. A CRR effort should include the integration of these resources with station officers and community groups to develop and manage a station area-specific CRR plan as a subset of the fire department's overall CRR plan. CRR lends itself well to a volunteer supported effort, led by competent professional leadership. CRR also includes public education for risk reduction.

A prepared and informed community is a safer community.

Given this, ESF should ensure that its fire prevention programs align with Eugene and Springfield's emergency management programs, and leverage the appropriate information into the Lane County Natural Hazard Mitigation Plan. Combining these functions and acquiring additional permanent staff to perform these combined functions fully can result in a more self-reliant, prepared, disaster-resilient community, with an emphasis on educating the residents about prevention, preparedness, and self-help strategies.

Fire Code Enforcement

Plans Review and Code Enforcement

Although a detailed analysis of the Fire Prevention Division activities is outside the scope of this study, ESCI made a few observations worthy of discussion. ESF enforces the 2014 edition of the Oregon Fire Code. All new construction plans for commercial and public buildings are reviewed for required fire and life safety features, including means of egress, occupant loads, and fire protection systems.

Per state law, fire inspections are conducted in all state-licensed facilities, and some permitted hazardous materials and industrial sites. All remaining occupancies are only inspected when a complaint is received, when occupancy use changes with associated construction/remodel activity, or when otherwise selected as a target inspection occupancy group. Several operational permits issued are related to hazardous materials use and storage or other higher hazard uses and activities. However, there are only a limited number of qualified personnel available to inspect these occupancies.

The inspection and enforcement of confidence testing and maintenance of fire protection systems is another concern. According to ESF records, approximately 40% of these systems are not in compliance with Fire Code requirements, and it is unknown if these systems are functional. The Division is notified of many of these deficiencies through auto-notifications of its inspection software. As a result of staffing limitations, there is little follow up in taking enforcement action to force occupancy owners to maintain these systems.

Code Compliance Discussion

During a routine fire inspection, an occupancy is inspected for fire/life safety hazards, general housekeeping, code violations, safe means of egress, and maintenance of installed fire protection systems. Inspection findings should be electronically documented and archived in the Division's RMS. Significant code and fire hazard conditions identified during inspections should be promptly corrected and verified by the Department.

The lack of routine life safety inspections of target hazards in the ESF service area—especially in the large-high density public assembly occupancies—should be of great concern to the cities of Eugene and Springfield. In particular, regular inspection of certain types of public assembly occupancies—dance halls, night clubs, theaters, for example—is critical to ensuring the safety of occupants who are not familiar with the building or are impaired. There are many examples of fires in these occupancy types that resulted in catastrophic loss of life, as noted in the following list.

- Coconut Grove nightclub fire: November 28, 1942, 492 fatalities
- Beverly Hills Supper Club fire: May 28, 1977, 165 fatalities
- The Station nightclub fire: February 20, 2003, 100 fatalities
- Ghost Ship warehouse fire: December 2, 2016, 26 fatalities

It should be noted that, except for the Ghost Ship warehouse fire, hundreds of more people suffered serious injuries in each of these fires.

In today's contemporary fire department, consistent and professional safety assessments and follow up of fire code issues in target hazards is a key mission of the organization, and receives significant programmatic emphasis and support.

Potential liability should also be a concern for the cities. Lack of code enforcement and follow up, especially when the fire department knows about a significant issue, potentially exposes the jurisdictions to significant liability. Subsequent to the Station nightclub fire, the National Institute of Standards and Technology (NIST) performed an investigation into the cause and effects of the fire. In its first set of recommendations NIST recommended:³⁰

- Adopt a building and fire code covering nightclubs based on one of the national model codes—as a minimum requirement—and update local codes as the national standards are revised;
- Implement aggressive and effective fire inspection and enforcement programs that address all aspects of these codes; and
- Ensure that enough Fire Inspectors and Building Plan Examiners—professionally qualified to a national standard—are on staff to carry out this work.

One potential avenue worth exploring is the expansion of the operational permit program to include additional public assembly target hazard occupancies. Fees collected could generate additional revenue to help offset some or all of the costs of administering the program.

