WILDLAND URBAN INTERFACE
FUELS REDUCTION PROJECT

Ian Appow

WUI FUELS REDUCTION PROJECT

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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.

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

Exectuted 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 stater's. NYC also was responsible for staffing the project cooridnator. 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

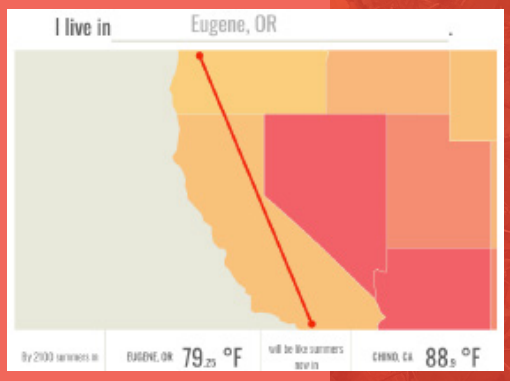
Provided oversight for habitat conservation during fuels reduction work in both public and private properties. Included in their contribution was access to GIS applications and data on taxlots and zoning for the City of Eugene allowing for responsible designations of worksite priorities.

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



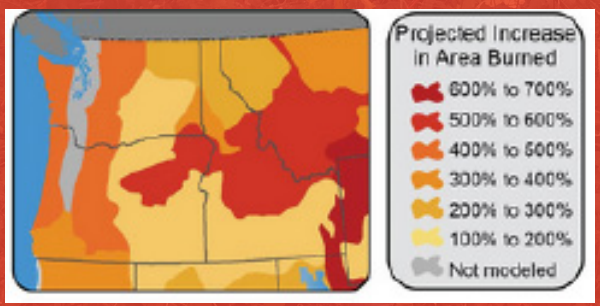
Left

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/48138/CAP20-Full-Document-w-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 wholistic 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 vehichles 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 Oppportunities 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.

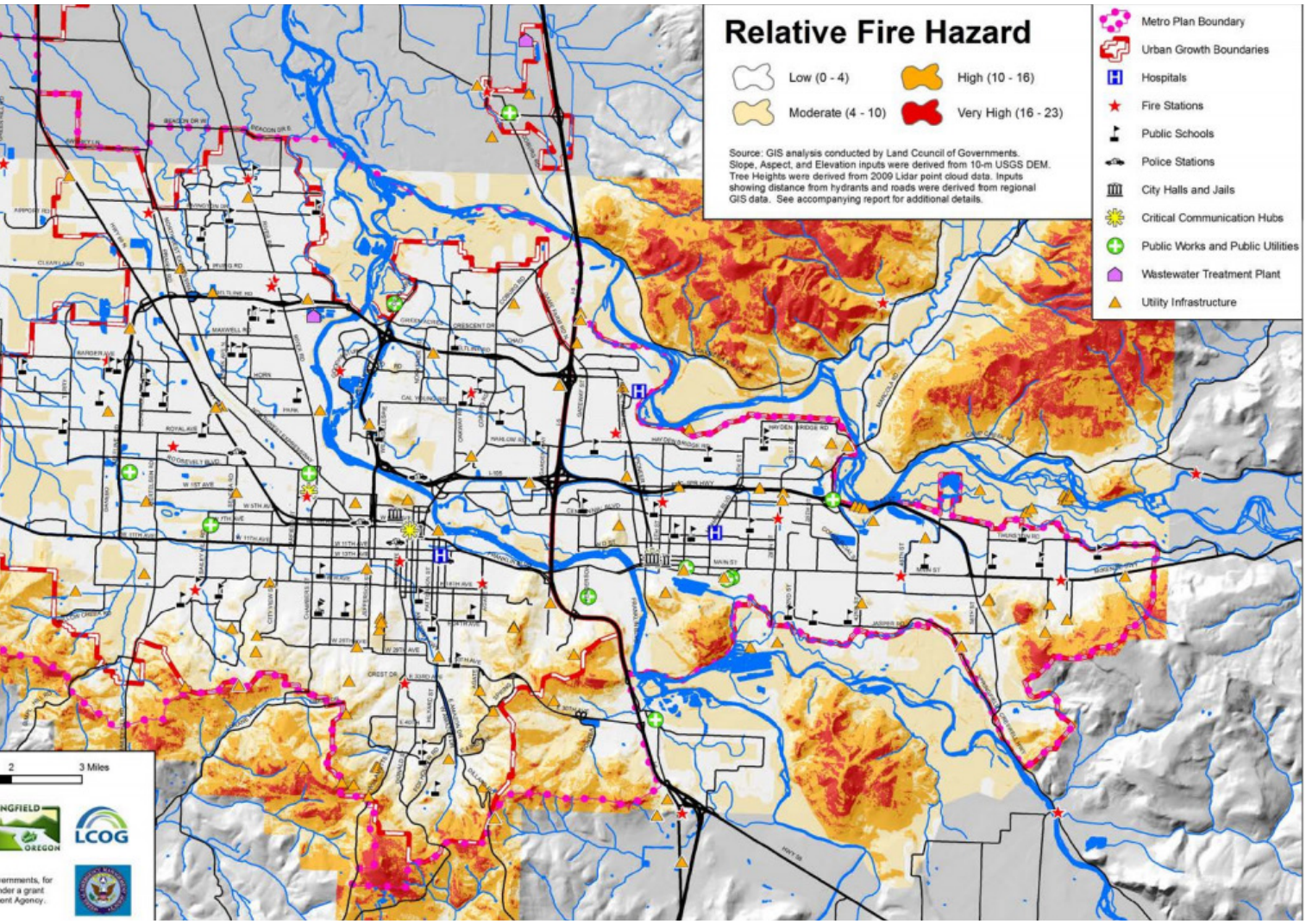
Source: https://www.eugene-or.gov/DocumentCenter/View/20573/Eugene-Springfield-Multi-Jurisdictional-NHMP-2014?bidId=

