

Wildfire Threat to the City of Santa Cruz

Promote Policies to Prevent and Protect

Summary

After the largest fire in Santa Cruz County history, we enter the driest year in 40 years. As of May 27, 2021, there have been 51 vegetation fires in Santa Cruz county; and as of May 20, 2021, there have been 75 outdoor fires in the City of Santa Cruz. We can't control the weather and climate, but we can mitigate other risks.

This report looks at the risks of wildfire to the City of Santa Cruz and how it is managing those risks.



(Shmuel Thaler – *Santa Cruz Sentinel*)

Background

The City of Santa Cruz is the largest city in Santa Cruz County and the county seat. This scenic coastal city is bordered by the Monterey Bay to the south with wildlands surrounding much of the rest of the city.^[1]

A large portion of The City of Santa Cruz is considered to be in a Wildland Urban Interface (WUI) area. Of the 12.7 square miles of land in the city nearly 50% is designated WUI.^{[1] [2]} WUI is a zone of transition where structures and other human development meet with undeveloped wildland, and as a result, are at a higher risk for wildfires. Some of these areas are at an even higher risk due to limited road access and encampments. The majority of wildfires in the WUI are human-caused.^{[3] [4] [5] [6] [7]}

There are 5 areas designated as WUI or “likely” to have a fire in Santa Cruz; they are: Moore Creek, Arroyo Seco/Meder Canyon, Pogonip, Arana Gulch, and DeLaveaga. Residential development continues to spread into WUI areas of Santa Cruz increasing the danger to life and property should a fire occur.^[7]

Figure 1 shows the WUI interface between the developed portion of The City of Santa Cruz and undeveloped wildland (green line).

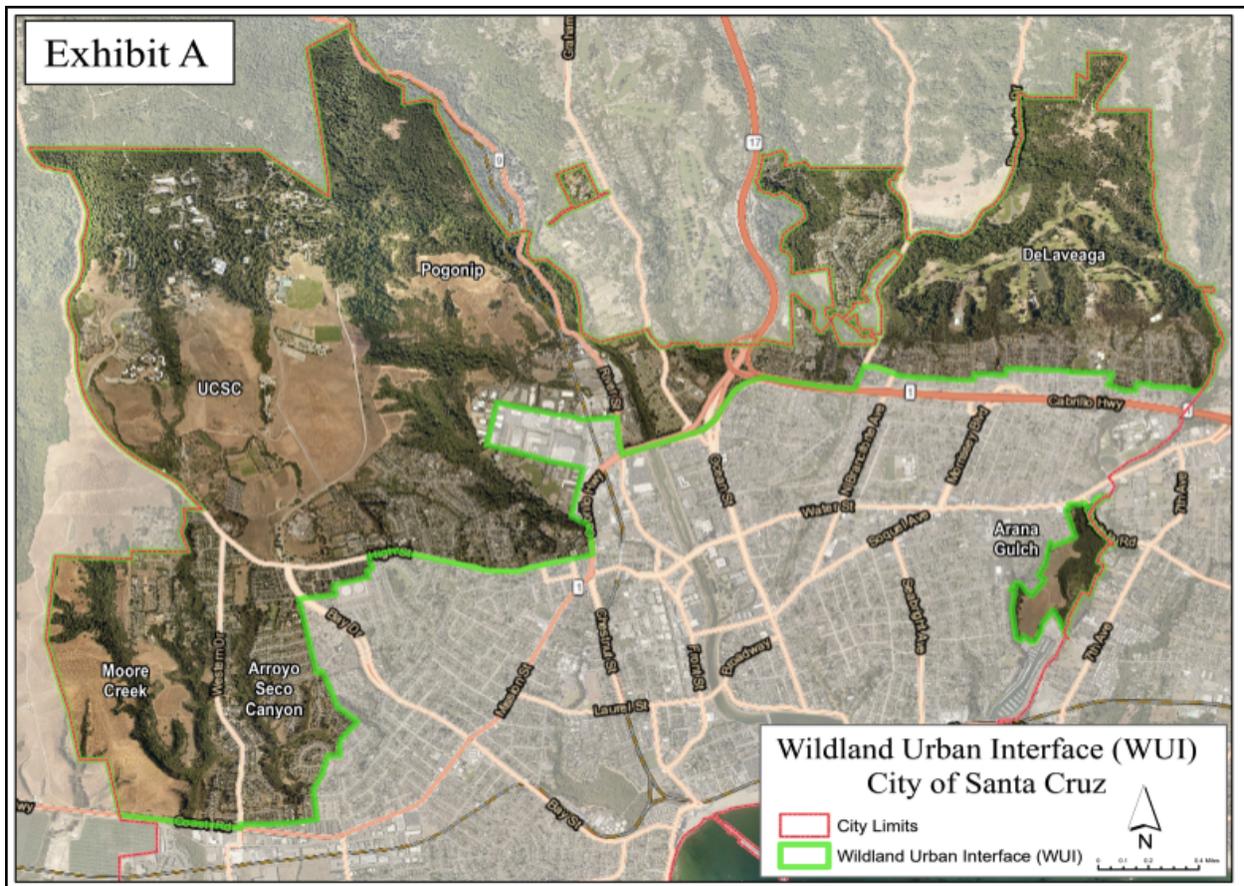


Figure 1. **Wildland Urban Interface (WUI) City of Santa Cruz**
(Source: Document received by Grand Jury)