Pre-Incident Planning and Fire Safety Audits

Pre-planning of commercial and public buildings is the process by which operational or Fire Prevention personnel perform an informal walk-through to become familiar with the occupancy. During these site visits, each location is inspected for fire/life safety hazards and code violations, with specific emphasis placed on access, means of egress, fire protection systems, fire hydrant locations, fire department connection locations, etc. In contemporary fire departments, with sufficient resources, this information is collected, cataloged, and archived in a computerized records management system (RMS), which can be quickly accessed in the field. Further, these departments integrate this information into GIS layers that allow for quick visualization in the field, integration with dispatch communication systems, and report generation.

At the time of this study, and with the staffing challenges that face ESF, the department completes pre-incident planning reviews on a limited basis, and its recent ISO credit reflects the lack of documentation for such efforts. ESF recently received an AFG Fire Prevention and Safety grant and completed an effort to update its building inventory noting pertinent information that is important in cases of emergency. Nearly 17,000 occupancies were inventoried and “cataloged.” Buildings and developments were inventoried, photographed, and identified with GIS coordinates for quick geographical locating, with important information such as owner contacts, the nearest fire hydrant location, best access or access difficulties, etc., and any hazards were noted. However, at the time of this study, the data is still being “scrubbed” for accuracy. Once all errors have been corrected, the information will be converted to GIS layers and used in the calculation of location risk and for emergency response.

The ESF service area’s growth rate is steadily increasing, and the department’s ability to keep up with new and existing building safety inspections will continue to be a challenge. ESF is also in the process of evaluating its current RMS for upgrades or replacement during this next year. One of the goals of this update is to ensure operations crews have quick access to important pre-fire plan information of the various occupancies in the ESF service area, along with the ability to update this information while still in the field.

Community Outreach and Education

ESF has a number of community outreach efforts for public education in association with the Emergency Management offices of both cities of Eugene and Springfield in addition to Lane County. They include the distribution of safety-related topics accessible on various city and county websites, public event distribution points, public service announcements, partner outreach projects (e.g., Red Cross smoke alarm installation project), elementary school and college campus visits, fire station tours, and many opportunities for collaborative participation in safe community activities. ESF is also enhancing its social media presence in advance of the major special events they will be hosting in the coming two years. ESF has very limited personnel assigned specifically for public education efforts, and the jurisdiction does their best with the limited resources currently available.

COMMUNITY GROWTH & RISK

Future Development

The cities of Eugene and Springfield have adopted Comprehensive Plans that established goals and objectives related to the expansion of city boundaries, population growth and development, desired community characteristics, and transit needs and infrastructure. These plans were created, taking into consideration the goals and objectives of the Eugene-Springfield Metropolitan Area General Plan. This plan identified the following objectives pertinent to this study:³¹

- Continue to minimize urban scatteration and sprawl by encouraging compact growth and sequential development.
- Ensure that land supply is kept in proper relationship to land use needs.
- Conserve those lands needed to accommodate expected urban growth efficiently.
- Encourage the development of suitable vacant, underdeveloped, and re-developable land where services are available, thus capitalizing on public expenditures already made for these services.

The cities will continue to “infill” consistent with this plan and their own internal planning efforts. The result of this approach should continue to maximize the use of existing city services, including ESF emergency response resources. The current Eugene Urban Growth Boundary (UGB) has not been expanded for housing. However, a slight expansion of the UGB had been recommended previously for approximately 950 acres. Almost all of this expansion was in the Clear Lake area for business and school campuses. An additional 50 acres of expansion was planned for parks use in the Santa Clara area.³²

The City of Springfield’s Comprehensive Plan also includes an expansion of the city’s UGB. Additional land was added to its UGB in 2016, including 216 acres in the North Gateway area, 508 acres in the Mill Race area, and 72 acres of dedicated Willamalane Park land in the southeast UGB area.