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 personnal 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 Assesment

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 supressed 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

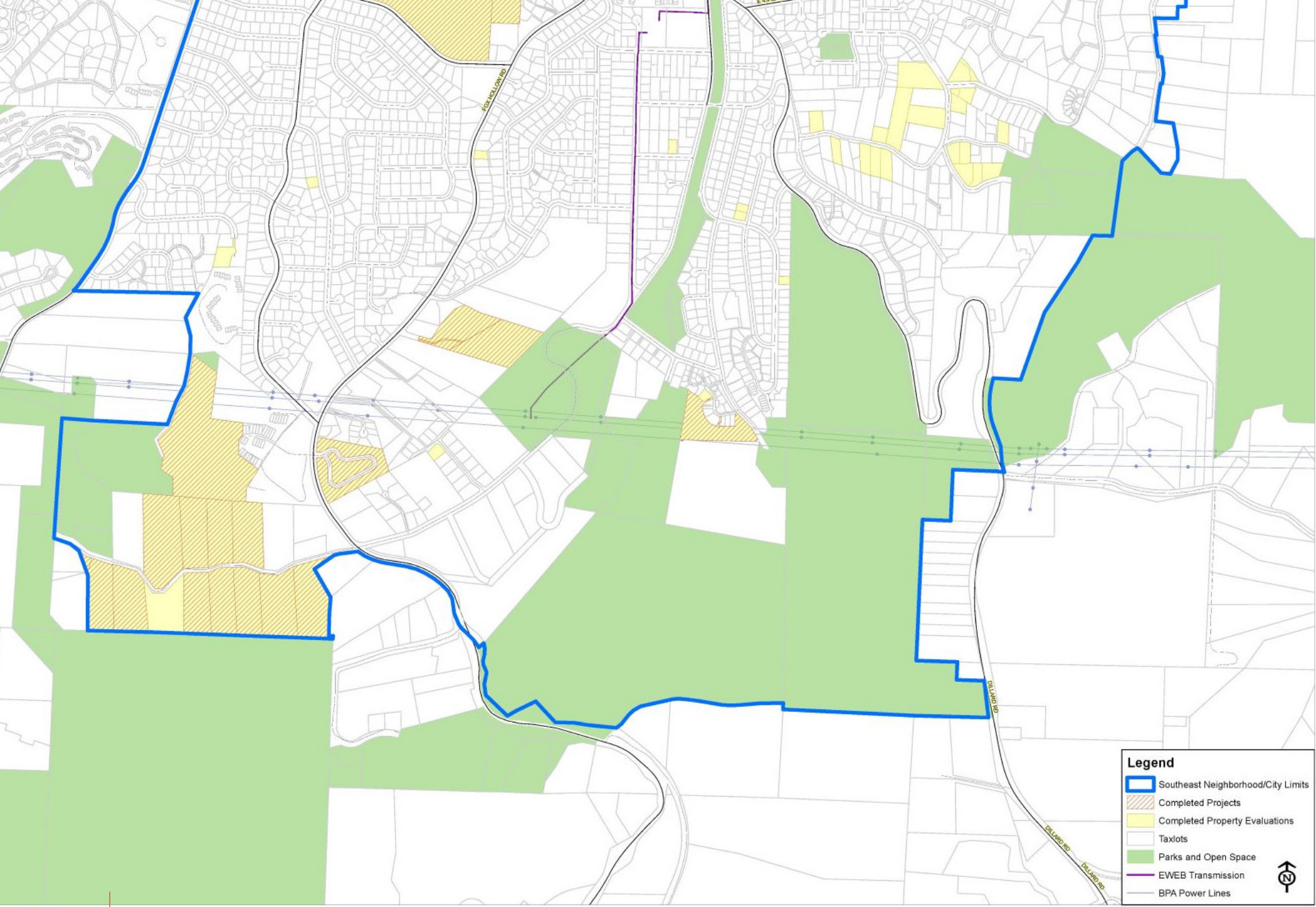
Investing in wildfire resiliency practices to mitigate chance of property damage. Increasing property values by lowering disaster risk. Upfront maintenance adresses other potential property damage potential like storm or fall damage from trees.

