

# CITY OF PORTLAND

## Wildfire Readiness Assessment: Gap Analysis Report

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AUGUST 2009

## **ACKNOWLEDGMENTS**

We would like to thank all City staff and technical advisory committee members who participated in this assessment.

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## EXECUTIVE SUMMARY

This report is the final product of a three year effort known as the City of Portland Wildfire Risk Reduction Project. It identifies and prioritizes 30 action items to improve the ability of officials to cope with wildfire in and around natural areas, especially Forest Park and Powell Butte. This report will help all City managers identify what can be accomplished within their Bureaus to foster better coordination, improve integration of wildfire management into work plans and training, and facilitate access to resources that accomplish longer term objectives. These actions are expected to improve and sustain the inter-bureau coordination that has been a hallmark of this entire effort to date.

Wildfires are increasing across the western United States. This increase is attributed to a buildup of forest fuels as a result of past fire suppression policies. Climate change increases the susceptibility of vegetation to fire due to longer dry seasons. The risk of loss to homes and businesses built at the margins of city natural areas is significant and growing. The Willamette Bluffs fires in 2000 and 2001 demonstrated this mounting wildfire risk. These fires, although successfully contained, highlighted the need for improved preparation, equipment, training and coordination.

## KEY ISSUES

- **Coordination** – City of Portland lacks a standing coordinating group to manage current and past wildfire mitigation and response efforts.
- **Communication** –City PP&R City Nature Field staff lack the necessary equipment to communicate with City First Responders (PF&R, PPB, POEM) and external wildfire resources.
- **City Policies** – Policies impede the maintenance of fire-safe yet ecologically functional vegetation on lands adjacent to natural areas. A better balance among ecological function, sustainability and safety within environmental zones is needed.
- **Training & Equipment** – Portland Fire & Rescue needs resources to insure that recent improvements in meeting state and national training & equipment standards in wildland firefighting can be sustained. Parks City Nature field staff needs training in basic wildland firefighting.
- **Community Education** – Expanded outreach to neighbors living in wildfire risk areas can improve the chances of homes and neighborhoods surviving a wildfire while also minimizing the number of firefighters needed for protection.
- **Access** – Some roads and fire lanes are not usable by emergency vehicles due to steepness or lack of maintenance. Roads in surrounding neighborhoods are often narrow or have sharp turns. In an evacuation, emergency vehicles could be blocked by fleeing residents.
- **Funding** – Accomplishing some report recommendations will require funding and staffing above current service levels, reallocation of resources, or temporary grant assistance.

PROPOSED ACTIONS

The following are the 30 recommended actions developed as a result of this project. Each action is assigned a priority level: **Priority 1** **Priority 2** **Priority 3**

#1. Convene a standing City of Portland wildfire technical working group.	#16. Conduct wildfire training for City wildfire response stakeholders.
#2. Identify and map the wildland urban interface area within the City.	#17. Develop a comprehensive, long term vegetation treatment program.
#3. Modify existing regulations to improve the permitting process and allow an increase of the defensible space around structures.	#18. Educate landowners within the Wildfire Hazard Zone about wildfire hazards.
#4. Integrate fire prevention goals and provisions into policies, plans, and codes.	#19. Establish a fire information network in Forest Park and Powell Butte.
#5. Secure funding for continued, long term vegetation management projects that maintain safe fuel levels in key locations.	#20. Create incentives to encourage fuel reduction and defensible space.
#6. Conduct a wildland firefighter training assessment of Portland Fire & Rescue.	#21. Design and install one or more demonstration areas to showcase wildfire resistant plantings.
#7. Reaffirm wildland firefighting standards for Portland Fire & Rescue	#22. Initiate and maintain training opportunities with regional and City incident management teams.
#8. Analyze and prioritize emergency vehicle access routes.	#23. Develop a cross-bureau plan for evacuation of citizens in high fire risk areas.
#9. Conduct a periodic tri-county wildfire coordination meeting.	#24. Develop critical GIS map layers for fire response and planning in natural areas.
#10. Revisit mutual aid agreements to ensure they are current and applicable.	#25. Review and update the Forested and Wildland Interface Areas Fire Protection Plan.
#11. Establish an agreed upon fire danger rating system and develop agency protocols.	#26. Re-Invigorate Neighborhood Emergency Teams with concrete projects.
#12. Continue to conduct annual wildland firefighter training for Portland Fire & Rescue personnel.	#27. Improve the system for identifying new construction in areas subject to wildfires.
#13. Improve enforcement of park rules in natural areas and open space tracts on approved land divisions.	#28. Assess and communicate the capacity of the water infrastructure (e.g. pipes, hydrants, water reservoirs).
#14. Improve emergency radio communications between PP&R Nature field staff and City first responders.	#29. Review the feasibility of adopting portions of state or nationally recognized wildfire interface codes.
#15. Design and conduct an effectiveness study of maintenance agreements that are established when new land divisions are approved to manage vegetation in open space tracts.	#30. Identify conditions of approval and mitigation strategies for new development or redevelopment in high risk areas.

For more information, please contact Mark Wilson, Portland Parks & Recreation, at (503) 823-6736.