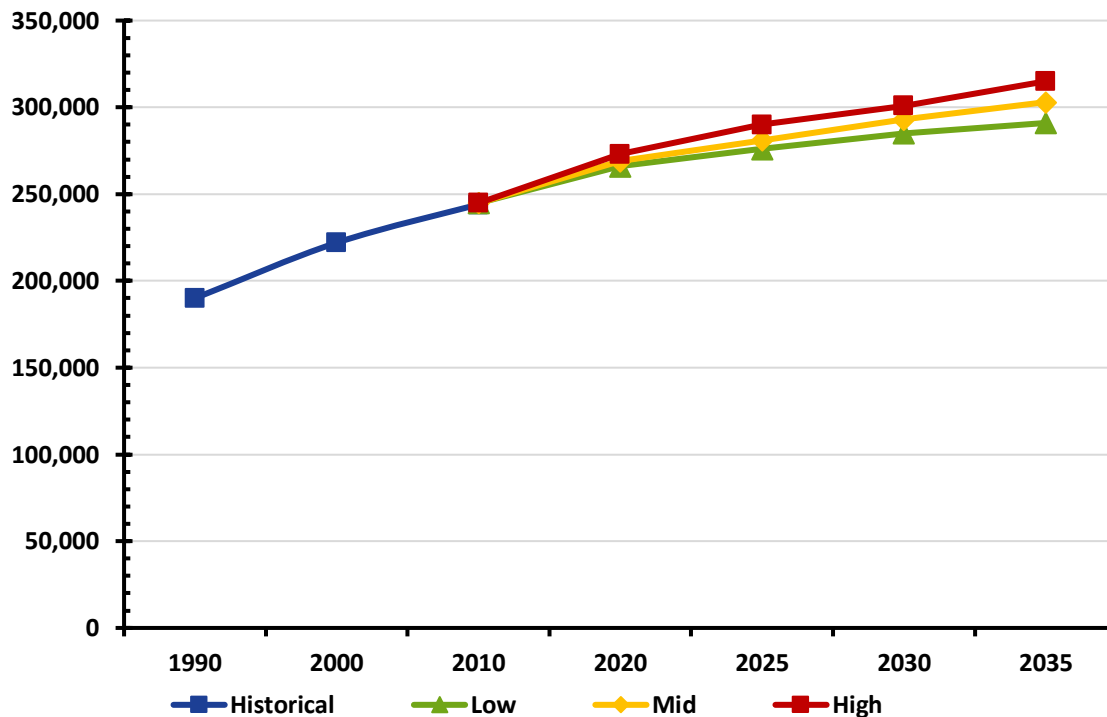
It is important to note that the UGB expansions in both cities were for business and public uses, not housing. Springfield has a large UGB footprint, primarily to the south and east of the current city limits.

ESF’s service area already encompasses almost all of the UGB land in both cities. As buildout occurs in these areas, impact on emergency services will likely be incremental, and depending on the type of build-out and use in these areas, life safety code enforcement requirements may increase as well.