The National Academy of Sciences 2018 study showed that in the U.S., California has the largest number of houses (4.5 million) in WUI areas, as well as the greatest number of people (11.2 million) living in the WUI.^{[5] [8] [9]} Five of the top 20 largest California wildfires occurred in 2020, according to California’s Department of Forestry and Fire Protection (Cal Fire) list of wildfires.^[10] Table 1 from Cal Fire shows the number of wildfires and acres burned in California in 2019 and 2020. So far in 2021, the number of wildfires (717) compared to the same time period in 2020 continues the upward trend.

Table 1. Number of Wildfires and Acres Burned in California 2019 and 2020

| Interval | Fires | Acres Burned |
|---|-------|--------------|
| January 1, 2020 through December 29, 2020 | 8,112 | 1,443,152 |
| January 1, 2019 through December 29, 2019 | 5,687 | 137,126 |
| January 1, 2021 through March 28, 2021 | 717 | 1,541 |
| January 1, 2020 through March 28, 2020 | 608 | 873 |

Source: Cal Fire Statistics^[10]

The CZU lightning complex fire which started on August 16, 2020, burned 63,754 acres in Santa Cruz County and destroyed 1,431 structures. The CZU fire was stopped before it reached the City of Santa Cruz.^{[11] [12]} The city may have escaped the CZU fire, but the city’s extensive wildlands have had more than their share of wildfires. In 2020 there were 88 wildland fires in the City of Santa Cruz compared to 58 wildland fires in 2019.^[13]

The threat of wildfires is real and is a growing concern to many residents. The public has expressed alarm over groves of eucalyptus trees found throughout the City of Santa Cruz including the WUI. Eucalyptus are highly flammable trees, and desire for their removal has been expressed on the website Nextdoor, in letters to the editor in the *Santa Cruz Sentinel*, and in complaints to the Santa Cruz County Grand Jury.^{[14] [15]}

Also there have been letters to the editor in the *Santa Cruz Sentinel* about fires caused in homeless encampments which have been, or can be, located in known WUI areas.^[16]^{[17] [18]} According to the Local Hazard Mitigation Plan there is a high probability that a wildfire will occur in one or more WUI areas in Santa Cruz. It is believed to be just a matter of time.^[7]

These factors and events give rise to three critical questions:

- What is the City of Santa Cruz doing to deal with the risk of wildfires in the city's many WUI areas?
- What is it doing well?
- What can it do better?

Scope and Methodology

This investigation focuses on:

- the wildfire threat to the City of Santa Cruz from vegetation and homeless encampments
- and what the City of Santa Cruz is doing to mitigate these wildfire risks.

The methods of investigation employed included: independent research, interviews with city leaders and agency staff, document requests, and data analysis.

The 2019-20 Grand Jury prepared a thorough review and analysis of the preparedness of Santa Cruz County to deal with fire and how to mitigate those risks. This investigation will build on that report and follow up on the specific issues in the City of Santa Cruz.^[19]

Another 2019-20 Grand Jury report dealt with homelessness in the county.^[20] Our investigation and report is limited to the fire risk in the City of Santa Cruz. This report is not an investigation into the problem of homelessness but how homelessness encampments increase the risk of wildfires in WUI areas of the city.

Investigation

The Danger of Wildfire to Santa Cruz

After 2020, the residents of Santa Cruz are all much more familiar with the risk of wildfire. While the city avoided the CZU Lightning Complex, the fire got very close to the borders of the city and the University of California, Santa Cruz, was evacuated. Wildfire risk is ever present, but there are ways to manage those risks.

Santa Cruz is blessed with acres of open space and recreation areas that ring the city as our greenbelt. Those areas are also laden with fuels in the form of trees, shrubs, and grasses. Wildland fires need two things: fuel and ignition. Weather and climate can increase the likelihood of a wildland fire spreading.

Weather and Climate

Fire risk is impacted by weather and climate. We have seasonal fire weather in California that results from a number of factors that increase the ignition, intensity, and spread of wildfires. Most well known of these factors would be off-shore winds which blow dry and warm air from the inland areas out to sea. This has multiple negative effects. Off-shore winds block our nightly marine layer, or cold wet blanket, from moving inland and reducing temperatures and increasing humidity. They are also warmer and drier, which dries out vegetation making it more likely to burn and with greater intensity. Corresponding high winds intensify wildfires and vastly increase their spread by both spreading embers over greater distance and impeding firefighting efforts.

Cal Fire has historically defined fire season as running from May to November, but climate change is having an impact. One result is that the fire season is starting earlier, sometimes in the spring. Winter rains are starting later in the year, and often with less

frequency and lower annual precipitation. We are also experiencing the driest year in 40 years.^{[21] [22]} We have had 51 vegetation fires as of May 27th in Santa Cruz County.^{[2] [10]}

We can't control the weather and climate, but we can mitigate other risks.