## I. INTRODUCTION

The City of Portland recognizes the need to minimize the risk of, be prepared to respond to, and manage wildfires in and around its natural areas, including: Powell Butte, Forest Park, the Willamette Bluffs Escarpment, Marquam Nature Park, Terwilliger Parkway, Fanno Creek, Kelly Butte, Smith and Bybee Wetlands Natural Area, and others. The City of Portland Wildfire Risk Reduction Project, funded by the Federal Emergency Management Agency (FEMA), has primarily focused on reducing wildfire risk through proactive management of vegetation at Portland’s two largest nature parks: Forest Park and Powell Butte. The primary objectives include:

- Reduce long-term and short-term wildfire risk to nearby homes and businesses;
- Remove flammable non-native plants;
- Improve wildlife habitat and forest ecosystems;
- Maintain scenic and recreation quality; and
- Set the stage for long range management.

During the course of identifying vegetation management strategies to reduce wildfire risk, it became apparent that there were additional issues to consider on a municipal level, including: emergency response training, equipment, inter-bureau and inter-agency coordination, emergency evacuation, and access. The purpose of this supplemental report is to identify “gaps” to manage wildfire risk.



A powerline corridor in Forest Park.

This report identifies action items that will improve the preparation and ability of City officials to cope with wildfire in and around natural areas. It suggests that these actions be grouped into three priority levels. An expectation is that this report will help managers to establish internal priorities, identify potential resources, and integrate wildfire management into their work plans and training. Additionally, the recommended actions will improve and sustain the inter-bureau coordination that has been a hallmark of this effort.

## Trends

Wildfires have been increasing across the western United States for the past several decades. Much of this increase is attributed to unnatural buildup of forest fuels due to past fire suppression policies. In addition, global climate change may have already increased the susceptibility of local vegetation to fire (longer dry and warm seasons) and is expected to continue this trend. Several local wildfires in recent years, particularly the Willamette Bluffs fires in 2000 and 2001, have brought the issue of mounting wildfire risk to the attention of Portland officials. The Willamette Bluffs fires, although successfully contained with no loss of life or homes, highlighted the need for improved preparation, equipment, training and inter-governmental coordination.



Bureau representatives review fire potential spots in Forest Park.

Over the past twenty years, Portland has permitted development of hundreds of new homes at the margins of both Powell Butte and Forest Park, as well as other natural areas. As a result, there are many more homes now at risk from wildfire than previously—increasing the potential loss from fires in these areas.

The good news is that the natural vegetation at Powell Butte and Forest Park is mostly in a relatively fire-resistant state due to the native species mix and relatively low fuel build-up. There are some areas where high risk fuels such as clematis, blackberry, and other exotic species are gradually building up and may increase further over the next few decades. But overall, local native vegetation is not nearly as vulnerable to fire as areas east of the Cascades, southwest Oregon or at higher mountain elevations where fuel loads have increased during the past several decades.

On the other hand, there is an ongoing risk that during a severe drought, park vegetation that is not normally flammable could dry out enough to carry a fire into the forest canopy where it would be very difficult to bring under control.

Three characteristics that influence wildfire behavior are:

- Fuels: the type and density of vegetation, as well as structures in the path of a fire. The four major fuel characteristics are fuel moisture, fuel size, horizontal continuity and vertical arrangement.
- Topography: refers to earth's surface such as slope, aspect, and shape. The steeper the slope the faster fires burn in an uphill direction
- Weather: including temperature, wind, precipitation and humidity

These three variables act together to either reduce or exacerbate fire behavior.

Wildfires can transfer to buildings in three ways:

1. **Conduction:** Direct transfer of fire from burning vegetation to buildings. Many structures that burn in wildfires ignite in this manner.
2. **Convection:** Wind borne embers that land on decks or roofs. A large forest fire can generate embers that carry several miles down wind.
3. **Radiation:** Radiant heat, when an intense flame front raises the air temperature high enough to ignite a building surface.

Research and post-fire analyses suggest that the best location to reduce wildfire risk is nearest to homes and neighborhoods that are adjacent to natural areas. Proven measures include proactive codes that require or encourage fire-resistant building materials, reduction of fuels within a few hundred feet of buildings and adequate emergency vehicle access.

### Key Initial Findings

This report notes several areas where Portland can improve wildfire preparation and management in and around Powell Butte and Forest Park. Key areas include:

- Coordination
- Training
- Access
- Communication
- Community Education
- City Policies

### Planning Area

The geographic planning area for this project includes Forest Park and Powell Butte Nature Park and their nearby surroundings (generally within a  $\frac{1}{4}$ -mile distance). Some findings and recommendations are applicable to other areas of the City that have natural vegetation within or adjacent to neighborhoods.

#### *Forest Park*



Forest Park

Forest Park is one of the largest urban natural areas within the City limits of any major metropolitan area in the United States. It also is a key ecological connection between the City of Portland and the Coast Range Mountains. Covering more than 5,000 acres, Forest Park is a varied and continuously evolving forest ecosystem. Overlooking the Willamette River,



the park stretches for nearly eight miles along the northeast slope of the Tualatin Mountains.

Over 60 species of mammals and more than 100 kinds of birds thrive in Forest Park. Mostly blanketed with native trees, the park is home to hundreds of species of flowers and shrubs. There are also over 70 miles of interconnecting trails and fire lanes that provide hiking opportunities, including the 30-mile-long Wildwood Trail, a National Recreational Trail.