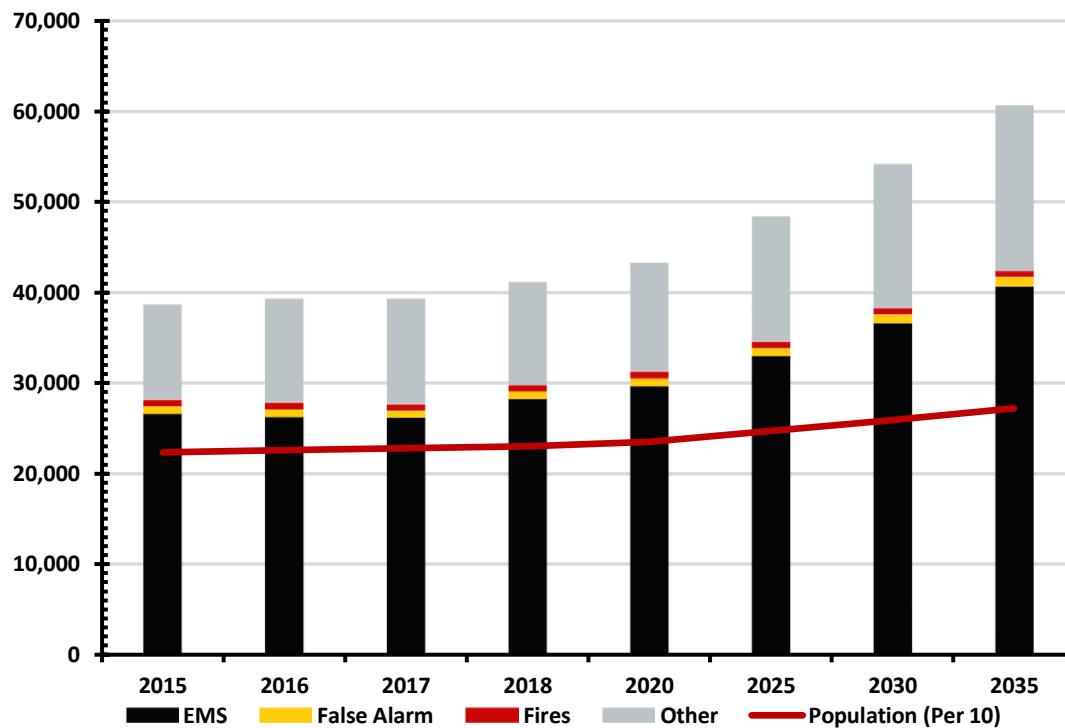
Projected Population Growth

It is widely understood that there is a direct correlation between population density and the number of emergency incidents experienced in the community. In other words, as the population increases, so does the number of emergency incidents, especially EMS incidents. Except for the early to mid-1980s, the populations of Eugene and Springfield have grown steadily since 1975, expanding by 50% by 2010.³³ More recently, the populations of Eugene and Springfield have experienced similar annual population increases of 1% per year. The following figure shows population projections through 2035, which includes aggressive and conservative projections.

Figure 83: Eugene Springfield UGA Population Projections³³



ESCI also overlaid the Eugene and Springfield population projections through 2035, as calculated by Portland State University's Population Research Center, as shown in the following figure. ESCI applied a per capita incident rate derived from historical service demand to the projected population in the service area to forecast future service demand. Note that the service demand increases vary depending on incident type. For example, based on historical incident information, EMS incidents are projected to increase by slightly over 2% per year. Other incident types were projected to increase by 3% per year. False fire alarms were projected to increase by only 1% per year, and the number of fire incidents was projected to stay about the same from year to year.

Figure 84: Incident Projections, 2015–2035

It must also be noted that these projections are based on the current service area and built environment. ESCI did not take into account annexations, large scale development, and other agreements to provide emergency response services to other adjacent jurisdictions in the incident projections.

The age demographic in a community is another important aspect to consider when anticipating demand for emergency services, especially EMS responses. According to the State of Oregon Office of Economic Analysis, the elderly population over age 75 in Lane County is projected to increase by 4% over the next 10 years.³⁴ This will undoubtedly have an impact on EMS service delivery in the ESF service area.

The Unhoused Issue

People living without homes is another changing demographic in the Eugene and Springfield area. The cities have experienced a significant “uptick” in the number of unhoused people, with their numbers steadily increasing since 2016, including a 32% increase between 2018 and 2019.³⁵ As a result, in July 2019, the Eugene City Council approved \$1.9 million to provide staff to develop and oversee programs to address the issue, build a large temporary living structure for up to 75 people, and provide landlords financial incentives to create affordable housing.

Interviews with ESF staff reveal that the significant increase in this population has resulted in increased emergency and non-emergency responses, along with introducing unique fire and life-safety code issues related to temporary housing, ad-hoc aggregate living situations, and illegal occupying of vacant structures. This has resulted in numerous fire and life-safety code violations. ESCI understands that efforts to gain compliance have been somewhat stymied by conflicting interpretations of related codes, political issues, and overall lack of agreement on the best approaches to address this significant social issue.

SUMMARY & RECOMMENDATIONS

Eugene Springfield Fire retained ESCI in March 2019 to conduct an All-Hazards Community Risk Assessment, with a focus on fire prevention mitigation efforts and planning for future large-scale sporting events. Throughout our research, we were struck by the high level of engagement, professionalism, and adaptability of this growing and evolving organization. We were also very impressed with the amount of detailed disaster planning and preparedness efforts already in place, especially in the realm of natural hazards mitigation planning.

Specific to planning for the upcoming sporting events, ESCI believes the long history of inter-agency public safety and security planning and execution in hosting large sports and entertainment events will be easily adaptable to the 2021 World Track & Field Championship. While ESF has seen increases in EMS service demand during large entertainment events, their previous experience shows that large sporting events typically do not result in a large increase in service demand. This is most likely the result of the healthy demographic of attendees, and lack of alcohol sales during these events. The University of Oregon's 2018 decision to expand the sale of alcohol at home football games at Autzen Stadium has not adversely impacted EMS response demand.

