# BAINBRIDGE ISLAND

# Community Wildfire Protection Plan





Prepared by Bainbridge Island Fire Department 2022

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"Safeguarding lives, property, and the environment through prevention, education, and emergency response."

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#### CORE VALUES

Compassion • Trust • Stewardship • Innovation • Courage

## I. INTRODUCTION

#### **Message from the Fire Chief**

On behalf of the Bainbridge Island Fire Department (BIFD), I am pleased to present the 2022 update to the Community Wildfire Protection Plan (CWPP). This is the first update to the original 2010 CWPP.

Since the adoption of the original plan, the cooperation of the community and other government agencies has significantly shifted in support of reducing wildfire risk to our community.

The goal of the 2022 CWPP update is to help residents understand the wildfire risk in our community and to provide easy-tounderstand guidelines for voluntary compliance for wildfire mitigation.

The implementation of the CWPP update will support the safeguarding of life, property, infrastructure, natural resources, and the unique ecosystems on Bainbridge Island from the risks of wildfire.

This new team approach of government agencies working with the community will enable us to work together in reducing the risk of wildfire here on Bainbridge Island.

Since the original development of the CWPP, significant objectives have been accomplished in an effort to improve wildfire mitigation and preparation for our Island community. Improvements in firefighter staffing, fire station openings, wildfire training, and local municipal code improvements are just a few of the significant changes (Figure 1).



Hank Teran, Fire Chief Bainbridge Island Fire Department

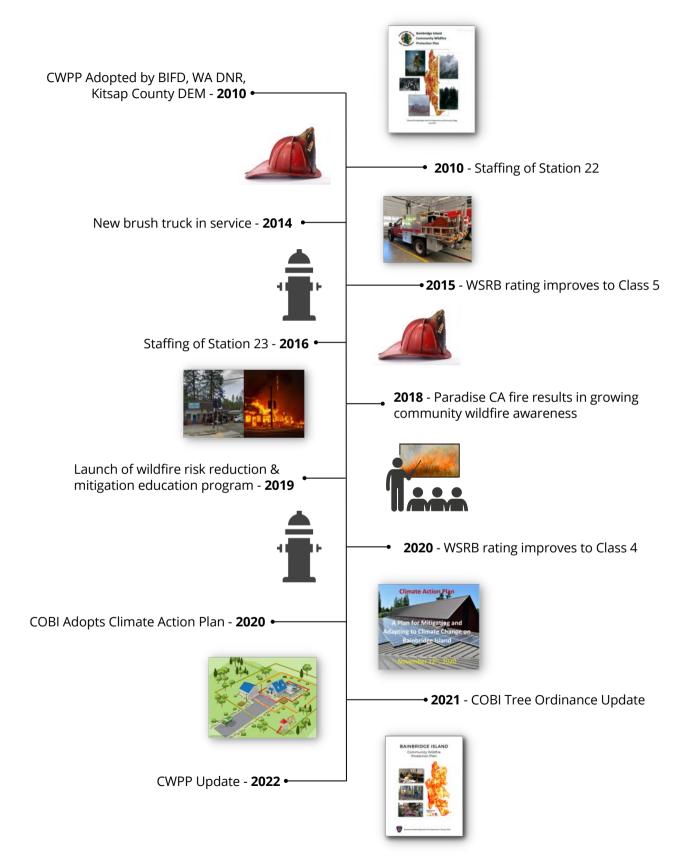


"Since the adoption of the original plan, the cooperation of the community and other government agencies has significantly shifted in support of reducing wildfire risk to our community."

Fire Chief Teran

## **II. TEN YEARS IN REVIEW**

#### Figure 1: Community Wildfire Protection Plan - Ten Years in Review



## III. OVERVIEW

#### Wildfires Are a Growing Hazard on Bainbridge Island

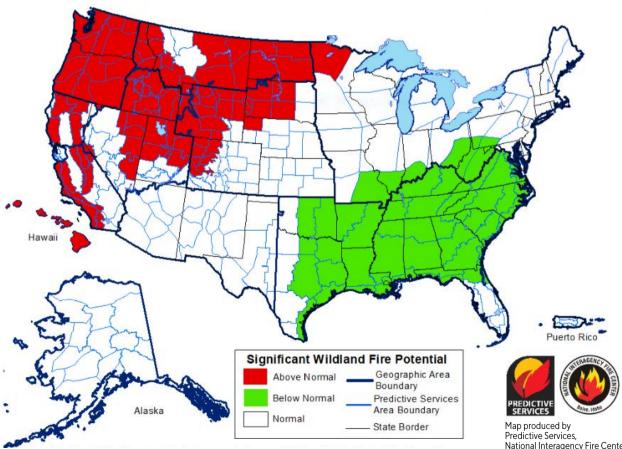
Wildfires are a growing hazard in many regions of the United States, posing a threat to life, property, and natural and cultural resources. Our Bainbridge Island community is no exception. This is especially true where development mixes with wildlands, the area that firefighters call the Wildland-Urban Interface (WUI). In addition, the secondary effects of wildfires on lives, livelihoods, and infrastructure—including erosion, landslides, the introduction of invasive species, and changes in water quality—can sometimes be more disastrous than the fire itself.

Wildfires are a natural and often beneficial ecological disturbance process, influencing species composition and vegetative structure across the landscape. Decades of timber harvest and fire suppression policies have altered this process in many areas, often creating a more dense forest environment that can burn more intensely than in the past. While the Puget Sound region may be known for its high levels of rainfall, fire is a common ecological influence in the area. Summer droughts occur here, which can elevate the risk of ignition in drier areas. Though Bainbridge Island has not experienced a large wildfire in recent years, the risk is still present. Each year, many small wildfires occur across our community. The potential for a major wildfire disaster is very high due to the combination of having a seasonally dry climate and high vegetative fuel loads—all it would take is an ignition under the right weather conditions.

The risk wildfire poses to life, property, and the environment in our community is increased by the growing numbers of homes located within the Bainbridge WUI. Currently, in our community, many homes are being built in the wildland interface areas without consideration of wildfire, some in semi-isolated areas surrounded by dense vegetation or adjacent to green belts, and some in neighborhoods that have decreased separation between homes. The condition of our vegetation and forests are ripe to support intense, high severity fires, making the likelihood of effective fire starts more prevalent. Many new and long-time residents assume that wildfire isn't a problem on the western side of the Cascade Mountains, yet there is evidence that our climate patterns are changing, and the window of susceptibility to a large-scale wildfire in the Puget Sound area has increased. A few years ago, our susceptibility window was weeks long, now it is months long. Historically, the Puget Sound area seldom had fires greater than a thousand acres. The fire weather window was short, and effective fire starts were infrequent, but that is changing:

- Weather pattern changes have allowed more fire starts to become large.
- Hotter, drier climates cause snow packs to melt months earlier, reducing natural moisture in high-risk areas.
- Higher population and more time in nature have increased the risk of human-caused wildfires.
- Increasing acreage of young forest landscapes increases fire susceptibility.
- Many predictive models show that wildfire susceptibility is increasing (Figures 2, 3, & 4).

#### Figure 2: Significant Wildfire Potential Outlook for July 2021



Above normal significant wildland fire potential indicates a greater than usual likelihood that significant wildland fires will occur. Significant wildland fires should be expected at typical times and intervals during normal significant wildland fire potential conditions. Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.