Fuel

Vegetation management is an important way that we keep our open spaces wild while reducing the threat of wildfires. By removing ladder fuels such as low limbs and shrubs, the Santa Cruz City Fire Department has reduced the likelihood of a fire spreading rapidly or growing out of control. By removing these ladder fuels, what starts as a grass fire remains a grass fire until firefighters arrive to control it. Without this step, the same fire could grow into an engulfing crown fire by moving up low shrubs and branches into the trees. Vegetation management also includes building fire breaks by removing all vegetation down to bare mineral earth which limits a fire's expansion.^[7]

Public versus Private Land

Starting in the summer of 2018, the Fire Department worked with the Parks and Recreation Department to identify areas where vegetation management was needed in city owned properties that posed a threat to neighborhoods within WUI areas. Shaded fuel breaks were constructed in DeLaveaga Park along with vegetation removal by California Conservation Corps and Cal Fire.^[23] The city hired contractors to manage vegetation in Arroyo Seco and Pogonip in early 2020. However, this is a job like painting the Golden Gate Bridge: as soon as you're finished, you need to start again.

Private property owners in the WUI bear primary responsibility for vegetation management on their property. The Fire Department fosters the creation of Firewise Groups to educate about proactive vegetation management.^[24] There are two Firewise Groups in Santa Cruz, one in Highland/Hillcrest Terrace in the Pogonip WUI area and the other in Prospect Heights in the DeLaveaga WUI area.^{[3] [25]}

Homeowners in WUI areas are required to follow the Community Wildfire Protection Plan (CWPP). The purpose of the CWPP is to identify and prioritize areas for fuel reduction and includes stricter building codes to decrease the risk of wildfire to the home.^{[3] [26]}

In December 2020, the City of Santa Cruz adopted and incorporated California State fire codes into the Santa Cruz Municipal Code to help decrease fire damage to homes in WUI areas. Building codes require vegetation management around the home and describe construction requirements for new homes having to use fire resistant materials.^{[3] [27]}

Types of Fuels

There are differences in vegetation types. Some trees and shrubs contain more oils or pitch making them more flammable or fuel laden.^[28] One type of vegetation, eucalyptus, warrants special mention.

Eucalyptus trees are considered a fire hazard because they shed bark and dead leaves in large amounts, which become tinder for fires. They also contain greater quantities of volatile oils in all their parts, which when heated, easily ignite and burn with explosive intensity. Some organizations recommend wholesale removal and replacement of them.^[29] The Sierra Club did so regarding the Blue Gum Eucalyptus in the Berkeley area.^[30]

The Fire Department has opted for managing the ladder fuels around the city's eucalyptus groves rather than outright removal or replacement. Although eucalyptus trees are highly flammable and present a risk of falling due to a shallow root system, they could be no more of a fire risk than other species when properly managed by appropriate measures including removing dead ground cover and maintaining open space under the canopy.^[31] ^[32]

Ignition

For the CZU complex fire, the source of ignition was hundreds of dry lightning strikes. While those can't be prevented, other sources of ignition can be. Human actions or inactions that increase the risk of wildfire can be identified and mitigated. Tall grass can be removed from around parking areas where a hot exhaust system could start a fire. Outdoor grills in parks can be closed from use during fire season.

The biggest risk as identified by the city in the Local Hazard Mitigation Plan is illegal camping.

Although Santa Cruz has over 3,000 acres of greenbelt and parkland, the City does not have the resources to adequately police and protect this area. This inadequate policing increases the frequency of illegal camping (Santa Cruz has a substantial chronic homeless population), which can result in fires in limited access and canyon areas.^[7]

Threat of Wildfire from Encampments

There are a number of fire risks from unmanaged encampments. Unhoused individuals and groups will use fires for warming or cooking. Propane canisters and other fuel sources pose a risk of ignition and explosion in a fire, putting our first responders at a greater risk. Closely packed encampments are full of flammable plastic and other synthetic materials such as tents, tarps, sleeping bags, and clothing, as well as portable grills, charcoal, butane tanks, and flammable liquids. See the photo on page 1 with melted tarps and propane tanks.^[33]

Encampments in the WUI areas increase wildfire risk. There are approximately 865 individuals in the City of Santa Cruz who are unsheltered.^[34] In October 2017 campers started a wildfire in the Moore Creek Preserve at the bottom of the canyon. It was put out within hours by ground crews and air support. Fortunately the fire was controlled before it spread to a nearby stand of eucalyptus trees that surround the 168 unit The Hilltop Apartment complex on Western Drive.^[35]

The Santa Cruz Fire Department initiated the development of an internal tool to document fire risks in the WUI. They used the city's Information Technology (IT) staff to create a cell phone app to take photos of fire incidents in outside locations and the ignition sources. The information is then mapped to help determine areas of concern. From the following maps there were 19 fewer fire incidents in Pogonip in 2020 than in 2019 (16 in 2020 and 35 in 2019). This is due to the clearing of encampments in the area.^[36]