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 prepardeness stratgies.

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.



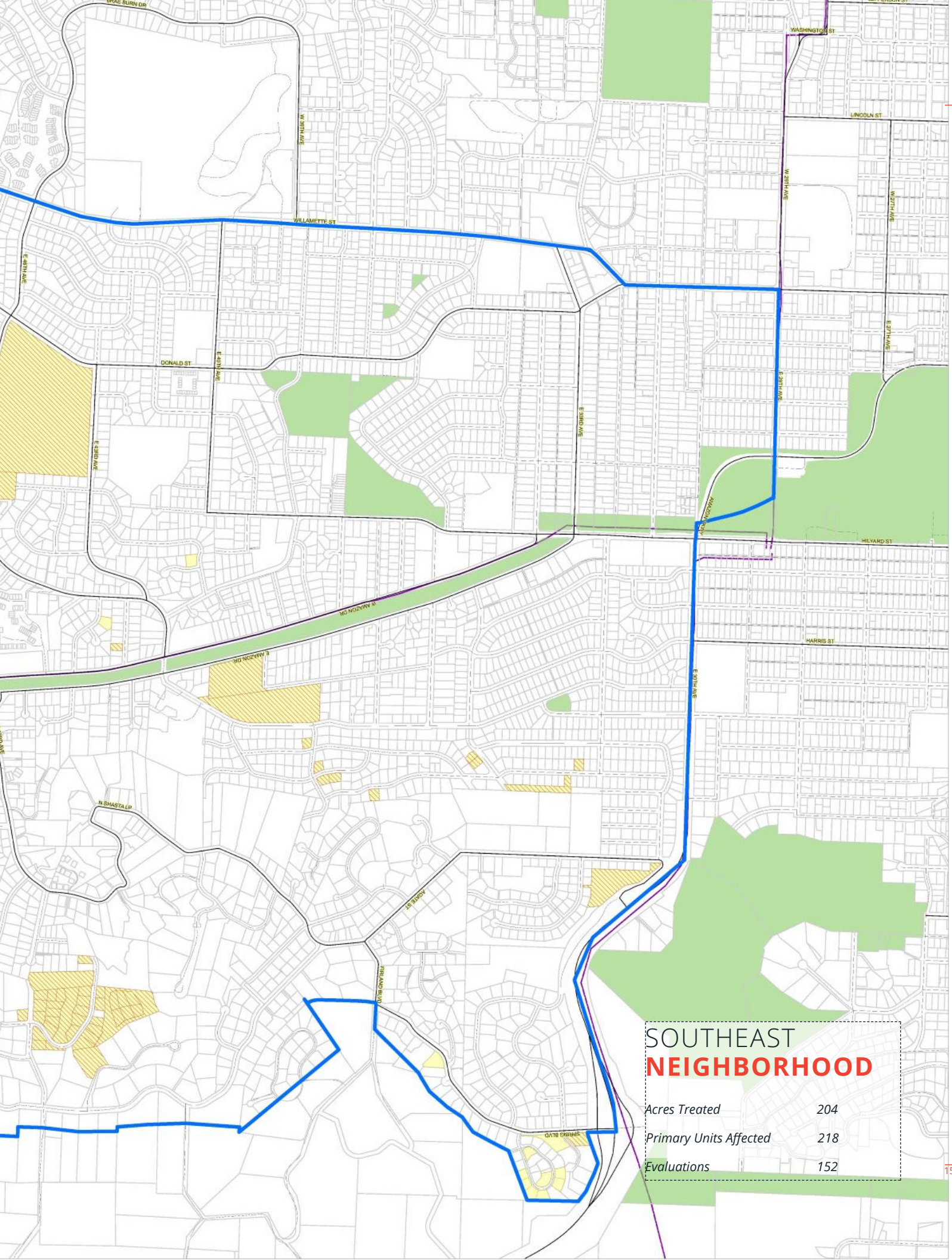
Eugene

December 6, 2019

SE Neighborhood - WUI Collaborative Project - 2019

0 0.25 0.5 Miles

Caution: This map is based on imprecise source data, subject to change, and for general reference only.



SOUTHEAST **NEIGHBORHOOD**

Acres Treated	*204*
Primary Units Affected	*218*
Evaluations	*152*

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 vehichles 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 Edge-wood 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 supressed trees.

Lower left ohoto
After
Less hazardous horizontal interactions amd natives 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 aleviate City staff time dedicated to it and also won a major swing of support from the neighbors. This led to an additional invovlement 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 trafficedcked area with dramatic topography. A cigarette or car accident would roar uphill.