Predictive Services, National Interagency Fire Center Boise, Idaho Issued July 1, 2021 Next issuance August 1, 2021

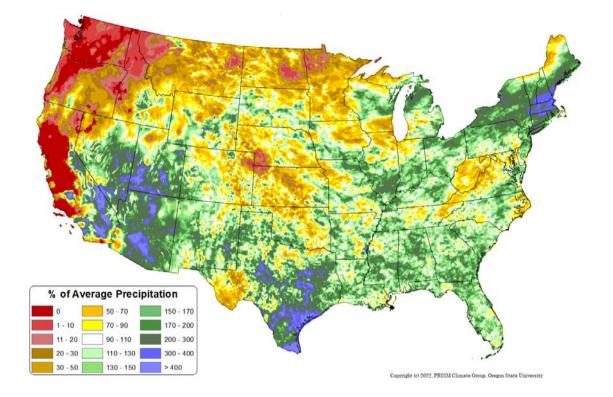
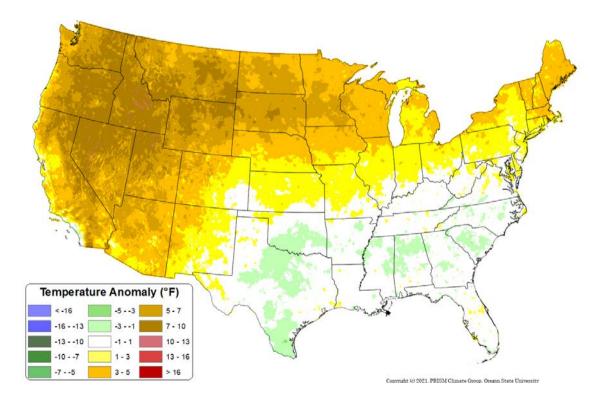


Figure 3: Total Precipitation Anomaly: July 2021 (Base Period: 1991-2020)

Figure 4: Daily Mean Temperature Anomaly: June 2021 (Base Period: 1991-2020)



## IV. WILDFIRE RISK AND HAZARD ASSESSMENT

Wildfires can result in significant, long-lasting impacts on ecological, social, and economic systems; therefore, it is necessary to identify and quantify the risks posed by wildfires and to subsequently develop cost-effective mitigation strategies. To do so, fire and fuel managers require information on where fires are likely to occur, the intensity at which they might occur, and what impacts they may have on highly valued resources and assets.

#### **Values at Risk**

Identifying the values in need of protection is often the first step in hazard planning. Wildfire hazard mitigation efforts typically focus on protecting structures. In addition, every community has sites of social, environmental, historic, or infrastructure importance that should also receive priority during protection planning. These can include protected areas, historic sites, schools, clinics, evacuation routes, utilities, etc.



#### Figure 5: Bainbridge Island Values at Risk, 2021

Wildfire risk assessment results provide a snapshot of current landscape conditions and associated risks. Periodic assessment over time can provide critical information for monitoring trends in risk and evaluating the performance of previous risk mitigation investments. It is also possible to modify assessment inputs (for example, fuel conditions) to reassess risks in a comparative risk assessment framework to evaluate the likely costeffectiveness of future mitigation investments.

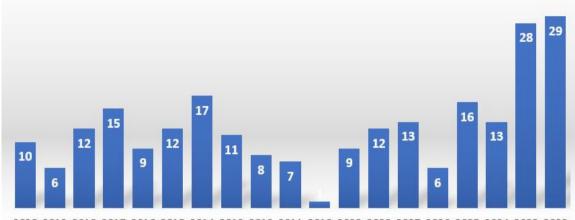
Wildfire risk is based on several factors: likelihood, intensity, exposure, and susceptibility. While it would be impossible to predict exactly when and where wildfires will occur in the future, homeowners and fire planners should be aware of fire-prone areas when prioritizing areas for mitigation activities. A community's wildfire risk is the combination of likelihood and intensity (together called "hazard") and exposure and susceptibility (together called "vulnerability").

#### Figure 6: Understanding Risk



#### Fire History on Bainbridge Island

Often overlooked in the Puget Sound region, wildfire is an age-old element of these forests and prairies, and fires of varying severity have occurred both historically and in recent times. Although fire history in the area is difficult to trace back more than 350 years, wide-spread stands of Douglas-fir (a fire-dependent forest type), tree-stand age classes, fire-scarred trees, and charcoal layers suggest that major fires burned in Kitsap County 450, 480, 540, and 670 years ago. Medium-sized, less intense fires occur on a several-decade scale, and small fires of a few acres or less occur every year on Bainbridge Island (Figure 7).



#### Figure 7: Number of Natural Vegetation Fires on Bainbridge Island, 2002-2020

2020 2019 2018 2017 2016 2015 2014 2013 2012 2011 2010 2009 2008 2007 2006 2005 2004 2003 2002

#### **Statewide Trends and Patterns**

The National Interagency Fire Center (NIFC), the nation's support center for wildland firefighting, keeps records of wildfire occurrences across the nation. Wildfires and acres burned in Washington State from 2002-2020 are listed in Table 1. NIFC records of human- vs. lightning-caused fires in the Northwest (OR and WA) from 2002 through 2020 are listed in Table 2.

#### Table 1: Wildfire Occurrence for Washington State, 2002-2020

YEAR	FIRES	TOTAL ACRES BURNED
2020	1,646	842,370
2019	1,394	169,742
2018	1,743	438,834
2017	1,346	404,223
2016	1,272	293,717
2015	2,013	1,137,664
2014	1,480	386,972
2013	1,527	44,016
2012	1,342	259,526
2011	993	17,480
2010	870	56,820
2009	1,976	77,250
2008	1.303	147,264
2007	1,268	214,925
2006	2,170	410,060
2005	998	185,748
2004	1,674	92,617
2003	1,373	200,517
2002	1,285	92,742

YEAR	LIGHTNING- CAUSED FIRES	LIGHTNING- CAUSED BURN ACRES	HUMAN- CAUSED FIRES	HUMAN- CAUSED BURN ACRES	TOTAL FIRES	TOTAL ACRES
2020	746	467,060	3,107	1,516,910	3,853	1,983,970
2019	1,430	109,155	2,260	140,321	3,690	249,476
2018	977	726,518	2,787	609,578	3,764	1,336,096
2017	1,254	655,578	2,150	465,864	3,404	1,121,442
2016	437	77,120	2,082	436,106	2,519	513,226
2015	1,705	1,121,267	2,898	702,206	4,603	1,823,473
2014	2,417	1,235,931	2,155	147,583	4,572	1,383,514
2013	2,282	388,151	2,107	115,842	4,389	503,993
2012	856	1,388,293	1,449	127,303	2,305	1,515,596
2011	808	273,222	1,342	30,038	2,150	303,260
2010	1,110	79,869	1,078	70,684	2,188	150,553
2009	1,843	148,328	1,624	29,592	3,467	177,920
2008	1,624	183,253	1,365	99,706	2,989	282,959
2007	1,486	618,879	2,346	244,335	3,832	863,214
2006	2,170	843,984	2,666	112,098	4,836	956,082
2005	901	122,131	1,924	219,012	2,825	341,143
2004	2,042	64,460	1,901	58,178	3,943	122,638
2003	1,605	234,331	2,370	126,381	3,975	360,712
2002	1,797	988,527	2,148	105,544	3,945	1,094,071

#### Table 2: Lightning- and Human-Caused Wildfires in the Northwest (OR and WA), 2002-2020

#### **Historic Fire Regimes**

Fire regimes can be characterized by a wide variety of spatial and temporal scales that may range from highly site-specific to regional scales and from a few years to thousands of years. Understanding the variability of the fire regime across these scales is crucial to understanding fire regimes and accomplishing conservation or management goals. Distinctions should be made between "fire history" and "historic fire regimes." Fire history is a more general term that measures the frequency of fires in a landscape. Historic fire regimes describe the characteristics of fires across a landscape and the relationship and interactions between ecosystem structure and processes. A natural fire regime is a general classification of the frequency and role fire would play across a landscape in the absence of modern human mechanical intervention, but including the influence of aboriginal burning. The five regimes are described in Figure 8.

#### Figure 8: Historic Fire Regime on Bainbridge Island

FIRE REGIME I 0-35 year frequency with low to moderate severity (mostly surface fires)

FIRE REGIME II 0-35 year frequency with high severity (stand replacement fires)

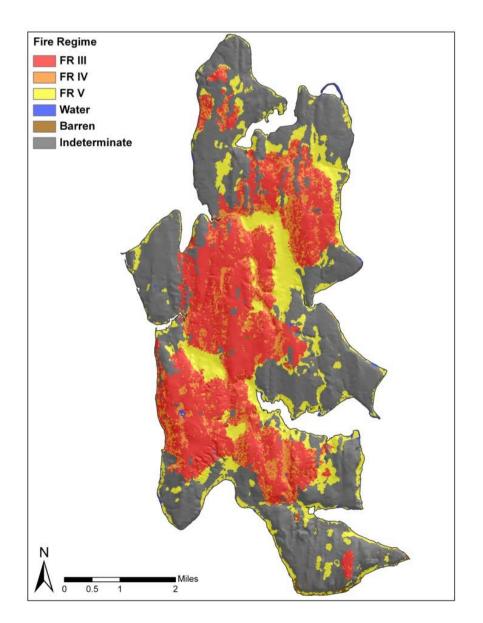
FIRE REGIME III 35-100+ year frequency with moderate severity

FIRE REGIME IV

35-100+ year frequency with high severity (stand replacement fires)

#### FIRE REGIME V

200+ year frequency with high severity (stand replacement fires)



This historic fire regime data is a 30-meter resolution data set developed by the LANDFIRE Project, a federal program devoted to providing spatial data to wildland managers (www.landfire.gov). The data represents an integration of the spatial fire frequency and severity regime characteristics simulated using a vegetation and disturbance dynamics model. This information is an approximate representation of the general conditions present in an area and should be used for reference only.