Figures 2 - 4 were provided to the Grand Jury and show the number and location of outdoor fire incidents by year.^{[36] [37]}

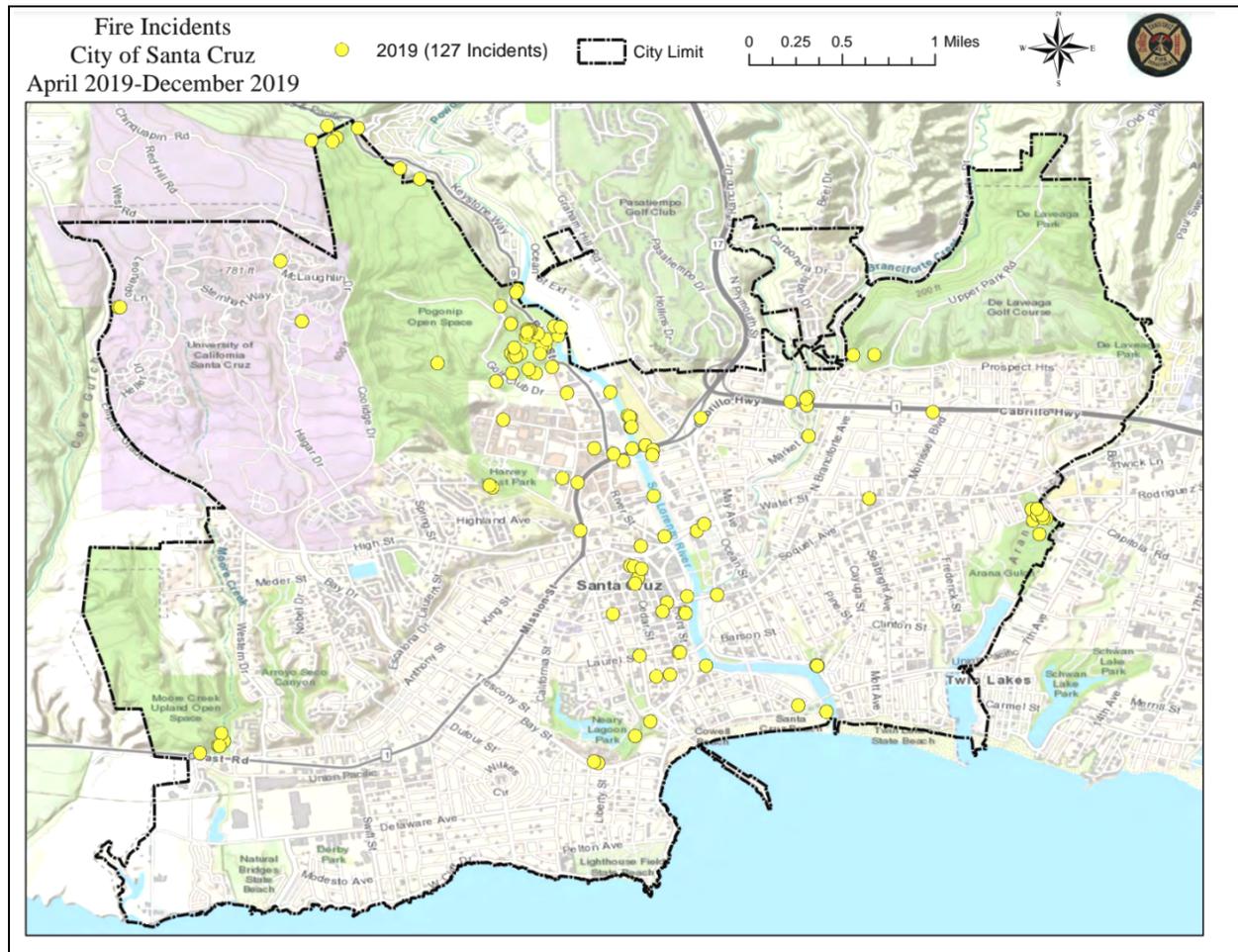


Figure 2. Fire Incidents City of Santa Cruz April 2019 - December 2019
(Source: Document received by Grand Jury)