Forest Park is a peninsula of habitat bounded on three sides by urban development. To the east is Portland's largest industrial area, which occupies the level terrace between the park and Willamette River. To the south is Northwest Portland, a dense urban neighborhood of older homes. And to the west is a network of subdivisions and rural or semi-rural homesteads that straddle Skyline Boulevard.

About 70% of the park's forest is dominated by deciduous or mixed canopy trees, a condition that reflects both past logging and fire history. These forests are far less flammable than the remaining 30% conifer-dominated forest. Since the current condition of the forest is a mosaic of deciduous, mixed and coniferous stands, a sustained crown fire across a large area is unlikely. However, under present conditions, dry season fires pushed by an east wind could move upslope through favorable vegetation (e.g., conifer trees & brushy areas) and towards residential areas. Over time natural forest succession will result in a gradual increase in conifer cover, thus gradually increasing the potential for sustained crown fire. The presence of big leaf maple trees, which are long-lived and somewhat shade tolerant, will help keep fire risk relatively low for a number of decades. However, a key issue is the management of natural vegetation near homes adjacent to the park, the area where risk is highest. Initial fuel reduction efforts in recent years have included areas at the upper and lower park boundaries. Restoration of open oak woodlands in the lower end accomplishes both ecological and fire risk reduction goals.

### ***Powell Butte***

Powell Butte is located in outer Southeast Portland. It is one of a chain of buttes that stretch southeast towards Boring and Damascus. Powell Butte Nature Park is comprised of 608 acres of meadow and forest jointly managed by the Bureau of Parks and Recreation and the Water Bureau.

Before the turn of the century, the native forest on top of the butte was cleared to make way for a large meadow and an orchard. In 1925, the City of Portland purchased the land from George Wilson for future water reservoirs, but continued to lease the northeast portion of the property to Henry Anderegg, a farmer and owner of Meadowland Crest Dairy. Dairy cattle continued to graze on the meadow and helped maintain it as open land up until fairly recently.

In the mid-1970s the Water Bureau prepared a long range development plan that called for the construction of four 50-million gallon underground reservoirs to be located at the north end of the butte. In 1981, the first reservoir was built and still serves as the key hub of the Water Bureau's distribution system. A second 50-million gallon reservoir is now being planned, and is expected to be completed by 2013. The Water Bureau also maintains three smaller distribution reservoirs on the butte that were previously owned by the now defunct Powell Valley Water District. In 1987 the City officially established Powell Butte as a nature park that was opened to the public in 1990.

Today trails accommodate hikers, mountain bikers and horseback riders. Abundant wildlife populates the park, including rabbits, ring-necked pheasants, ground squirrels, raccoons, gray foxes, skunks, bats, chipmunks, coyotes and black-tailed deer. The park is home to many birds of prey and its open meadows allow views of distant peaks in the Cascades. Invasive English hawthorn trees are abundant, though recent restoration projects have reduced the number and extent. The slopes are forested with Douglas-fir, big leaf maple, red alder and western red cedar. A large area of forested wetlands lies along the Springwater Trail, near Johnson Creek.

The main wildfire concern is the potential for a grassland fire to be pushed by east winds to the forest edge, where it could burn up fuel ladders into the forest canopy, where it would be difficult to control. By and large the mixed canopy forest condition is not conducive to crown fire, and since residential areas lie down slope of the forest, this lessens the risk of wildfire reaching homes (fires burn more slowly down slope than up). There have been grassland fires in recent years, but these did not make it into the forest, in part because of the buffer provided by non-native English hawthorne trees, which are somewhat fire resistant. The Bureaus of Fire and Rescue and Parks and Recreation have cooperated on conducting prescribed burns over the past few years that are intended to help reduce the short term risk of grass fires.



Team members tour Powell Butte to view fuel reduction projects.

The Bureaus of Parks and Recreation and Environmental Services have implemented first stage fuel reduction projects for both Powell Butte and Forest Park. These projects largely entail removal of non-native, invasive vegetation by means of cutting and herbicide application. Over the long term the goal is to establish a fire resistant band of native deciduous woodland between the forest and meadow to make fire spread more difficult.

## Previous Wildfire Planning Efforts

The City of Portland has been developing wildfire mitigation and response strategies over the past several years. Two documents developed from previous efforts include: *The Forested and Wildland Interface Areas Fire Protection Annex* and *City of Portland Natural Hazard Mitigation Plan, Section 11: Wildfire*.

*The Forested and Wildland Interface Areas Fire Protection Plan (2005)* outlines the operational responsibilities of departments and bureaus of the Portland municipal government and supporting agencies. It includes Portland Fire and Rescue, Parks and Recreation, Police, Water, Emergency Communications, ComNet and Maintenance. Outside agencies participating include Multnomah County Emergency Management, Oregon Department of Forestry, Civil Air Patrol and the American Red Cross.

The *City of Portland Natural Hazard Mitigation Plan, Section 11: Wildfire* was a collaborative effort by multiple City bureaus approved by the Federal Emergency Management Agency in December 2004 and the 1<sup>st</sup> Edition released August 2005. It provides an overview of fire history, hazard identification, mitigation plan goals and existing activities, and wildfire action items. Action items identified in the plan have been incorporated into this assessment. These provide direction on specific activities that City organizations and residents can undertake to reduce risk and prevent loss from wildfire events. However, since the development of this plan only 2 of the 21 action items have been completed, 8 others have been identified as “In Progress”, and the remaining 10 have not been started. Recent changes in bureau staff and lack of implementation funding have hindered completion of these action items.