The majority of forested land on Bainbridge Island is classified as a moderateto-high fire severity regime (Figure 8). "High" severity fire regimes are characterized by infrequent severe crown fires, surface fires that cause high tree mortality or stand replacement fires that typically result in total stand mortality and moderate-to-high loss of the duff-litter layer. Unlike moderate severity fire regimes, the landscape following high severity regimes is usually dominated by a lack of remnant survivor trees. The complete loss of the overstory results in the eventual development of an even-aged forest stand. These stand-replacing fires in Western Washington are generally associated with drought years and east wind weather events (which lower humidity). Fires are often of short duration but of high intensity and severity.

#### **Fire Regime Condition Classes**

A fire regime condition class (FRCC) is a classification of the degree of departure from the natural regime. The condition class scale was developed to generally describe how the current severity, intensity, and frequency of fires have affected key vegetative components of the ecosystem, as compared to historic or reference conditions. The majority of Bainbridge Island is within FRCC II (Figure 9). The three condition classes are described as follows:

#### CONDITION CLASS I

Fire frequencies are within or near the historical range and have departed from historical frequencies by no more than one return interval; vegetation attributes are intact and functioning within the historic range. The risk of losing key ecosystem components is low.

#### CONDITION CLASS II

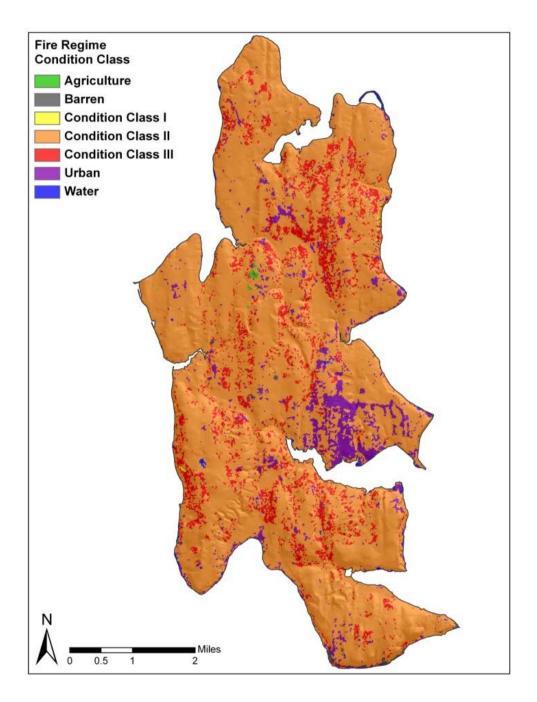
Fire frequencies and vegetation attributes have been moderately altered from the historical range, and fire frequencies have departed from historical frequencies by more than one return interval. The risk of losing key ecosystem components is moderate. As you can see in Figure 9, most of Bainbridge Island is Fire Regime Condition Class II.

#### CONDITION CLASS III

Fire frequencies and vegetation attributes have been significantly altered

from the historical range, and fire frequencies have departed from historical frequencies by multiple return intervals. The risk of losing key ecosystem components is high.

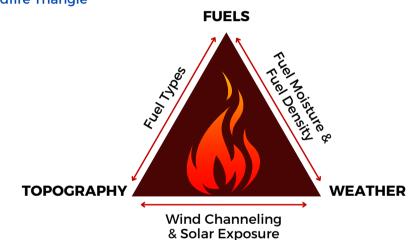
#### Figure 9: Fire Regime Condition Classes



#### **Wildfire Conditions**

Wildfire behavior is driven by the interaction of a few factors: weather, vegetation type (commonly called "fuels"), and topography. The wildfire

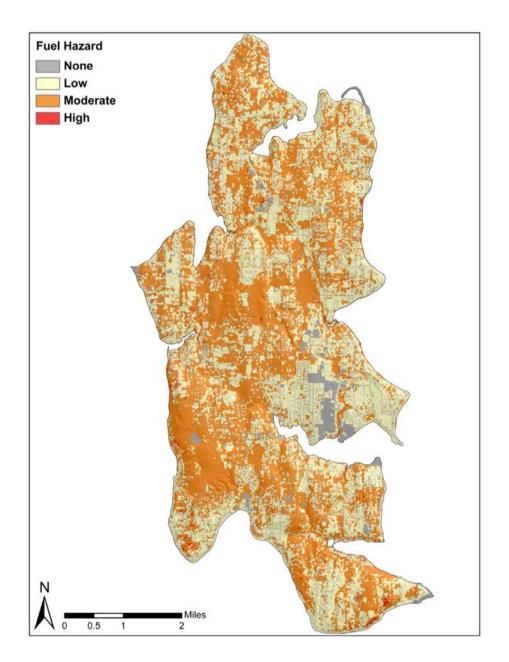
triangle (Figure 10) is a simple graphic used in wildland firefighter training courses to illustrate how the environment affects fire behavior. Each point of the triangle represents one of the three main factors that drive wildfire behavior. The sides represent the interplay between the factors that are seen on the ground as they affect wildfire behavior. The potential for wildfires to become severe depends on these factors. For example, large fires in Western Washington typically occur on steep south-facing slopes and often result from a combination of circumstances including a source of ignition in areas of dry, heavy fuels, an extended period of drought, and dry east winds. Wildfires here usually occur during the dry summer months of July, August, and early September, but they can occur anytime between April and October given the right conditions. Fire hazard increases in the late summer and early fall when hot, dry east winds occur more frequently, and the area has experienced the low point of the annual precipitation cycle.



#### Figure 10: Wildfire Triangle

#### VEGETATIVE FUELS

The presence of living or dead vegetative fuels can be the greatest contributor to wildfire hazards. Combustion of vegetation can create flame lengths exceeding 100', radiate heat capable of igniting structures 100' away, and cast off firebrands that can travel well over a mile. The fuel hazard assessment (Figure 11) uses the 40 Scott & Burgan fire behavior fuel model descriptions to classify vegetation hazards into categories of non-burnable (e.g., roads, extensive areas of concrete, etc.), light (grasses, forests with light litter; fuel loading <1.10 tons/acre), medium (most forests; fuel loads ~1.1 to 2.5 tons/acre), heavy (dense forests; fuel loads >5 tons/acre), and slash (none present in this database). The fuels are ranked according to the National Fire Protection Agency (NFPA) 1144 criteria. Populated areas on Bainbridge Island are predominantly exposed to wildfire from direct sources, such as adjacent flammable vegetation.

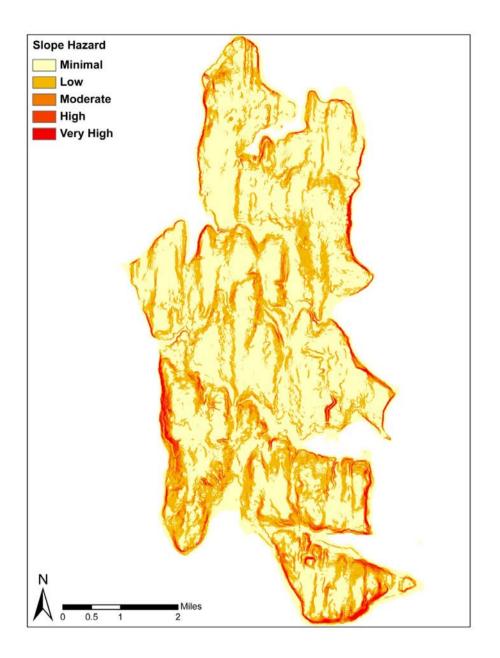


#### Figure 11: Hazard Levels for the Vegetative Fuels Factor

#### SLOPE

Steep slopes increase a fire's rate of spread uphill and can create topographic influences on wind. Topography is mostly low, rolling hills with several ridges oriented north to south. The percent slope is derived from the 10-m digital elevation model supplied by the Washington Department of National Resources (DNR). The slope hazard rating is a large contributor to the overall hazard rating because of its influence on fire spread and the increased difficulty of fighting wildfire as the slope steepens (Figure 12).