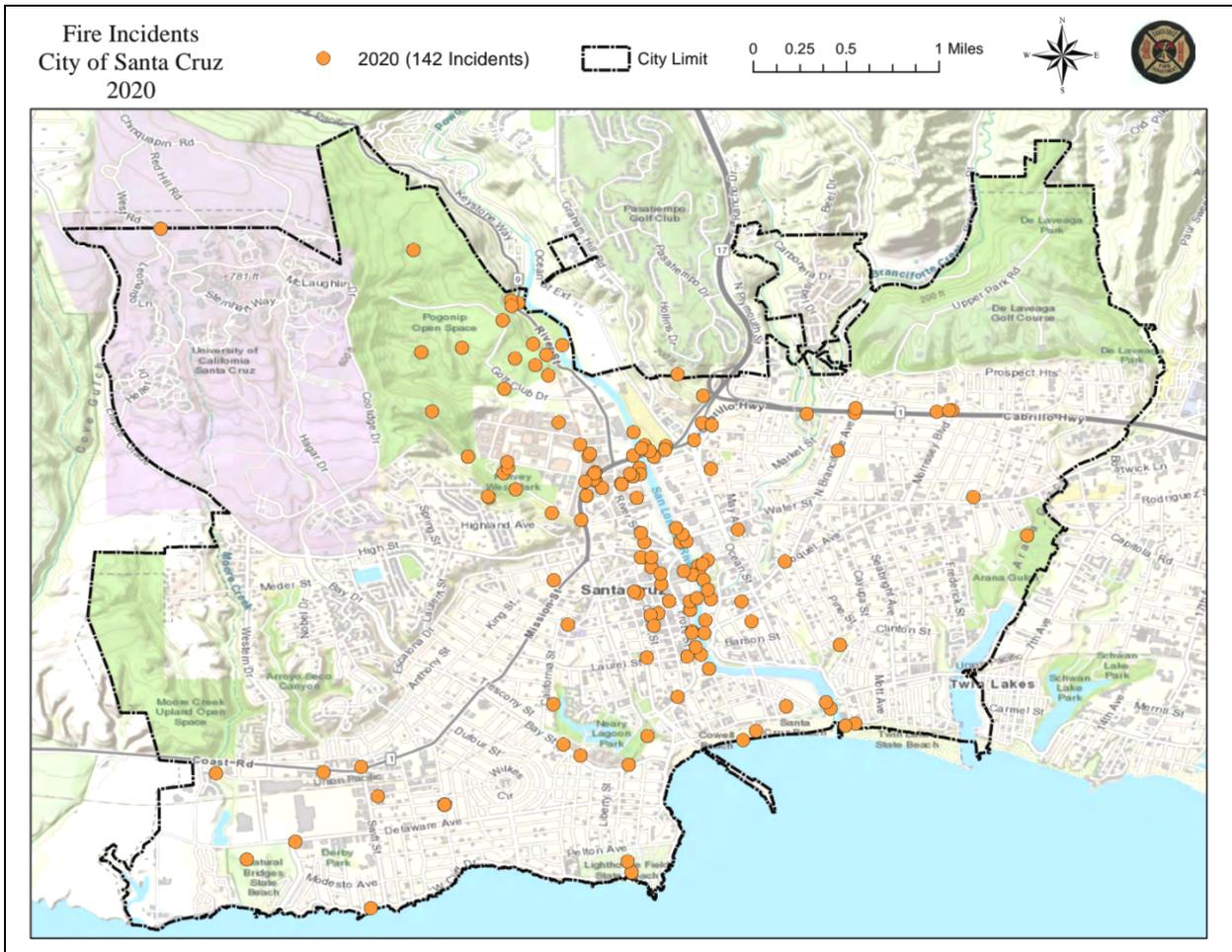


Figure 3. Fire Incidents City of Santa Cruz 2020
(Source: Document received by Grand Jury)