## II. PLANNING PROCESS

A variety of individuals were included in this process in order to solicit their feedback on multiple issues, including staff involvement in all three phases. A Technical Advisory Committee (TAC) was recruited to provide broad-based expertise in wildfire and fuels management, especially in urban-wildland interface settings. TAC member biographies are included in Appendix A.

### TAC and Staff Interviews

The TAC provided outside, objective expertise in wildland fuels management, firefighting operations and cooperative agreements. They provided a set of recommendations for what the City of Portland should have in place if adequate financial resources are available.

TAC members were interviewed in early January. Each member was e-mailed a list of questions in advance, and a follow-up phone interview was provided for all but one. Each member provided information for one or more of the following categories depending on their expertise:

- Emergency Management
- Codes/Structural Ignitability
- Communication
- Vegetation Management
- Training/Equipment
- Partnerships/Mutual Aid
- Community Outreach/ Education

The results of the TAC interviews are in Appendix B.

Following the TAC interviews, staff members from the Bureaus of Planning and Sustainability, Parks and Recreation, Portland Fire & Rescue and Office of Emergency Management were interviewed the week of January 12, 2009. Questions were based on background research and TAC interviews. The results of the TAC and staff interviews were presented in a January 2009 memorandum, titled Portland Wildfire Risk Assessment Synthesis, which was distributed to all workshop participants.

## Workshop

The park tour and workshop was held on January 21, 2009, and drew 29 participants, including City staff, TAC members, stakeholders and consultants.

The park tour stopped at seven locations around the Forest Park perimeter. It provided an opportunity to view typical fuel and access conditions in the wildland urban interface zone.



Workshop participants review emergency vehicle access in Forest Park.

The afternoon workshop first addressed desired outcomes and key issues. Then small groups discussed in detail suggested actions in one of three categories:

- Planning and Mitigation
- Operations and Training
- Vegetation Management and Fire Ecology

Each group identified suggested actions, lead agencies, timelines and priorities.

### III. PORTLAND'S KEY ISSUES

As a result of the interviews with City of Portland staff and the team workshop, several potential areas for improvement were identified to ensure a higher level of wildfire preparedness. The most important are described below.

- **Coordination** – At present Portland has no single coordinating group to review current and past wildfire mitigation and response efforts. Policies, projects and resources all require inter-bureau coordination. This results in doubling of efforts or ineffective policies or project follow-through due to conflicting objectives or misdirection. While this process has included coordination between multiple bureaus, there needs to be a more permanent structure in place or the momentum to complete actions will be lost.
- **Communication** – A key component in emergency management, including wildfire response, is the ability of field personnel to communicate amongst each other and with external resources (e.g., dispatch, arriving resources, Incident Command). Having compatible radios and knowing the frequencies used are critical issues during such an emergency. While Fire and Police are well equipped to communicate, Park field staff is unable to communicate with first responders in the field. Cell phones issued in lieu of radios lack coverage within much of Forest Park and the west hills. The ability for staff to communicate with others could prove helpful directing first responders to the scene or providing other critical assistance. In the event the incident grows, the Portland Office of Emergency Management can distribute radios from their radio cache to assisting resources upon their arrival. However, this would not aid in the quick direction Parks staff might provide during the initial moments of an emergency. The ability for better

communication between bureaus should be improved upon and, with proper radio use training, can enhance the integration of all bureau services.

- **City Policies** – The City’s Environmental Overlay Zone, Portland Fire Code, Property Maintenance Code and Wildfire Hazard Zone need adjustments to help facilitate management of wildfire risk. The Environmental Overlay Zone provides some balance between protecting natural resources and allowing development, but the land use review process for vegetation removal is cumbersome and expensive, and may not allow enough flammable native vegetation to be cleared or pruned away from buildings even when permits are issued. The Portland Fire Code regulates fuel accumulations around commercial buildings, but does not require flammable vegetation management on residential properties. Title 29 of the Portland City Code, Property Maintenance Code was written to mitigate nuisances and neighborhood eyesores, not to correct wildfire hazards. The Wildfire Hazard Zone provides a mapping platform to which more stringent building codes and vegetation management regulations can be tiered. What is needed is an agreement among key community stakeholders that strikes a better balance among ecological function, sustainability and safety within environmental zones. If and when an agreement is arrived at, City Codes and enforcement policies can be adapted and better coordinated
- **Training & Equipment** – A well-trained and equipped cadre of firefighters and first responders enhance firefighter safety, increase incident operation efficiency, and improves the coordination and communication of resources. All City of Portland Fire personnel have wildland firefighting training as it relates to fire ecology, operations and fire prevention, but many key personnel have limited wildfire training or experience. Scheduling limitations and financial circumstances have challenged Portland Fire’s ability to focus on wildfire response training and equipment provision in recent years. Adequate funds for training are lacking, in part because other, higher priority firefighting and emergency response-related topics have repeatedly consumed the limited funds available in the Fire Training budget. For example, Portland Fire & Rescue staff participate in training exercises including high-rise and shipboard/marine firefighting, weapons of mass destruction, technical rescue, hazardous materials response, emergency medical drills including mass casualty incidents, driver training, workforce development and cultural competency in addition to other routine and mandated topics. Portland Fire is planning on providing additional wildland training, but city-wide budget shortfalls will continue to limit funding needed for this, as well as other programs.
- **Community Education** – Well-informed and motivated homeowners and neighbors living within the wildland-urban interface can improve the chances of their homes and neighborhoods surviving a wildfire while also minimizing the number of firefighters needed to protect them. Some outreach and education efforts are in place, including an informational brochure, but these could be significantly expanded and improved. A proactive, coordinated effort to educate communities around Forest Park, Powell Butte, and other wildfire risk areas is needed. Key groups, such as neighborhood and homeowner associations or Neighborhood Emergency Teams (NETs), may be used for this purpose.
- **Access** – Emergency apparatus access is clearly limited in key areas around Forest Park. It may also be an issue in other wildland-urban interface areas. Residences, structures and areas adjacent to the forest must be accessible to emergency equipment to allow quick response times and to ensure firefighter safety. The few roads within Forest Park are not accessible in several areas due to instability and/or steepness. Roads in surrounding neighborhoods (e.g., Linnton) are often too narrow or have sharp turns that require