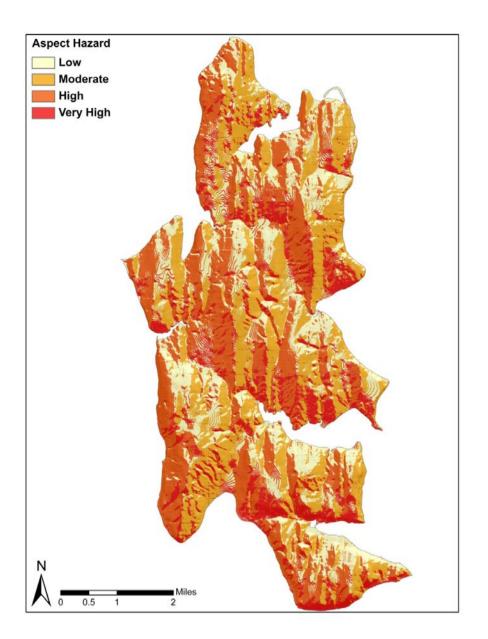
#### Figure 12: Hazard Levels for Slope Factor



#### ASPECT

Bainbridge Island has many cloudy days, but solar insolation still has a large effect on fuels, especially during fire season. South-facing slopes receive much more solar radiation than slopes with a north aspect, due to the island's midlatitude location near the 48th parallel. South slopes thus typically have drier fuels and soils, which affects fuel types and densities that can be grown on the slopes, as well as potential fuel moisture levels. While important, aspect hazard is not a major driver of fire behavior and thus accounts for a smaller amount of the hazard ratings (Figure 13).

#### Figure 13: Hazard Levels for the Aspect Factor



#### Wildfire Types

Four main types of wildfires can occur: ground fires, surface fires, crown fires, and spotting fires. Depending on the conditions of the fire event, one or multiple types of fires can occur at a time.

#### **GROUND FIRES**

Ground fires burn in the natural litter, duff, roots, and sometimes high organic soils. Once started, they are very difficult to detect and control. Occasionally, especially during prolonged drought, such fires can smolder all winter underground and then emerge at the surface again in spring.

#### SURFACE FIRES

Surface fires burn on the surface of the ground and are primarily fueled by lowlying vegetation. They may move rapidly, and ease of control depends upon the fuel involved.

#### **CROWN FIRES**

Crown fires burn in the tops of trees. Once started, they are very difficult to control since wind plays an important role in crown fires. They can advance at great speed from crown to crown, often well in advance of the fire on the ground. These are the most intense and dangerous wildland fires.

#### SPOTTING FIRES

Spotting fires can be produced by crown fires as well as wind and topography conditions. Large burning embers are thrown ahead of the main fire and can travel as much as 1.5 miles ahead of the flame front. Once spotting begins, the fire is extremely difficult to control.



**Ground Fire** 



Surface Fire



**Crown Fire** 

#### **Hazard Assessment**

In the 2010 CWPP, a Geographic Information System (GIS) analysis was used to model and analyze wildfire hazards and risks. Three spatially explicit data sets of factors critical to wildfire behavior (fuels, slope, and aspect) were combined with proximity to hydrants and past vegetation fires to develop the overall wildfire hazard map of Bainbridge Island (Figure 14). Each factor was assigned a numeric weight based on its potential contribution to fire behavior (Table 3), following point-rating conventions based on NFPA 1144 (2008, Annex A). The points for each of the factors were then added together to create a hazard rating. The hazard rating was combined with risk based on previous fire history. The final map was then scaled into quartiles to provide a relative ranking of low to high hazards (Figure 14). An overview of the assessment factors and their relative ratings is listed in Table 3.

CATEGORY	ITEM	POINTS	POINT CATEGORY	HAZARD RATING	% OF OVERALL RATING
Spatial Hazard	Fuels	0 5 10 20 25	non-burnable light medium high slash	none low moderate high very high	50%
	Slope	1 4 7 10 15	<10% 10–20% 21–30% 31–40% >40%	minimal low moderate high very high	25%
	Aspect	0 2 3 5	N E W S	low moderate high very high	8.3%
Protection Hazard	Hydrants	0 5	Hydrant within 1000' Hydrant >1000' away	low high	8.3%
lgnition Risk	Past Vegetation Fires*	1 2 4 5	0 fires / sq. mile** >5–5.4 fires / sq. mile >5–14 fires / sq. mile >14 fires / sq. mile	low moderate high very high	8.3%
	Maximum Possible	60			100%

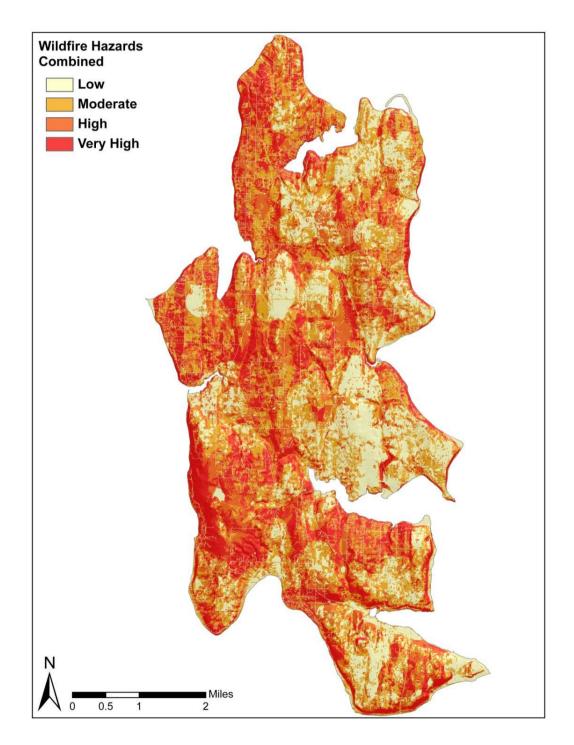
#### Table 3: Hazard Assessment Criteria and Ratings

\* Category values were derived from the entire data set of 21 years (1989-2009) and are not annual values.

\*\* The four groups represent quartiles of the results; for example, the low (1 point) category is the lowest quartile of the data (0-25th percentile).

#### **Overall Wildfire Hazard**

To create the final hazard rating map, all of the assessment maps were summed using the point scale in Table 3 and classified from low to very high by quartile (Figure 14).



#### Figure 14: Overall Wildfire Hazard Levels for Bainbridge Island

# V. MITIGATION STRATEGIES

Risk assessments do not necessarily reveal appropriate mitigation strategies. Other factors to consider are relevant laws and regulations, strategic objectives, broader land and resource management plans, treatment opportunities, and likely effectiveness and negative consequences of various treatment alternatives. However, assessments of wildfire risk are critical for informing the development and implementation of cost-effective risk mitigation efforts and can be used as a basis to evaluate different treatment alternatives. Designing efficient fire management strategies involves asking:

- Where can wildfire risk be best mitigated?
- What treatments and management activities are feasible?
- Where can different treatments be implemented and to what extent?
- How will treatments affect various risk factors (likelihood and intensity)?
- What combinations of activities can most cost-effectively mitigate wildfire risk?

Many residents of Bainbridge Island may be unaware of the concept of defensible space or unaware that the concept is directly applicable to their property, adding to the potential for severe WUI incidents in the future. Should we face a major wildfire, it is possible that the Island could become a major disaster zone with heavy property losses and potential loss of human life. However, with careful planning and collaboration among public agencies and community members, it is possible to minimize the losses that can result from wildfire.

In 2019, the Bainbridge Island Climate Change Advisory Committee was directed by the City Council to develop a Climate Action Plan (CAP) that is consistent with the Island's Comprehensive Plan. On November 10, 2020, the City of Bainbridge Island City Council approved the <u>Climate Action Plan- A Plan</u> for <u>Mitigating and Adapting to Climate Change on Bainbridge Island</u>. The CAP recognizes the need to adjust to our changing climate and prepare for more frequent and intense climate change impacts and the increased potential for wildfire in our community. It provides a pathway to enhance our community resilience by including approved wildfire mitigation strategies for both public and private landowners.

The City's Comprehensive Plan also references <u>municipal codes</u> pertaining to the care of trees, vegetation, and forested areas on Bainbridge Island (Figure 20, page 34). Its policies and nonregulatory provisions pertain especially to the

plans and ongoing activities of Island residents on their own property when the use and enjoyment of the property involve stewardship and maintenance of trees and vegetation. Chapter 16.18 of the City of Bainbridge Island Municipal Code provides specific actions property owners may take to reduce fuel hazards on their property.