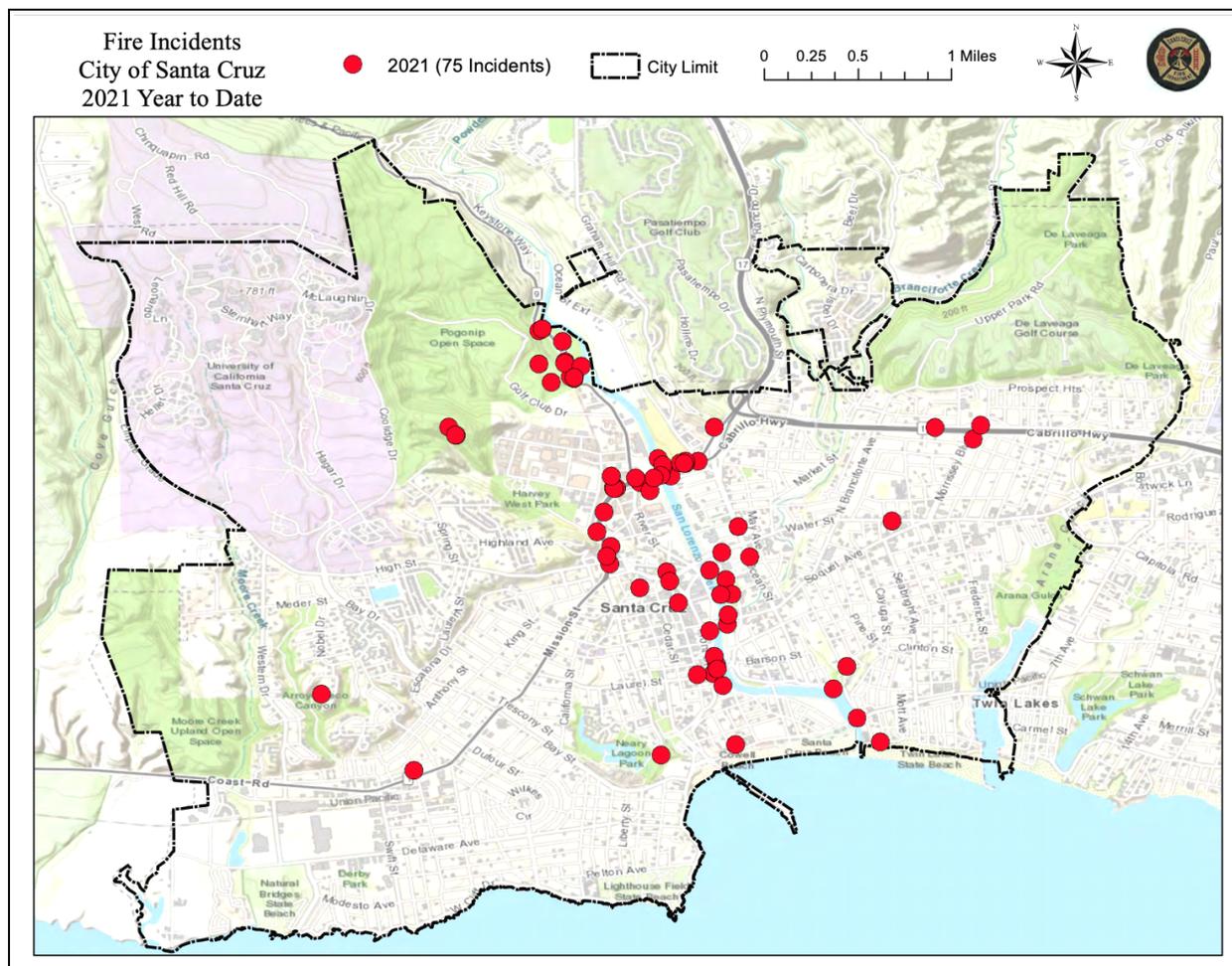


Figure 4. Fire Incidents City of Santa Cruz 2021 Year to Date on May 20, 2021
 (Source: Document received by Grand Jury)

Barriers to Mitigation

City as Epicenter

The greatest percentage of the county’s unhoused people are located in the City of Santa Cruz. Approximately 55% of the county’s unhoused population are located in the city, while the city’s population is but 24% of the county.^[34]

A number of factors contribute to this. Seventy-three percent of county shelter beds are in the city. The main jail and the Santa Cruz Health Center are located in the city, as well as other governmental and private facilities that provide services to the homeless population^[38].

The city bears the social and financial impact of homeless encampments since the majority of unhoused campers are located in the city but the city doesn’t control the resources to manage them. Most of the state and federal funds for homeless shelters, services, and the like are administered by the county. As noted in last year’s Grand Jury

report “Homelessness: Big Problem, Little Progress,” the lack of coordination between key stakeholders is a significant barrier to the efficient and capable implementation of homelessness solutions.^[39] There is a regular meeting between the city and county including the mayor, vice mayor, District 3 supervisor, and District 5 supervisor (2x2 Committee); but those meeting records are not public.

Legal Obstacles

The City of Santa Cruz is faced with significant legal impediments that impact its ability to remove encampments. *City of Boise v. Martin*, decided in 2019, made ordinances prohibiting certain activities including camping on public lands unenforceable. The Boise case held that city ordinances that impose criminal penalties on unhoused people for sleeping or sitting on public property violates the 8th Amendment which prohibits “cruel or unusual punishment.” As such, conduct that is an unavoidable consequence of one’s being human should not be criminalized. The recent preliminary injunction in *Santa Cruz Homeless Union, et al. v. Bernal, et al*, prevented the city from clearing the encampment in San Lorenzo Park that had been identified as a risk to public health.^[40]

Any attempt to close an encampment is likely to give rise to a lawsuit in federal court initiated by non-governmental organizations (NGO). The city may prevail, but it will be required to defend.

California Department of Transportation (Caltrans) right-of-ways

Within the city limits, property adjacent to state highways is state owned and controlled. This means that the city does not have jurisdiction over the management of the people living on the side of highways or what happens in those areas. The city cannot move highway encampments. This is the responsibility of Caltrans with the help of the California Highway Patrol.^[41]

Despite this, the city is obligated to provide emergency services (fire, medical) to these areas and has chosen to provide trash management. Highway adjacent encampments are the state’s responsibility even if it is the city’s problem.

This has been the subject of recent news items as the city and county wrote to the Governor for help with the encampment at Highway 1 and River Street. As of the writing of this report, the Governor has not responded to their appeal but Caltrans has been cooperative and has the authority to ultimately make any decisions to remove the encampment.^[38] ^[42] This camp was cleared on May 10, 2021 in a coordinated effort involving Santa Cruz Police Department, California Highway Patrol, and Caltrans.^[43]

COVID-19 and Budget

COVID-19 has had multiple impacts on the city. It drastically reduced city revenues. It has increased state regulation on city operations that has limited options. State mandates beginning in March 2020 forced most of the city’s tax generating businesses to close or be severely restricted.