backing up to complete. In case of an evacuation, emergency vehicles could easily be blocked by fleeing residents.

- **Funding** – Accomplishing report recommendations will require funding and staffing above current service levels, reallocation of resources from other programs, and/or acquisition of alternative funding sources.

#### **IV. RECOMMENDED ACTIONS**

Key City of Portland staff should be fully prepared for wildfire emergencies. City staff have a strong commitment to professionalism and competency, but there is also clear concern that they are not presently prepared for wildland firefighting. Since wildland fire is not a common occurrence in the City of Portland, the bureaus are not as well-trained or equipped to deal with wildfire as they will need to be when one does occur. Portland firefighters are primarily trained and equipped to fight structural fires, and for the most part utilize established water systems to extinguish it. They understand how fires behave in buildings and know what to watch for and how to attack. Wildfires are often contained or steered rather than directly extinguished, and it takes a different approach, knowledge of wildfire dynamics, different tools, even different personal protective equipment (PPE). Local ecosystems are adapted to periodic fire, and there are plenty of ways fires may start. Being prepared to manage wildfire when the time comes is essential for the safety of fire fighters and for the protection of the community.

This section of the report lists actions that the City of Portland should implement in order to achieve a sufficient level of prevention, mitigation and response to wildfire. The actions are grouped into three priority levels to reflect which actions should be considered first.

Each proposed action was evaluated against four criteria, with a score of 1-3 assigned for each. Generally, the top third of all scores is ranked Priority One, middle third ranked Priority Two, and bottom third ranked Priority Three. Two actions, despite ranking middle to low under the selected criteria, are recommended to be included as Priority One due to their clear importance and urgency. These actions are identified by a double asterisk (\*\*).

The four criteria are:

- *Is the action technically feasible?*
  - (1) Experimental
  - (2) Likely
  - (3) Known
- *Is the completion of this action necessary to implement other actions?*

- (1) Not needed
  - (2) Helpful to other actions
  - (3) Necessary
- *Is this action time sensitive? Is there an opportunity that should be taken advantage of now?*
    - (1) Not time sensitive
    - (2) Upcoming opportunity
    - (3) Present opportunity
  - *How many project goals/objectives does this action meet? (These goals are listed on page one).*
    - (1) Meets one project goal
    - (2) Meets two project goals
    - (3) Meets three or more project goals

Additional criteria to consider for each action (though they were not used in scoring) are funding opportunities and public support. If a funding source, or in some cases a partnership opportunity, for an action is known or likely, this is noted. Also, this document should be referenced when identifying funding and prioritizing projects that align with these actions.

The criteria scoring, funding and public support comments, and action planning matrix are in Appendix C.



## WILDFIRE ACTIONS

The following is a summary of 30 actions resulting from this process. The following sections describe each action in great detail and identifies a logical lead for each action.

- |  |  |
|--|--|
| #1 Convene a standing City of Portland wildfire technical working group.   | #16 Conduct wildfire training for City wildfire response stakeholders.   |
| #2 Identify and map the wildland urban interface area in the City of Portland.   | #17 Develop a comprehensive, long term vegetation treatment program.   |
| #3 Modify existing regulations to improve the permitting process and allow an increase of the defensible space around homes.   | #18 Educate landowners within the Wildfire Hazard Zone about wildfire hazards.   |
| #4 Integrate fire prevention goals and provisions into City policies, plans, and codes.  | #19 Establish an information network in Forest Park and Powell Butte.  |
| #5 Secure funding for continued, long term vegetation management projects that maintain safe fuel levels in key locations.   | #20 Create incentives to encourage fuel reduction and defensible space.  |
| #6 Conduct a wildland firefighter training assessment of Portland Fire & Rescue.   | #21 Design and install one or more demonstration areas to showcase wildfire resistant plantings.                       |
| #7 Reaffirm wildland firefighting standards for Portland Fire & Rescue   | #22 Initiate and maintain training opportunities with regional and City incident management teams.                     |
| #8 Analyze and prioritize emergency vehicle access routes.   | #23 Develop a cross-bureau plan for evacuation of citizens in high fire risk areas.                                    |
| #9 Conduct a periodic tri-county wildfire coordination meeting.  | #24 Develop critical GIS map layers for fire response and planning in natural areas.                                   |
| #10 Revisit mutual aid agreements to ensure they are current and applicable.   | #25 Review and update the Forested and Wildland Interface Areas Fire Protection Plan.                                  |
| #11 Establish an agreed upon fire danger rating system and develop agency protocols.   | #26 Re-Invigorate Neighborhood Emergency Teams with concrete projects.   |
| #12 Continue to conduct annual wildland firefighter training for Portland Fire & Rescue personnel.   | #27 Improve the system for identifying new construction in areas subject to wildfires.                                 |
| #13 Improve enforcement of park rules in natural areas and open space tracts on approved land divisions.   | #28 Assess and communicate the capacity of the water infrastructure (e.g., pipes, hydrants, water reservoirs).         |
| #14 Improve emergency radio communications between PP&R Nature field staff and City first responders.  | #29 Review the feasibility of adopting portions of state or nationally recognized wildfire interface codes.            |
| #15 Design and conduct an effectiveness study of maintenance agreements that are established when new land divisions are approved to manage vegetation in open space tracts. | #30 Identify conditions of approval and mitigation strategies for new development or redevelopment in high risk areas. |