#### **Hazardous Fuel Reduction**

While weather and topography are factors beyond human control, wildfire behavior can be influenced by modifying fuel load and continuity across the landscape. Reducing hazardous fuels around homes, along transportation corridors, and in the City's landscape can significantly minimize losses to life, property, and natural and cultural resources in the event of a major wildfire. Forests that are managed for resistance to fire damage will also be more resistant to damage by insects, disease, organisms, and extreme weather conditions, further protecting fish, wildlife, watersheds, and other public resources. Any fuel treatments, including tree removal, must meet the requirements of the Bainbridge Island Consolidated Tree Ordinance. Common methods for fuel reduction treatments include:

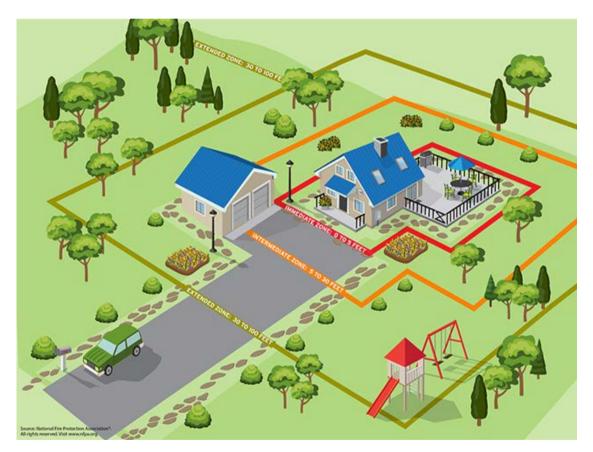
- Fire
- Mechanical
- Hand labor
- Chemical/herbicide
- Grazing
- A combination of the above

Types of fuel reduction projects can include:

- Stand thinning
- Pruning/thinning
- Reduction of disease stands
- Prescribed fires
- Fuel breaks
- Defensible space
- Fire-resistant plantings

#### **Defensible Space**

Defensible space is the area around a home or structure that has been maintained and designed to reduce fire danger. This defensible space reduces the risk that fire will spread from one area to another, or to a structure, and provides firefighters access and a safer area from which to defend a threatened area. Research around home destruction vs. home survival in wildfires points to embers and small flames as the main way that the majority of homes ignite in wildfires. Embers are burning pieces of airborne wood and/or vegetation that can be carried more than a mile through the wind, causing spot fires and igniting homes, debris, and other objects. There are methods for homeowners to prepare their homes to withstand ember attacks and minimize the likelihood of flames or surface fire touching the home or any attached structures. Experiments, models, and post-fire studies have shown homes ignite due to the condition of the home and everything around it, up to 200' from the foundation. This is called the Home Ignition Zone. There are three "zones": Immediate, Intermediate, and Extended Home Ignition Zones (Figure 15).



#### Figure 15: Firewise Home Ignition Zones

Learn more about Firewise Home Ignition Zones: <u>www.nfpa.org</u>

#### **Home Ignition Zones**

#### IMMEDIATE ZONE

The home and the area 0-5' from the furthest attached exterior point of the home, defined as a non-combustible area. Science tells us this is the most important zone to take immediate action on as it is the most vulnerable to embers. Start with the house itself, then move into the landscaping section of the Immediate Zone. Best practice includes:

- Clean roofs and gutters of dead leaves, debris, and needles.
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.
- Reduce embers that could pass through roof and eave vents by installing 1/4-inch or smaller metal mesh screening.
- Clean debris from exterior attic vents and install 1/8-inch metal mesh screening to reduce embers.
- Repair or replace damaged or loose windows and screens.
- Screen or box-in areas below patios and decks with wire mesh to prevent debris and combustibles from accumulating.
- Move any flammable material away from wall exteriors wood mulch, flammable plants, leaves and debris, firewood piles – anything that can burn. Remove flammables stored underneath decks or porches.

#### INTERMEDIATE ZONE

The area 5-30' from the furthest exterior point of the home. Best practices include employing landscaping and/or hardscaping that creates breaks that can help influence and decrease fire behavior:

- Clear vegetation from under large stationary propane tanks.
- Create fuel breaks with driveways, walkways/paths, patios, and decks.
- Keep lawns and native grasses mowed to a height of 4".
- Remove ladder fuels (vegetation under trees) so a surface fire cannot reach the crowns. Prune trees up to 6-10' from the ground; shorter trees do not exceed 1/3 of the overall tree height (Figure 16).
- Space trees to have a minimum of 18' between crowns with the distance increasing with the percentage of slope (Figure 17).
- Tree placement should be planned to ensure the mature canopy is no closer than 10' to the edge of the structure.
- Tree and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape.

#### Figure 16: Tree Pruning

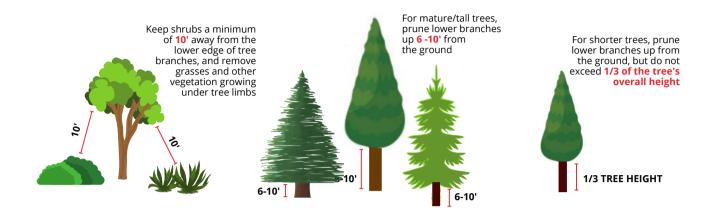
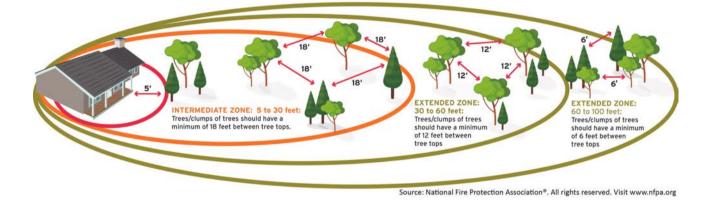


Figure 17: Tree Spacing



#### EXTENDED ZONE

30-100', out to 200'. Landscaping – the goal here is not to eliminate fire but to interrupt fire's path and keep flames smaller and on the ground:

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

#### **City of Bainbridge Island Code Requirements**

The Bainbridge Island City Council is responsible for adopting provisions in the City's Municipal Code to allow certain wildfire mitigation activities to occur. Most of the restrictions are based on land use classifications and how they relate to vegetation maintenance and tree removal. These provisions may change at any time. The following tables (4, 5, 6) attempt to provide a summary of permissible activities. Property owners are encouraged to contact the City's Planning and Community Development Department with specific questions related to permissible vegetation maintenance and tree removal activities at <u>pcd@bainbridgewa.gov</u> or (206) 780-3750.

Permits are sometimes required to remove trees considered to be "significant." A significant tree is defined as:

- A live evergreen tree 10" in diameter or greater, measured 4.5' above existing grade.
- A live deciduous tree 12 inches in diameter or greater, measured 4.5 feet above existing grade.
- In the Mixed-Use Town Center and High School Road zoning districts, any live tree 8" in diameter or greater, measured 4.5' above existing grade.
- Any live trees located within a required critical area or critical buffer as defined in Chapter 16.20 BIMC.





# **IMMEDIATE ZONE**

0-5' from the furthest exterior point of the home

FIREWISE BEST PRACTICE	SHORELINE AREAS	CRITICAL AREAS	AQUIFER RECHARGE PROTECTION AREA	ALL OTHER AREAS
Clean roofs and gutters of dead leaves, debris, and pine needles.				
Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.				
Reduce embers that could pass through vents in the eaves, soffits, foundation, and crawlspace by installing 1/8-inch metal mesh screening.				
Remove debris that may accumulate at roof-to-wall intersections. Embers from a fireplace can exit the chimney and could ignite a wildfire; to prevent this, install a spark arrestor.				
Screen or box-in areas below patios and decks with wire mesh to prevent debris and combustible materials from accumulating.				
Move any flammable material away from wall exteriors – mulch, flammable plants, leaves and needles, firewood piles – anything that can burn. Remove anything stored underneath decks or porches.	•	•	•	•
Trim tree limbs that overhang from the Intermediate zone into this area.				
Use non-flammable fencing material when attaching directly to siding. Do not add vines or other types of vegetation to fencing. Wooden fences can carry flames directly to the house.	•	•	•	

Best Practice can be implemented without any additional permitting, requirements or approvals.

Vegetation or tree removal subject to COBI approval. Contact COBI Department of Planning and Community Development at pcd@bainbridgewa.gov or (206) 780-3750.

Tree removal information: if your property is located outside the Mixed-Use Town Center and High School Road zoning districts, you can remove without a permit up to 6 significant trees in any 3-year period if your lot is larger than 1 acre or up to 3 significant trees in any 3-year period if your lot is 1 acre or less. The 3/6 trees in a year rule does not apply when the trees you'd like to remove:

- · Are required to be retained as a result of another provision of the code.
- Are in critical areas or shoreline areas.
- Qualify as landmark trees based on species and size and lot zoning district.