Even though significant resources are in place to address risk and hazards in the Eugene and Springfield communities, and in addition to the recommendation to implement a CRR program as previously noted, ESCI believes more can be done to better position the organization and community for addressing these risks and offers the following additional observations and recommendations.

Continue a Targeted Wildfire Prevention/Mitigation Program

Given the significant wildfire risk in portions of the service area, ESF should continually dedicate efforts to educating those living and working in the wildland-urban interface neighborhoods about their wildfire risk, steps they can take to better prepare, and WUI fuels reduction. Lane County offers the Firewise program to residents living in unincorporated rural Lane County areas; however, residents within the Eugene and Springfield city limits do not qualify for this program, which includes access to wildfire mitigation grant funds.

ESCI understands that the Eugene City Council recently authorized funding for a joint youth work force-wildfire risk reduction program, intending to create "defensible space" around homes in the WUI and educate these residents of the need to make their properties more resistant to the impacts of wildfires.

Increase Fire Prevention Staff and Inspections

During the study, ESCI noted that the Fire Prevention Division was managed by an Acting Fire Marshal, whose previous position was not backfilled. This leaves only three Deputy Fire Marshals to handle complaints, public education, the Juvenile Firesetters program, and operational permit and target hazard inspections. Three other DFMs primarily perform plan reviews, new construction related inspections, and fire protection system acceptance testing. All DFMs conduct fire investigations as required.

As previously noted, due to the lack of resources to support consistent fire code compliance efforts, and the lack of consistent periodic inspections of target hazard occupancies, the department should consider increasing Fire Prevention Division staffing to ensure life safety code compliance is maintained in all relevant occupancies in the cities of Eugene and Springfield. This is critical in meeting ESF's safety objectives, and the Oregon State Fire Marshal's partial exemption status allowance.

Improve Radio/Data Communications System Planning and Interoperability

As noted previously in this study, ESF has been aggressively updating its field data and 900 MHz radio system infrastructure to improve radio coverage and capacity. However, these upgrades and improvements are only being implemented within the ESF service area, and apparently not being coordinated with other adjacent fire and public safety agencies. This is not necessarily the fault of ESF, as they have a pressing need to ensure their emergency crews can clearly communicate on incidents. Instead, it highlights the need for better coordination and integration of the various emergency responder radio systems that integrate with the Central Lane 911 Center.

ESF and adjacent fire and EMS response agencies would likely benefit from the creation of an interagency communications/governance organization, similar to the local law enforcement's Lane Regional Interoperability Group. Improving coordination and management of the various radio and data systems used by local fire and EMS agencies may improve radio system capacity, interoperability, and efficiencies, all of which are critical in effectively responding to large-scale and disaster situations.

Standardize Administrative Policies, Procedures, and Processes

The department exercises different policies and procedures, depending on an employee's "home employer." This perpetuates inefficiencies in administering many of the employee support functions, such as Human Resources support, payroll, benefits coordination, etc. During a disaster event, this could create an unnecessary and unwieldy burden on administrative staff and managers.

As previously recommended in an ESCI study, the merger of the two fire departments would eliminate this incongruity, and likely streamline administrative support tasks and communications, and may eliminate barriers that prevent administrative cross-training that may be critical in a disaster situation. Short of a full merger—and understanding there may be bargaining unit implications—ESF should compare these divergent policies and procedures, and combine or adopt single policies and procedures where possible for all employees, regardless of employer affiliation.

Increase Collaboration and Coordination Between Emergency Management & ESF

During the site visit, some of the information shared revealed apparent barriers to effective communication and coordination between the ESF Operations Division, Fire Prevention Division, and Eugene and Springfield's Emergency Management Offices. While it is beyond the scope of this study to identify the specific reasons for this, ESCI feels that efforts should be undertaken to improve coordination of emergency management planning, education, and preparation activities between ESF and both cities, with a focus on integrating EM and ESF public education and planning activities into their respective operations.

Address the Unhoused Issue

Those living without housing is very visible in the community and has resulted in the allocation of significant funds to address the problem. However, the impact of this growing problem on ESF operations and life-safety remains somewhat nebulous. ESF should take steps to collect specific data related to this issue, including identifying unhoused EMS patients, and fire and other life-safety issues created by persons found in their circumstances to determine whether any changes should be made to ESF's procedures in alignment with the service area's overall goals. Further, ESF should participate in relevant community planning efforts to address this issue. The purpose of this is two-fold: (1) To ensure the unique life-safety risks and challenges related to housing are addressed upfront in the planning process, and; (2) To ensure key planning stakeholders understand the relevant ESF services that are provided.