## PRIORITY LEVEL ONE

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### Action #1

**Convene a standing City of Portland wildfire technical working group to implement Actions proposed in the Wildfire Readiness Assessment report.**

Lead: Portland Office of Emergency Management, Portland Parks & Recreation, and Portland Fire & Rescue

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. The technical working group, comprised of representatives from relevant City Bureaus and departments, would provide an ongoing forum to discuss and coordinate implementation of wildfire mitigation actions across City bureaus, helping to ensure that such actions are reasonably applied. The key bureau representatives, including those listed in the *Forested and Wildland Interface Areas Fire Protection Plan*, would convene on a regular basis to pursue priority actions such as; vegetation management policy and codes, mapping, education and training, and funding. The first meeting should take place in November 2009.

### Action #2

**\*\*Identify and map the wildland urban interface areas in the City of Portland, starting with the area around Forest Park.**

Lead: Bureau of Planning and Sustainability

Discussion: Wildland areas provide critical watershed functions including hydrology, water quality, reduction in landslide and flooding risks, and fish and wildlife habitat. The wildland urban interface area needs to be better identified and mapped to inform various planning, programmatic and project-related activities. This identification and mapping will establish a level of risk that could be used to establish a standard in Action #3. This map will need to be updated periodically due to the changing conditions of the natural landscape.

### Action #3

**Modify existing regulations (e.g., environmental overlay zone code) to improve the review process and increase the defensible space around homes, while continuing to protect significant natural resource values and functions.**

Lead: Bureau of Planning and Sustainability

Discussion: The environmental overlay zone was established primarily to protect natural resources in wildland-urban areas. In some cases, a land use review may be required to allow homeowners to remove flammable native vegetation within the critical zone nearest buildings. Land use reviews are expensive and time consuming. There are ways to allow fuel reduction while still retaining high quality native forest and woodland habitats. Generally, this means reducing (but not eliminating) the occurrence of non-native and native flammable plants at all levels (ground, mid-story and canopy) while retaining or even increasing the occurrence of native plants that are resistant to fire. The environmental code should be revised by adding a standard that would allow removal and substitution of flammable native plants with less-flammable native plants within the critical zone nearest buildings. The Portland Plant List includes a list of native plants and a list of nuisance and prohibited plants. The native plant list has been modified to identify flammable (e.g., "fire accelerant") and less flammable trees and shrubs. Native groundcovers have not been identified as flammable and less flammable, but generally broadleaved evergreens with waxy leaves (e.g., salal, ceonothus) are flammable. Consider

adhering to or referencing the Oregon Forestland-Urban Interface Fire Protection Act (SB360) to accomplish this action. In addition, a set of fuel reduction standards may be established based on the level of risk identified in Action #2.

#### **Action #4**

**Integrate, as appropriate, goals and provisions for fire management and risk reduction into City policies, plans and codes. Identify and address ambiguities or conflicts among City requirements.**

Lead: Bureau of Planning and Sustainability, Portland Fire & Rescue, Portland Office of Emergency Management

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. It enhances the ability of City programs to meet multiple objectives to protect public health, safety and the environment, as well as to reduce risk. The review and update of City policies may occur during updates to the comprehensive plan, environmental zoning, Willamette Greenway program and other code titles. The review should address densities and urban form (e.g., the spatial and built environment characteristics), transportation routes and connectivity, public infrastructure capacity (e.g., water), building materials, pruning/thinning, removal of ladder fuels, planting requirements, tree removal, revegetation after a fire, incorporation of fuel breaks, and storage of hazardous materials. This item should be addressed through the Portland Plan project to update the Comprehensive Plan. This project will not be completed for a couple of years or longer, depending on budget priorities being decided now (March - June '09).