Allowed if work is done by a certified arborist.







# **INTERMEDIATE ZONE**

5-30' from the furthest exterior point of the home

FIREWISE BEST PRACTICE	SHORELINE AREAS	CRITICAL AREAS	AQUIFER RECHARGE PROTECTION AREA	ALL OTHER AREAS
Clear vegetation from under large stationary propane tanks.				
Create fuel breaks with driveways, walkways/paths, patios, and decks.	•		•	•
Keep lawns and native grasses mowed to a height of 4".		•		
Remove ladder fuels (vegetation under trees) so a surface fire cannot reach the crowns. Prune trees up to 6-10' from the ground; for shorter trees do not exceed 1/3 of the overall tree height.	•	•		
Space trees to have a minimum of 18' between crowns with the distance increasing with the percentage of slope.		•		
Tree placement should be planned to ensure the mature canopy is no closer than 10" to the edge of the structure.	•			
Tree and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscape.	•			

- Best Practice can be implemented without any additional permitting, requirements or approvals.
- Anything new may require a permit. Vegetation or tree removal subject to COBI approval. Contact COBI Department of Planning and Community Development at pcd@bainbridgewa.gov or (206) 780-3750.
- Tree removal information: if your property is located outside the Mixed-Use Town Center and High School Road zoning districts, you can remove without a permit up to 6 significant trees in any 3-year period if your lot is larger than 1 acre or up to 3 significant trees in any 3-year period if your lot is 1 acre or less. The 3/6 trees in a year rule does not apply when the trees you'd like to remove:
  - $\cdot$  Are required to be retained as a result of another provision of the code.
  - · Are in critical areas or shoreline areas.
  - Qualify as landmark trees based on species and size and lot zoning district.







# EXTENDED ZONE

30-100' from the furthest exterior point of the home

FIREWISE BEST PRACTICE	SHORELINE AREAS	CRITICAL AREAS	AQUIFER RECHARGE PROTECTION AREA	ALL OTHER AREAS
Dispose of heavy accumulations of ground litter/debris.			•	
Remove dead plant and tree material.				
Remove small conifers growing between mature trees.	0	•	•	
Remove vegetation adjacent to storage sheds or other outbuildings within this area.		•	•	
Trees 30'-60' from the home should have at least 12' between canopy tops. <b>*</b>				
Trees 60'-100' from the home should have at least 6' between the canopy tops.*	•			

Vegetation or tree removal subject to COBI approval. Contact COBI Department of Planning and Community Development at pcd@bainbridgewa.gov or (206) 780-3750.

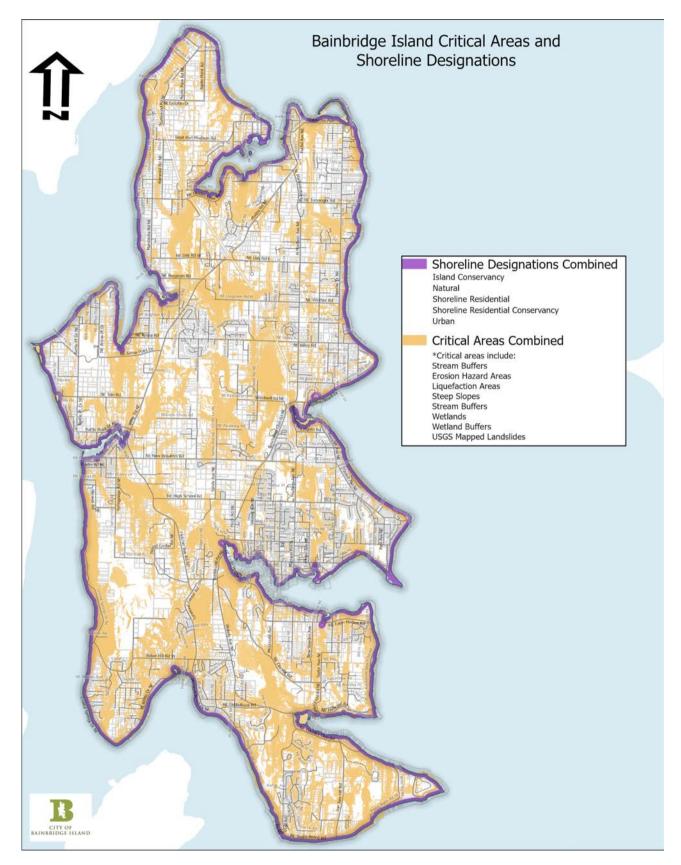
Tree removal information: if your property is located outside the Mixed-Use Town Center and High School Road zoning districts, you can remove without a permit up to 6 significant trees in any 3-year period if your lot is larger than 1 acre or up to 3 significant trees in any 3-year period if your lot is 1 acre or less. The 3/6 trees in a year rule does not apply when the trees you'd like to remove:

- · Are required to be retained as a result of another provision of the code.
- Are in critical areas or shoreline areas.
- $\cdot$  Qualify as landmark trees based on species and size and lot zoning district.

Snags, fallen tree trunks, and large branches are important wildlife habitat and do not adversely affect wildfire safety in all cases if left in place. Standing snags may be subject to COBI tree removal regulations.

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







Bainbridge Island Critical Areas and Shoreline Designations PDF

#### **Forest Practices and Healthy Forest Management**

Bainbridge Island's trees and forested areas provide many resource benefits: wildlife habitat, clean air and water, opportunities for outdoor recreation, and natural beauty. It is important ensure a balance between conservation and maintaining a healthy forest, including wildfire mitigation.

The Bainbridge Island Municipal Code allows for broader vegetation and tree management on properties, including shoreline areas, through a forest practices permit rather than using a piecemeal approach based on allowances and exceptions contained in the code. There are a number of benefits to this approach, including:

- The ability to evaluate an entire property holistically.
- The ability to address multiple hazards simultaneously (fire, disease, landslide, etc).
- Allows for consideration of mitigation beyond the intermediate and extended Firewise zones
- Develops a plan that ensures compliance that is not at the expense of making progress in meeting fire and other ecological goals.

To find out more about whether a forest practices approach would be best for your property, contact COBI Department of Planning and Community Development at <u>pcd@bainbridgewa.gov</u> or the Washington State Department of Natural Resources at <u>southpuget.forestpractices@dnr.wa.gov</u>.



#### **Reduction of Structural Ignitability**

The risk wildfire poses to forest lands and homes in our community is inseparable; wildland fires can burn homes, and structural fires can spread to the adjacent forested areas.

Defensible space, as outlined in the previous section, provides a mechanism to reduce the likelihood of direct flame impact to or from structures and adjacent vegetation. COBI's recent adoption of provisions that allow property owners to perform this type of protection within the "immediate zone" is a step in the right direction towards risk reduction.

Further measures are necessary, however, to protect homes through building construction and maintenance. Embers are a major factor in wildland fires where structures are lost. The International Wildland-Urban Interface Code and National Fire Protection Association 1144 <u>Standard for Reducing Structure</u> <u>Ignition Hazards from Wildland Fire</u> are two examples of national consensus codes that address building construction features that contribute to structural ignitability.

In 2021, COBI adopted limited provisions of the International Wildland-Urban Interface Code pertaining to the construction and replacement of roofs. These provisions require an assessment of the property for wildfire hazards and the use of roofing materials and techniques that make the roof more fire-resistant.

Other recommendations, that should be considered for future code adoption include, but are not limited to:

- Ignition-resistant construction of exterior walls, eaves, and underfloor areas.
- Non-combustible gutters and downspouts.
- Exterior window glazing.
- Screening vents in attics, subfloors, and foundations with ¼-inch or smaller mesh to prevent embers from entering.
- Ignition-resistant deck construction.

Numerous other provisions related to construction that assist the fire department in responding to fires should continue to be reviewed on a regular basis and improvements made, whenever possible. Such areas include:

- Roadway and driveway access provisions, including width, overhead clearance, turning radius, surfaces, grades, angles of approach and departure, turnarounds, etc. Access during wildfire conditions exacerbates any access problems or limitations already in place.
- Posting of addresses and naming of private driveways. While the Fire Code already requires addresses to be posted, requiring the use of non-

combustible signage would be a benefit.

• Fire protection water supply infrastructure. Around 50% of the island is served by fire hydrants. Expansion of fire protection water supply infrastructure makes firefighting operations more effective and efficient. Capacity and reliability of these systems is also of vital importance.