APPENDIX A: HAZARD VULNERABILITY MATRICES

ESCI HAZARD AND VULNERABILITY ASSESSMENT TOOL								
STRUCTURE FIRES-Eugene-Springfield								
EVENT	PROBABILITY	SEVERITY = IMPACT - MITIGATION)						RISK
	Likelihood this will occur	COMMUNITY IMPACT			MITIGATION CAPACITY			Relative threat*
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Very High	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 - 100%
Moderate Risk Urban	2	2	2	2	1	1	2	21%
High Risk Urban	1	3	3	3	2	2	2	16%
Moderate Risk Suburban	2	2	2	2	1	1	2	21%
High Risk Suburban	1	3	2	2	2	2	2	14%
Moderate Risk Rural	2	1	2	2	1	1	1	17%
High Risk Rural	1	2	2	2	2	2	2	13%
Low Risk Rural	2	1	1	1	1	1	1	13%
AVERAGE SCORE	1.57	2.00	2.00	2.00	1.43	1.43	1.71	17%

ESCI HAZARD AND VULNERABILITY ASSESSMENT TOOL								
NON-STRUCTURE FIRES-Eugene-Springfield								
EVENT	PROBABILITY	SEVERITY = IMPACT - MITIGATION)						RISK
	Likelihood this will occur	COMMUNITY IMPACT			MITIGATION CAPACITY			Relative threat*
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Very High	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 - 100%
High Risk Urban	2	3	3	3	2	2	2	31%
Moderate Risk Urban	2	2	2	2	1	1	2	21%
Low Risk Urban	2	1	1	1	1	1	1	13%
Urban/Wildland Interface	2	3	2	2	3	2	2	29%
AVERAGE SCORE	2.00	2.25	2.00	2.00	1.75	1.50	1.75	23%

ESCI HAZARD AND VULNERABILITY ASSESSMENT TOOL								
EMS-MEDICAL ASSISTS-Eugene-Springfield								
EVENT	PROBABILITY	SEVERITY = IMPACT - MITIGATION)						RISK
		COMMUNITY IMPACT			MITIGATION CAPACITY			
	<i>Likelihood this will occur</i>	HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	<i>Relative threat*</i>
SCORE	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Very High	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 - 100%
High Risk	1	3	1	1	0	0	2	7%
Moderate Risk	3	2	1	1	3	3	2	38%
Low Risk	4	1	1	1	4	4	2	54%
AVERAGE SCORE	2.67	2.00	1.00	1.00	2.33	2.33	2.00	30%

ESCI HAZARD AND VULNERABILITY ASSESSMENT TOOL								
RESCUE-Eugene-Springfield								
EVENT	PROBABILITY	SEVERITY = IMPACT - MITIGATION)						RISK
		COMMUNITY IMPACT			MITIGATION CAPACITY			
	Likelihood this will occur	HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	Relative threat*
SCORE	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Very High	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 - 100%
Rescue - MVA	3	1	1	1	2	2	2	28%
Rescue - Structural Collapse	1	3	4	2	2	2	2	16%
Rescue - Trench	1	2	2	1	2	2	2	11%
Rescue - Low/High Angle	1	2	1	1	2	2	2	10%
Rescue - Confined Space	1	2	1	1	2	2	2	10%
Rescue - Swiftwater	4	3	1	1	0	0	2	29%
Rescue - Stillwater	2	2	1	1	2	2	2	21%
Rescue - Ice	1	2	1	1	2	2	2	10%
Rescue - Other	2	3	1	1	2	2	2	23%
AVERAGE SCORE	1.78	2.22	1.44	1.11	1.78	1.78	2.00	19%