The County Health Department also decided that closing encampments heightens risks of infection to both campers and the population at large. From interviews for this investigation last fall, we learned that the global pandemic also required city departments to continue serving the public while developing new protocols to keep employees and citizens safe.^[38]

Since the pandemic began the City's revenues from sales and business related taxes fell precipitously such that the city's departments have been forced to take general budget cuts of about 10% across the board, as learned in interviews.^[38] Yet this has happened when greater numbers of homeless encampments and increased fire risks have put greater demands on the city's resources.

It should be noted that over the last year, the city has reactively spent significant resources on clearing and cleaning up encampments.^[38] Proactive policies that would stop encampments from becoming entrenched could help reduce these costs.

NIMBY and the Need for Public Engagement

Another obstacle the City of Santa Cruz faces is politically active and engaged citizens who do not want homeless people in their neighborhoods. These active "NIMBY" (Not In My Backyard) neighborhoods have made it increasingly challenging for the city to initiate proactive policies that would remove entrenched encampments.^[44]

As recent events regarding the Temporary Outdoor Living Ordinance (TOLO) have shown, the city is aware of the need to do better in their outreach and messaging around new ordinances.^[45]

City Management of Wildfire Risks

The City of Santa Cruz has a solid understanding of the risks of wildfires in the WUI. The Fire Department's Division of Fire Prevention is tasked with identifying and mitigating fire risks and the City's Risk Management Plan defines these risks. The challenge has been in the city's ability to manage and mitigate these known risks.

Vegetation

During this investigation we found that the Fire Department has numerous programs to address the risk of wildfire from vegetation on public and private land. They have a plan to maintain fuel level in public spaces. They also manage Firewise groups to educate homeowners in the WUI on how to manage their own vegetation and fuel load. They are working to expand these groups to more areas of the city.

The Team

In 2019 the City of Santa Cruz established an Encampment Assessment Team (EAT) which monitors and develops operational plans and strategies for managing homeless encampments. It includes representatives from the City Manager's Office, the Fire Department, Police, Parks and Recreation, Public Works, Water Department and the city attorney's office. The EAT meets weekly, but because an attorney from the city

attorney's office attends these meetings, all records of what is discussed have been claimed to be undisclosable under attorney-client privilege. As a result it has not been possible to assess the effectiveness of this team.^[46]

Further, it is unclear what authority, if any, has been delegated to the EAT. With transparency, this team and its work has the potential to serve the public by informing about the wildfire risks and how they are managed.

The city does not have a fixed policy in place that designates what person or persons within the city government has final authority to manage and mitigate the fire risks associated with homeless encampments except for emergency situations where the Fire Department has the authority.

The Encampments

The city council recently adopted, then rescinded, a new Temporary Outdoor Living Ordinance (TOLO) which stayed within the bounds of the Boise case and mitigated the risks of entrenched camping in the city.^[45] This was a significant step in managing this complex and ever changing situation that could have given the city the tools to eliminate dangerous camping in the WUI.

TOLO, in its now rejected form, contained several provisions that would lessen the risk of wildfire in the City of Santa Cruz including:^[22]

- Prohibition of overnight and daytime encampments in sensitive and at risk areas of the city to reduce the risk of a wildfire caused by accidental ignition.
- Designation of Arroyo Seco Canyon as a sensitive species area and a WUI area.
- Prohibition of encampments in open spaces at all times.
- Requirement that tents used by those camping in other areas be packed up every morning to limit entrenchment.
- Requirement for frequent counts of the number and the location of those sleeping outside to define the situation and its seasonal changes and associated risks.
- Requirement for continued work with the county and better advocacy for the city.

Local city departments are taking proactive measures to gather relevant current data necessary for planning. The Fire Department conducts frequent walk-throughs of encampments to assess risk levels. The Police Department has recently undertaken a more in depth count of the unhoused population within the City of Santa Cruz to get more accurate and timely data to help address the current situation.^[38] It is hoped that it will continue to do so on a regular basis.

Recent *Sentinel* headlines are a case study in how dangerous encampments can be to those living in them and the city as a whole. There have been three major fires in the Highway 1 camp this year resulting in injuries and destruction of property at the time of this writing.^{[47] [48] [49]} Living outside is dangerous. We could easily have a “Ghost Ship” event in Santa Cruz, like the disaster in Oakland where 36 people died in a warehouse fire. It could happen here with a fire spreading through densely packed tents and tarps.

The TOLO presented a first step in mitigating the risks from these entrenched encampments. Enforced as described, it would have greatly diminished the danger of wildfire. Tent and tarp cities can't build and sprawl when they have to move every day.

Conclusion

Changing climate trends have increased fire risks in the City's WUI areas. Together with an increase in the number of encampments, this has placed a higher demand on the City's resources. This is happening during a time that the City's budget is shrinking due to the COVID-19 pandemic.

There is consensus across the City departments that homeless encampments present a significant risk of wildfires, as well as a risk to public health and safety. After a tremendous expenditure of human capital and opportunity cost, the City has more recently taken steps to organize around this problem and address it proactively. We find it important that they continue this work in a transparent manner.