#### **Firewise Landscaping**

When landscaping around a home, most homeowners are interested in creating a landscape that is aesthetically pleasing, complements their home, and has variations in color, texture, flowers, and foliage. When selecting plants, you should also consider the flammability of plants (i.e., fuel), particularly if your home is located in or adjacent to a forest. Homeowners should take active steps to minimize or reduce the fuel and fire hazards around their homes, including the use of fire-resistant plants in the landscape. Equally important are proper plant placement, plant spacing, and ongoing plant maintenance. These practices, when combined, can create a fuel break and help protect your home by blocking intense heat (Figure 19).

#### Figure 19: Landscaping That Includes Fire-Resistant Plants and Fuel Breaks





Creating a defensible space around your home includes using fuel breaks and fire-resistant plants in the landscape. Fire-resistant plants are those that do not readily ignite from a flame or other ignition sources. These plants can be damaged or even killed by fire; however, their foliage and stems do not significantly contribute to the fuel and, therefore, the fire's intensity. Plants that are fireresistant have the following characteristics:

- Leaves are moist and supple.
- Plants have little dead wood and tend not to accumulate dry, dead material within the plant.
- Sap is water-like and does not have a strong odor.
- Sap or resin materials are low.
- Most deciduous trees and shrubs are fire-resistant.

Learn more about fire-resistant plants: <u>www.bifd.org</u>

#### **ORDINANCE NO. 2021-07**

AN ORDINANCE of the City of Bainbridge Island, Washington, revising and amending Chapter 16.18 of the Bainbridge Island Municipal Code related to the applicability of that chapter, fire safety measures, and wildfire mitigation activities for residents of Bainbridge Island, and the definitions section of that chapter. View Ordinance No. 2021-07 in full at: <u>www.bainbridgewa.gov</u>

Below are sections from Ordinance No. 2021-07 that addresses wildfire mitigation on Bainbridge Island. 16.18.025 Purposes This chapter is adopted for the following purposes:

#### Section D:

To implement goals and policies in the current comprehensive plan, the Community Forest Management Plan (2006), the Bainbridge Island Open Space Study (October 2008). And the Bainbridge Island Community Wildfire Protection Plan (2010), or subsequent updated versions.

#### Section F:

To implement a long-range policy of maintaining the island's forest canopy cover while taking measures to prevent wildfires and protect structures in accordance with recommendations of the Bainbridge Island Fire Department.

# 16.18.040 Activities allowed without a permit Section H:

Voluntary wildfire mitigation activities, other than tree and vegetations removals requiring a permit in BIMC 16.18.050.A or Chapter 16.32 BIMC (Protection of Landmark Trees), within a 30-foot defensible space of habitable structures, including, but not limited to, the following:

- Vegetation removal underneath a propane tank;
- For trees less than 30 feet in height, pruning up to ten feet from the ground to remove ladder fuels, as long as pruning doesn't exceed 1/3 of tree height;
- Removal of trees to provide at least 18 feet between crowns;
- Removal of trees within 5 feet of the furthest attached exterior point of a habitable structure.

Property owners may obtain assistance with wildfire mitigation activities from the Bainbridge Island Fire Department, the City Arborist, and private tree professionals in accordance with City prepared guidance. Further information can be obtained from the applicable sections of the Fire Code (Chapter 20.04 BIMC), the Climate Action Plan, and the Bainbridge Island Community Wildfire Protection Plan. The Fire Department and Department of Planning and Community Development will maintain a checklist to provide guidance in implementing wildfire mitigation, and it is the intent that both the checklist and this code section will be reviewed annually to ensure they are consistent with best practices to mitigate wildfire danger.

#### 16.18.130 Definitions

"Defensible space" means an area either natural or person-made where material capable of causing a fire to spread has been treated, cleared, reduced, or changed to act as a barrier between an advancing wildfire and the loss to life, property, or resources. In practice, "defensible space" is defined as an area a minimum of 30 feet around a habitable structure that is cleared of flammable brush or vegetation.

"Ladder fuels" means fuels which provide vertical continuity between strata, thereby allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. Ladder fuels help initiate and assure the continuation of crowning.

#### **Wildfire Mitigation Priorities**

Wildfire mitigation requires time and hard work. It also helps to know what to focus on first. In the 2010 CWPP, the methodology used to establish mitigation priorities was based on geographic location and where density of structures was the greatest. Over the past decade, it has been determined that a broader and more simplified approach is necessary and should focus on all primary structures (such as residences). The following guidance can be used when determining where to start and how to prioritize mitigation efforts:

- Primary structures, such as homes, should be the first focus of mitigation efforts. That will be one of the top priorities of firefighting efforts.
- The focus should be on the Immediate and Intermediate Zones (in that order). These are the most critical in helping to make a difference in survivability of the structure. Employing careful landscaping and creating breaks can help influence and decrease fire behavior.
- Work beyond 30' from the primary structure (the Extended Zone) should be the lowest priority. This zone is also not subject to vegetation removal exemptions in the COBI Municipal Code. Mitigation work in these areas should be coordinated with COBI and BIFD staff to determine regulatory requirements and to balance mitigation and natural resources needs.
- Maintenance and upkeep of primary and secondary structures' features such as clean gutters, mesh screening in vents and windows, and keeping firewood piles and other storage away from structures.
- Incorporating construction features that reduce the potential from home ignition such as non-combustible roofing and siding, etc., should always be a consideration.

# BeforeImage: Second second

#### Figure 21: Before and After Prioritized Mitigation in the Immediate and Intermediate Zones

# VI. FIRE DEPARTMENT READINESS & RESPONSE

#### **Fire Department Readiness**

BIFD's readiness for wildfires can be broken down into three areas: training, equipment, and experience.

#### TRAINING

Because of the risk of wildfire on Bainbridge Island, BIFD extensively trains its firefighters in wildland firefighting. Our Island's firefighters are trained to the Wildland Firefighter Type 2 standard established by the National Wildfire Coordinating Group. This training includes classroom instruction as well as practical, hands-on training. Annual refresher training for all response personnel is also required. In addition, BIFD officers have advanced National Incident Management System and WUI Firefighting training. Many of our members are also state and nationally credentialed at levels above the basic wildland firefighter standard, which allows them to work on larger wildfires on the eastern side of the Cascades or even out-of-state.

#### EQUIPMENT

BIFD has a variety of apparatus to be used for fighting wildfires:

- Four Type 1 structural engines. Each one carries wildland-specific firefighting tools, hose, and equipment, and holds 750 gallons of water.
- Three water tenders. Each carries 3,000 gallons of water.
- One Type 6 brush engine. This apparatus is designed specifically for wildland firefighting and is 4x4 off-road capable.





• BIFD has purchased a Type 3 WUI engine that is scheduled to be delivered in 2023. Its 4x4 capability provides us with the versatility to deploy it to other types of responses throughout the year where poor road conditions or inclement weather, such as snow or ice, provide challenges to other apparatus in BIFD's existing fleet.

In addition to apparatus, all BIFD responders are issued wildland firefighting protective gear. Additional equipment includes field-programmable Bendix King radios, GPS units, hand-held weather stations, a portable fire pump that can be carried to hard-to-reach areas, and iPads with field mapping applications.

BIFD also purchased a remote automatic weather station (RAWS) that is linked via satellite to the National Interagency Fire Center in Boise, Idaho. This equipment is located at the Bloedel Reserve and provides critical local weather data that was not previously available. View the data at the <u>Washington</u> <u>Regional Climate Center website</u>.

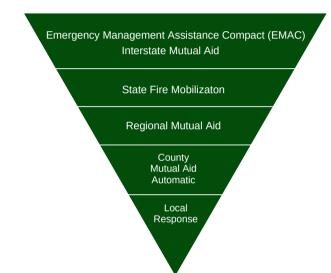
#### EXPERIENCE

There is no better way to learn how to fight fire than by actually going out and fighting real fire. Much of the extensive experience acquired by BIFD responders has been through our participation in state mobilizations, interstate mobilizations, and regional mutual aid fire events. The Department also has members with experience managing large-scale wildfire events in Washington, Oregon, and California with interagency incident management teams (Type 2 and Type 3). A number of BIFD members also have come to the Department with extensive wildland firefighting experience, including service on contract wildland firefighting engines, deployments with WA DNR, participation with other fire departments fighting wildfires, and experience with a Type 1 interagency "Hot Shot" crew.