ESCI HAZARD AND VULNERABILITY ASSESSMENT TOOL								
HAZARDOUS MATERIALS-Eugene-Springfield								
EVENT	PROBABILITY	SEVERITY = IMPACT - MITIGATION)						RISK
	Likelihood this will occur	COMMUNITY IMPACT			MITIGATION CAPACITY			Relative threat*
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Very High	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 - 100%
High Risk Hazmat - Urban	3	3	4	3	2	2	3	53%
Moderate Risk Hazmat - Urban	3	2	2	2	2	2	3	41%
Low Risk Hazmat - Urban	2	1	2	1	1	2	3	21%
High Risk Hazmat - Suburban	3	2	2	2	2	2	3	41%
Moderate Risk Hazmat - Suburban	3	2	2	2	1	2	3	38%
Low Risk Hazmat - Suburban	2	1	2	1	1	2	3	21%
High Risk Hazmat - Rural	2	2	2	2	2	2	3	27%
Moderate Risk Hazmat - Rural	2	1	1	1	1	2	3	19%
Low Risk Hazmat - Rural	2	1	1	1	1	2	3	19%
AVERAGE SCORE	2.44	1.67	2.00	1.67	1.44	2.00	3.00	30%

ESCI HAZARD AND VULNERABILITY ASSESSMENT TOOL								
NATURALLY OCCURRING EVENTS-Eugene-Springfield								
EVENT	PROBABILITY	SEVERITY = IMPACT - MITIGATION)						RISK
		COMMUNITY IMPACT			MITIGATION CAPACITY			
	Likelihood this will occur	HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	Relative threat*
SCORE	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Very High	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 - 100%
Tornado	0	0	0	0	2	2	2	0%
Severe Thunderstorm	1	1	1	1	2	2	2	9%
Snow Fall	1	1	1	1	4	4	4	16%
Blizzard	1	1	1	1	3	3	3	13%
Ice Storm	2	2	3	3	3	3	3	35%
Earthquake	3	4	4	4	2	3	3	63%
Tidal Wave	0	1	1	1	2	2	2	0%
Temperature Extremes	2	2	2	2	2	2	2	25%
Drought	2	2	2	2	2	2	2	25%
Flood, External	3	2	2	2	2	2	2	38%
Wild Fire	4	3	2	2	3	1	1	50%
Landslide	1	2	3	3	3	3	3	18%
Dam Inundation	1	4	4	4	3	3	4	23%
Volcano	1	1	2	1	2	2	2	10%
Epidemic	2	2	1	2	2	2	2	23%
AVERAGE SCORE	1.60	1.87	1.93	1.93	2.47	2.40	2.47	22%

ESCI HAZARD AND VULNERABILITY ASSESSMENT TOOL								
TECHNOLOGIC EVENTS-Eugene-Springfield								
EVENT	PROBABILITY	SEVERITY = IMPACT - MITIGATION)						RISK
	Likelihood this will occur	COMMUNITY IMPACT			MITIGATION CAPACITY			Relative threat*
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Very High	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1 = Low 2 = Moderate 3 = High 4 = Catastrophic	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 = Very High 1 = High 2 = Moderate 3 = Low 4 = None	0 - 100%
Electrical Failure	2	2	1	2	1	2	2	21%
Generator Failure	1	3	1	3	2	2	2	14%
Transportation Failure	2	4	2	4	3	3	3	40%
Fuel Shortage	2	4	2	4	3	3	3	40%
Natural Gas Failure	2	4	2	4	3	3	3	40%
Water Failure	2	4	2	4	3	3	3	40%
Sewer Failure	2	4	3	4	3	3	3	42%
Steam Failure	1	1	1	1	2	2	2	9%
Fire Alarm Failure	1	3	3	3	2	2	2	16%
Communications Failure	2	4	2	4	3	3	3	40%
Medical Gas Failure	1	3	1	3	2	2	2	14%
Medical Vacuum Failure	1	3	1	3	2	2	2	14%
HVAC Failure	2	1	2	2	2	2	2	23%
Information Systems Failure	2	4	2	4	3	3	3	40%
Fire, Internal	3	2	3	3	2	1	1	38%
Flood, Internal	2	1	1	1	1	2	2	17%
Hazmat Exposure, Internal	2	2	2	2	2	2	3	27%
Supply Shortage	2	4	1	4	3	3	3	38%
Structural Damage	1	1	3	3	2	2	2	14%
AVERAGE SCORE	4.71	2.14	1.84	3.05	2.32	2.37	2.42	27%