#### **Action #5**

**Secure funding for continued, long term vegetation management projects.**

Lead: Bureau of Parks and Recreation

Discussion: The current efforts to manage vegetation in high risk areas around Forest Park and Powell Butte are primarily funded by a three-year duration FEMA grant. This grant is nearly complete (2009,) and no alternative sources of funds have been obtained to continue these projects. Reduction of flammable vegetation in high risk areas is critical in preventing a catastrophic wildfire, and this requires periodic attention. The *Wildfire Risk Reduction – Final Reports* for Forest Park and Powell Butte recommended key projects to mitigate the risk of wildfire. The following sources of funding should be considered: FEMA, U.S. Forest Service, Multnomah County Secure Rural Schools Title III, Oregon Department of Forestry, expanded partnership with Forest Park Conservancy and OWEB.

#### **Action #6**

**Conduct a wildland firefighter training assessment of Portland Fire & Rescue.**

Lead: Portland Fire & Rescue, with an external Fire Agency (e.g., Oregon Department of Forestry [ODF], City of Bend Fire & Rescue)

Discussion: PF&R continues to train staff to the national qualifications appropriate for an urban fire department. PF&R is also continuing to provide and improve upon annual wildfire training for all Portland Fire & Rescue firefighters. Some of Portland Fire's newest members bring strong wildfire backgrounds; current training is drawing on their experiences to enhance the department's wildfire capabilities. In order to evaluate the effectiveness of this improved wildfire training an appropriate external fire agency, (such as Oregon Department of Forestry

[ODF], and/or City of Bend Fire & Rescue) will be asked to assist PF&R to assess wildfire preparations & response capabilities and make recommendations for future improvements.

### **Action #7**

#### **Enhance wildland firefighting standards for Portland Fire & Rescue**

Lead: Portland Fire & Rescue

Discussion: Portland Fire endeavors to train their personnel to the highest standards in all aspects of firefighting. As an urban fire department, Portland Fire & Rescue response to wildfire is less frequent. Fire shall continue to evaluate its wildfire response and the level of service it is expected to provide to its mutual aid partners and the State & Federal levels upon request. PF&R will also insure that its firefighters are trained in accordance with expected appropriate National Wildfire Coordinating Group (NWCG) qualifications.

### **Action #8**

#### **Analyze and prioritize emergency vehicle access routes.**

Lead: Bureau of Parks and Recreation and Portland Fire & Rescue

Discussion: Forest Park and Powell Butte have limited access for emergency vehicles. Leif Erikson Drive, which transects much of Forest Park about halfway up the slope, has experienced several landslides that have cut off through access for fire trucks. Several of the fire lanes are overgrown, too steep or otherwise not suitable for emergency access. It is essential that appropriate fire lanes be cleared and maintained in order to allow unimpeded access by firefighting personnel and lighter firefighting apparatus such as brush units and all-terrain vehicles. Leif Erikson Drive, Saltzman and Springville Roads need to be cleared and maintained vertically and horizontally to accommodate full-size fire apparatus. Powell Butte has good access to the top, but very limited access to the forested side slopes. At present there has been no systematic analysis of emergency vehicle access to these parks, nor is there any prioritized list of access improvements. This makes it difficult to secure funding to maintain or create the access that will be needed once a fire emergency occurs. This action proposes a coordinated field study by the Bureau of Parks and Recreation to review all emergency access routes within the existing road network, followed by the creation of a prioritized project list for Forest Park. Representatives from the Bureaus of Parks and Recreation, Fire & Rescue, and other key stakeholders should coordinate these efforts, with the assistance of a transportation engineer or forest roads expert (ODF, Forest Service, BLM). To ensure adequate access for emergency vehicles on an ongoing basis, the Bureaus should coordinate periodic efforts to update information and track minor and major access improvement and maintenance projects.

### **Action #9**

#### **Conduct a periodic tri-county wildfire coordination meeting.**

Lead: Portland Fire & Rescue

Discussion: The bureaus and surrounding fire jurisdictions from the tri-counties (Multnomah, Clackamas, and Washington) should meet to discuss wildfire mitigation and response on a periodic basis. The meeting(s) will provide an opportunity to discuss preparedness for the upcoming fire season, including response plans, training opportunities and expectations for capabilities of all involved; results of the previous fire season should be discussed, including those items that proved successful, any issues that need alteration for the following season,

future equipment needs, vegetation projects, table top exercise and training plans for the next season.

#### **Action #10**

**Revisit mutual aid agreements to ensure they are current and applicable.**

Lead: Portland Fire & Rescue, Portland Office of Emergency Management

Discussion: Mutual aid agreements identify resources that can be shared between jurisdictions in the event that assistance is needed either within the City of Portland or in neighboring communities. Each mutual aid agreement should be reviewed for relevancy and if necessary updated. If gaps are identified (e.g., lack of air support) explore other opportunities and establish new agreements as needed. Write these agreements into *The Forested and Wildland Interface Areas Fire Protection Plan*.

#### **Action #11**

**Establish an agreed upon fire danger rating system and develop agency protocols.**

Lead: Portland Fire & Rescue, Bureau of Parks and Recreation, Portland Office of Emergency Management

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. Seasonal fire danger is sporadically communicated to fire personnel throughout the summer and fall fire season; however the City of Portland lacks an official fire danger rating system to communicate the seasonal threat to staff and residents. The City of Portland should consider adopting the National Fire Danger Rating System and install signs at key points in Forest Park, Powell Butte and other critical areas in Portland. The Portland area has a NOAA regional office that could provide fire weather forecasting. The identified weather units for the Portland Metropolitan area are ORZ-604 or WAZ-604. After a fire danger rating system is established, each bureau involved in wildfire mitigation and response should develop a set of protocols that will address actions the bureau will take in response to the daily fire danger rating. For instance, during red-flag days or periods of extended high temperatures coupled with high winds, Fire & Rescue should increase staffing levels on brush units full-time and Parks should increase patrols in high risk areas.