#### **Fire Department Wildfire Response**

In the event of a wildfire on Bainbridge Island, the initial response would come from the local fire stations on the island. If more resources are needed than what BIFD has at the time of the event, in-<u>county</u> mutual aid would be dispatched to provide additional resources. It is important to note that the in-county response is automatic, and it happens seamlessly. If county resources are not enough, inregion mutual aid will be requested. This would include resources from neighboring counties. If the fire event will be prolonged, or regional resources have been exhausted, a state fire mobilization can be requested from resources across Washington State. If we run out of resources within the state, we have access through an EMAC request to get help from out-of-state. Through the tiered response model (Figure 22), BIFD has access to any and all assets necessary to fight wildfire in our community.



#### Figure 22: Wildfire Tiered Response

#### **RESPONSE ACTIONS - "SIZE-UP"**

The initial response to wildfires in our community will be based on 9-1-1 dispatch information. Once on scene, a "windshield size-up" is made, and an initial radio report is made based on what the on-scene responders see from the apparatus. Responders will then get out of the apparatus to get eyes on the fire to see what is burning, how big the fire is, how fast it is traveling, what kind of fuels are burning, and if there are any exposures that need protecting. Once that information has been gathered, a follow-up report will be made. At that time, any additional resource requests can be made.

#### **RESPONSE ACTIONS - ENGAGEMENT**

Engagement is the act of attacking the fire. There are different ways to fight the fire depending on what the conditions are. Attacking the fire may involve hand tools, hose lines, air assets, and/or heavy machinery. If structures are threatened, an assessment of those structures will be made (structural triage) to determine which may be saved (with or without additional resources) and which are not likely to be saved based on hazards or amount of resources needed to defend. This is why wildfire mitigation and defensible space are critical to protecting a structure from wildfire. Once the fire is under control, it will be monitored and patrolled for a few days to make sure the fire remains extinguished and the site is secure.

## **VIL EVACUATION**

#### **City of Bainbridge Evacuation Response**

The Bainbridge Island Hazard Specific Annex - Wildfire Response and Evacuation Plan was developed in partnership with the City of Bainbridge Island Emergency Management Coordinator, the Bainbridge Island Police Department, and the Bainbridge Island Fire Department. The purpose of this annex is to serve as a supplemental document to the Comprehensive Emergency Management Plan that provides wildfire-specific information and response procedures related to firefighting, evacuation, and emergency public information.

During a wildfire on Bainbridge Island, community members may be given evacuation directives. Evacuation levels are identified by three categories depending on the severity of the threat to life safety. They are "Get Ready," "Get Set," and "Go!," with "Go!" being the highest threat.

These levels and actions to take, may be communicated to the public audibly and/or visually through personal or technical means such as public address systems, television, social media, and other media outlets.

#### WILDFIRE RESPONSE PLANNING READY... EMBER AWARENESS SET. Wind-blown embers can travel one mile or more. Think about PACK GO...

where embers might land around your home and take actions to mitigate the risk of fire.

#### VEGETATION MANAGEMENT/ DEFENSIBLE SPACE Modifying your vegetation

and *clearing debris* is a great way to create a defensible space around your home.

Pack your vehicle with your emergency items.

#### **FAMILY PLAN**

Figure 23: City of Bainbridge Island Wildfire Readiness Infographic

Create a *family plan* to address the needs of every member of your household, including pets.

#### **EMERGENCY KITS**

Build an emergency kit to contain enough supplies for at least three days.

#### LEAVE EARLY!

Know when to leave, what to take, *where* to go, and *how* to get there while evacuating during a wildfire.

#### DON'T WAIT

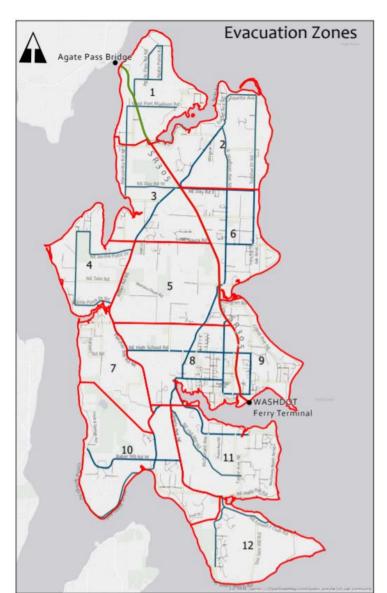
If you are advised to leave, don't hesitate. Have several travel routes in case one route is blocked by the fire or emergency vehicles and equipment.



#### SHELTER IN PLACE

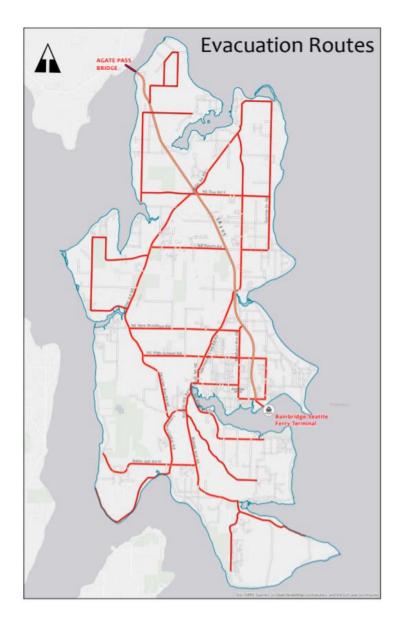
If trapped by a wildfire, shelter away from outside walls. Patrol inside your home for spot fires and extinguish them. Stay hydrated. Ensure you can exit the home if it catches fire. Check your roof and extinguish any fires, sparks, or embers. Check inside the attic for hidden embers. Patrol your property and extinguish small fires.

Bainbridge Island has been divided up into 12 evacuation zones, making it extremely important for every resident to know their evacuation zone (Figure 24). Real-time information will be used to determine which evacuation zones need to be evacuated. Information regarding specific evacuation routes (Figure 25) will be conveyed to the community based on the location of the hazard. Throughout the emergency, the size and location of the danger area will be continuously reevaluated and, if necessary, will advise the evacuation of additional areas. In general, evacuation routes will direct people to get away from the hazard area and to report to a temporary reception center. If offisland evacuation is needed, evacuation routes will head north on State Route 305 to the Agate Pass Bridge or south to the ferry terminal in downtown Winslow.



#### Figure 24: Bainbridge Island Evacuation Zones

#### Figure 25: Evacuation Routes



#### EMERGENCY MESSAGING

The City of Bainbridge Island uses NIXLE to send out emergency texts and email messages. At the time of this update about 50% of Island residents subscribe to NIXLE emergency alerts (Figure 26). The messaging will include information about the situation, recommended protective actions, evacuation route information, road closures, locations of assembly points for those without access to vehicles, where to go for care and shelter, and other pertinent information. Other methods of communication may include:

- Kitsap County "Code Red" mass notifications
- Wireless emergency alerts through Kitsap County or the state

- City website and social media sites
- Police and fire vehicle public address systems
- Print, radio, and television media
- Message boards throughout the community
- Amateur Radio System (ham radio)

#### Figure 26: NIXLE



NIXLE® is the Island's official emergency notification and alerting system.

Sign-up to receive free public safety notifications and emergency alerts from the City of Bainbridge Island and BIFD.

Alerts are sent for events impacting Bainbridge Island only. Examples include: road closure notices, missing persons alerts, and emergent public safety alerts

Signing up is easy: text 98110 to 888777, or visit <u>www.nixle.com</u> and enter your zip code.

# VIII. GOALS & OBJECTIVES

It is critical that goals and objectives be identified in this CWPP update to move the culture forward with advancements in both wildfire education and mitigation. Cultural change can sometimes take time when advancing wildfire mitigation in a community. The process of setting goals, in partnership with the community, and including other governmental stakeholders is a key element in developing this new culture. Therefore, the following goals have been identified as important measures over the next five years:

- Conduct community-wide wildfire mitigation educational presentations annually.
- Adapt the "Map Your Neighborhood" curriculum to include wildfire mitigation.
- Conduct annual voluntary home wildfire mitigation inspections.
- Annual presentation to community service clubs (i.e., Rotary and Kiwanis).
- Annual wildfire mitigation status presentation to Fire Commissioners.
- Annual wildfire mitigation progress presentation to City Council.
- Continued enhancements in the Bainbridge Island Municipal Code for wildfire mitigation.
- Annual community activities around Wildland Community Preparedness Day.

It is the hope that by the next CWPP update, significant and measurable progress has been made towards wildfire risk reduction on Bainbridge Island.

To learn more about wildfire risk reduction and mitigation, visit <u>www.bifd.org</u>