ESCI HAZARD AND VULNERABILITY ASSESSMENT TOOL								
HUMAN RELATED EVENTS-Eugene-Springfield								
EVENT	PROBABILITY	SEVERITY = IMPACT - MITIGATION)						RISK
	Likelihood this will occur	COMMUNITY IMPACT			MITIGATION CAPACITY			Relative threat*
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
SCORE	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Very High	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = N/A 1= Low 2 = Moderate 3 = High 4 = Catastrophic	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 = Very High 1= High 2 = Moderate 3 = Low 4 = None	0 - 100%
Mass Casualty Incident (trauma)	2	3	1	1	1	1	2	19%
Mass Casualty Incident (medical/infectious)	2	3	2	2	2	2	2	27%
Terrorism	2	4	4	4	2	2	2	38%
VIP Situation	2	4	1	4	2	2	2	31%
Infant Abduction	1	4	1	2	2	2	2	14%
Hostage Situation	1	3	1	1	2	2	2	11%
Civil Disturbance	2	3	3	3	1	1	1	25%
Labor Action	1	3	1	1	2	2	2	11%
Forensic Admission	1	1	1	1	2	2	2	9%
Bomb Threat	2	1	1	1	2	2	2	19%
AVERAGE SCORE	1.60	2.90	1.60	2.00	1.80	1.80	1.90	20%

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Nuisance Vegetation Program

To protect the health, safety and general welfare of the community, Eugene residents have a city ordinance (City Code Chapter 6) to control vegetation on property within the city limits. This ordinance requires homeowners to remove and prevent vegetation which:

- impairs traffic visibility,
- obstructs streets or sidewalks or,
- otherwise threatens the public right-of-way.

The City of Eugene is responsible for the maintenance of trees within the public right-of-way, including pruning and removal. Please contact our office for questions related to trees within the right-of-way.

The Parks and Open Space vegetation management program is a complaint-based program that responds to vegetation complaints. Our goal is to encourage voluntary compliance by informing owners of a problem prior to any formal complaint being made. If a complaint is made and a violation is found, the owner is notified by letter and has ten days to correct the problem. If the violation is not corrected, the City of Eugene will hire a contractor to mitigate the nuisance and the costs will be billed to the property owner. The minimum mowing charge is \$175.00. The cost may be higher in some cases, especially if much of the work must be done by hand.

FAQs

- [What does this program enforce?](#)
- [What is this program not responsible for enforcing?](#)
- [What if I have private tree issues?](#)

[VIEW ALL](#)

If you have questions regarding the nature of violations or vegetation code requirements, please call us at 541-682-4821.

Short URL to this page: www.eugene-or.gov/vegenforcement

Contact Us

Parks and Open Space

Email

1820 Roosevelt Blvd.
Eugene, OR 97402

Ph: 541-682-4800
Fx: 541-682-4882



[Previous](#)

[Next](#)



Eugene Wildfire Preparedness Coalition
541-972-3867 • eug.fire.prep.coalition@gmail.com



Dear Councilors and Mayor Vinis,

The Holiday Farm Fire came within 14 miles of Springfield. Had the easterly winds continued on September 7, 2020 Springfield and Eugene could have been on fire. We saw with the Alameda Fire that started in Ashland but quickly spread into the urban residential neighborhoods of Talent and Phoenix consuming 2,400 homes and businesses.

The 5th Oregon Climate Assessment Report predicts that wildfire will become more frequent and destructive in future fire seasons. We now know that wildfire can ignite a densely populated urban area as easily as the rural forest.

We are asking you to watch this 16 minute video featuring Chief Heppel talk about the threat of wildfire to our community. <https://youtu.be/23ZO69HsNO4>

Our community needs a robust wildfire preparedness campaign to prevent a catastrophe happening in Eugene and Springfield.

The Eugene Wildfire Preparedness Coalition is asking the Eugene City Council, Mayor and City Manager to prioritize for a City Council Work Session before June 2021 to address this serious threat to our community. We are also asking the City Council, Mayor and City Manager to consider instituting the position of Fire Adaptive Community Coordinator to work through the Eugene Springfield Fire. Below is the job description from the Ashland Fire and Rescue. <https://www.governmentjobs.com/careers/ashlandor/jobs/2465742/fire-adapted-communities-coordinator?pagetype=jobOpportunitiesJobs>

Regards,
Tom Peck,
Eugene Wildfire Preparedness Coalition Chair