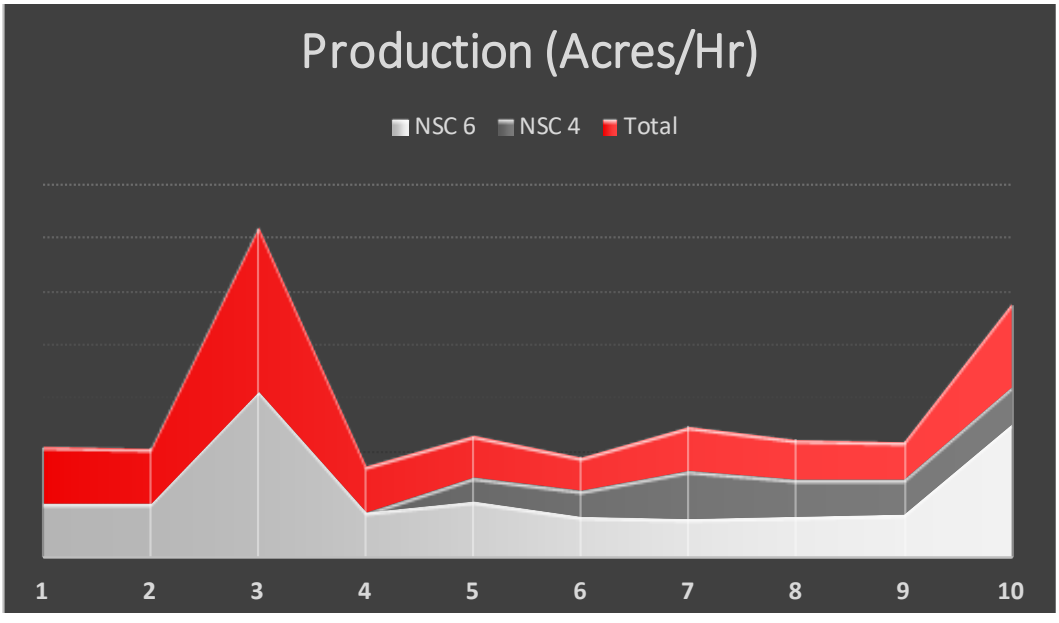
Lower right photo
After
Invasive ground cover is removed, thinning is appropriate. Ground fires would have nowhere to go now.

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

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
Supression Funding Formula		X
ODF Organizational Model		X
State-Federal Interagency Performance		X
Supression 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

https://www.oregon.gov/gov/policy/Pages/wildfirecouncil.aspx

TAKEAWAYS

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 preperation in hindside. So I stepped away from mass outreach strategies and focused on quality opportunities that would hopefully convey our comitment 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 occurance 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 fluxuating 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 aditional 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.

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