Findings

- F1.** Despite recognizing that the most important factor to reduce fire risk in the WUI area is the removal of entrenched encampments, the City has only done this in reaction to extreme emergency situations, instead of on a proactive basis.
- F2.** The Temporary Outdoor Living Ordinance was a significant step toward proactive management and mitigating the risks associated with entrenched encampments.
- F3.** The coordination between the City and the County on homeless issues is insufficient and not transparent to the public.
- F4.** Accurate data, including a count of the unhoused living in Santa Cruz, is necessary to assess and manage the fire risks from encampments.
- F5.** Based on the amount of debate and public concern about fire safety of eucalyptus, the Fire Department has done insufficient outreach on this topic.
- F6.** There are still WUI neighborhoods without a Firewise group. Firewise groups decrease the risk of fire in WUI areas through public education about protecting property and vegetation management.
- F7.** The City of Santa Cruz doesn't do enough to show that they are limited in what they can do to remove encampments along highways as this property is owned by Caltrans and under state law.
- F8.** The 10% across the board budget cuts do not match priorities of the City.
- F9.** The holding in *Martin v. City of Boise* limited the City's ability to enforce existing ordinances. TOLO was a carefully crafted attempt to manage fire risks from entrenched encampments.

Recommendations

- R1.** Before the height of fire season, the City Council should agendize and recognize the fire risk from encampments and craft an ordinance to address these issues. (F1, F2)
- R2.** In the next three months, the City Council needs to have more transparent and formal coordination with the county on management of homeless resources. (F3)
- R3.** In the next 12 months, the Santa Cruz Fire Department should educate the public on risk of fires caused by eucalyptus versus other vegetation. This would help all communities with eucalyptus trees realize the importance of vegetation management and not just in Firewise neighborhoods. (F5)
- R4.** In the next 12 months, the Santa Cruz Fire Department should work to establish a Firewise community in every WUI area of the City. (F6)
- R5.** The City Council should continue efforts to revise ordinances to comply with recent case law so they will allow more effective management of encampments to reduce fire risks. (F9)
- R6.** In the next three months, the City Manager should establish a procedure for conducting regular quarterly surveys of the number and location of the City's unhoused population to more effectively manage fire risks in WUI areas. (F4)
- R7.** Before the budget cycle, the City Manager should revisit budget priorities. (F8)
- R8.** In the next six months, the City Council should produce a detailed plan and accounting of how the federal and state homeless funds are used. (F3)
- R9.** In the next three months, the City Manager should notify the public that Caltrans is responsible for the removal of all encampments along state highways. (F7)
- R10.** Continually, the City Council should engage state offices to be more involved in encampment situations. This should be with all homeless encampments on Caltrans property and not just for highway widening projects. (F7)

Commendations

- C1.** The Fire Department has worked creatively with City IT staff to use technology to better manage risks.
- C2.** The Police Department conducted a count of the unhoused population of Santa Cruz, providing the first detailed, city-led reporting on the situation.

Required Responses

| <i>Respondent</i> | <i>Findings</i> | <i>Recommendations</i> | <i>Respond Within/ Respond By</i> |
|----------------------------|-----------------|----------------------------|---------------------------------------|
| Santa Cruz City Council | F1–F3, F5, F9 | R1, R2, R4, R5, R8, R10 | 90 Days August 31, 2021 |

Invited Responses

| <i>Respondent</i> | <i>Findings</i> | <i>Recommendations</i> | <i>Respond Within/ Respond By</i> |
|-------------------------------|-----------------|------------------------|---------------------------------------|
| Santa Cruz City Fire Chief | F5, F6 | R3, R4 | 90 Days August 31, 2021 |
| Santa Cruz City Manager | F4, F7, F8 | R6, R7, R9 | 90 Days August 31, 2021 |

Definitions

Homeless encampment: Homeless encampments are locations where one or more homeless people live in an unsheltered area. These encampments can be found on properties owned by private individuals or companies or owned by local, state, and federal governmental agencies.^[50]

WUI - wildland urban interface: The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.^[51]

Wildlands: The generally open and continuous areas of vegetation (forest, brush meadow, etc.) that do not have human development or travel routes within them (as defined by Santa Cruz City Fire Department).^[52]

Open space: Open space has human made roads or trails that allow for access. Generally these would be for pedestrian or limited vehicle access. Often these abut or overlap wildlands as they share more or less human created features (as defined by the Santa Cruz City Fire Department).^[52]

Green belt: Green belts are pockets of a wildland or open space area that is surrounded by human development. The difference being that they are not continuous with an open space that is without significant human development around it. They could be considered islands of space that are surrounded by roads, houses, etc (as defined by Santa Cruz City Fire Department).^[52]

Fuel Ladder: A fuel ladder or ladder fuel is a firefighting term for live or dead vegetation that allows a fire to climb up from the landscape or forest floor into the tree canopy. Should fire become involved in the crown or tree canopy, embers may be expected to travel up to 1.5 miles or further depending on how strong the wind is and potentially can cause additional fires.^[7] Common ladder fuels include tall grasses, shrubs, and tree branches, both living and dead. The removal of fuel ladders is part of defensible space “firescaping” practices.^[53]

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Websites

None

Site Visits

None