#### **Action #12**

**\*\*Continue to conduct annual wildland firefighter training for Portland Fire & Rescue personnel.**

Lead: Portland Fire & Rescue

Discussion: Recently, Portland Fire & Rescue's wildfire training has greatly improved. New recruits now receive an appropriate introduction to the subject during their initial training. An improved annual training was provided to all members starting in 2009. Portland Fire shall endeavor to maintain this enhanced level of training to ensure their members will perform safely and effectively in wildfire events. Based upon expected levels of service (State and Federal), Portland Fire shall determine what NWCG qualifications may be appropriate for their members and strive to achieve these levels.

**\*\*Action #13**

**Improve enforcement of park rules in Portland Parks and Recreation managed natural areas and open space tracts on approved land divisions.**

Lead: Bureau of Parks and Recreation, Bureau of Development Services

Discussion: Portland Parks and Recreation natural areas and some private open space tracts are regularly inhabited by transient populations and subject to other illegal uses that pose significant wildfire risks. In many cases these areas also have expanses of invasive weeds and grasses that are highly flammable. Maintenance agreements and staffing levels are not adequate to mitigate wildfires. The Portland Parks and Recreation Park Ranger Program (currently 1 full-time ranger for the entire park system) cannot presently enforce rules that protect park users and natural resources from human caused wildfire.

**Action #14**

**\*\*Improve emergency radio communications between City first responders and PP&R City Nature staff.**

Lead: Portland Fire & Rescue, Bureau of Parks and Recreation, Portland Office of Emergency Management

Discussion: A key component in wildland firefighting and emergency management in general is the ability of field personnel to communicate with each other and with external resources (e.g., dispatch, arriving resources, Incident Command). Having the ability to communicate and knowing the frequencies to use on a particular incident are critical. However, Parks staff have no means of radio communications so they are limited in their ability to communicate with first responders. During the initial attack phase of a wildland fire, the ability for field communication within and between some bureaus (with the exception of Portland Fire & Rescue and Portland Police Bureau) is not well established. For example, City Nature staff in the field have a difficult time communicating with each other because radios are not issued and cell phones, issued in lieu of radios, do not have coverage in some areas of Forest Park. The ability for better communication between bureaus should be improved upon and, with proper radio use training, can enhance the integration of all bureau services.

## **PRIORITY LEVEL TWO**

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**Action #15**

**Conduct an audit to determine the effectiveness of maintenance agreements on private open space zoned lands.**

Lead: Bureau of Development Services

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. Maintenance agreements determine how private open space tracts of land should be managed. Some areas that are managed poorly or not maintained at all can become wildfire risks. The City will need to determine if current maintenance agreements are being implemented by reviewing agreements and visiting properties. Upon review, zoning codes may need to be updated and mechanisms identified for bringing the property owners into compliance with

wildfire risk reduction standards. (Note: Some training or outside expertise may be needed to help Bureau of Development Services recognize wildfire risks).

### **Action #16**

#### **Conduct wildfire training for wildfire response stakeholders.**

Lead: Bureau of Parks and Recreation, Bureau of Maintenance

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. Aside from Portland Fire & Rescue, other stakeholders are identified in the *Forested and Wildland Interface Areas Fire Protection Annex* to assist in the wildfire incidents. For example, the Bureau of Parks and Recreation field staff are potential first responders to a fire in Forest Park, Powell Butte or other natural park sites. Water tenders with the Bureau of Maintenance are identified as a possible resource for wildland firefighting. All personnel on the scene of a wildfire, including water tender drivers, should be trained in basic wildland firefighting. The appropriate level of wildland firefighting training is the completion of NWCG S-130 and S-190 courses or an equivalent. Other potentially beneficial training includes fire ecology. This training will heighten their level of awareness and increase their safety during wildfire events. Additionally, park personnel and vehicles should be equipped with basic wildland firefighting equipment.

### **Action #17**

#### **Develop a comprehensive vegetation treatment program that includes both mechanical methods and prescribed fire.**

Lead: Bureau of Parks and Recreation, Portland Fire & Rescue.

Discussion: A vegetation treatment program can provide a long-term approach to managing vegetation and reintroducing fire to natural areas. The Department of Interior and U.S. Forest Service vegetation treatment programs includes: (1) establishing and implementing a comprehensive approach for fuels mapping and inventory that includes the location and condition of vegetation, the appropriate treatment frequency, and priorities for treatment; (2) evaluating various treatment techniques for cost effectiveness, ecological consequences and air quality impacts; (3) based on priorities consistent with current vegetation plans and land management plan direction, developing long-range schedules that describe sequencing of treatments, as appropriate, such as commercial or pre-commercial thinning and prescribed burning; and (4) establishing and implementing a protocol for monitoring and evaluating vegetation treatment techniques.

### **Action #18**

#### **Educate landowners within the Wildfire Hazard Zone generally, and within Urban Wildland Interface Zones specifically about wildfire hazards.**

Lead: Portland Office of Emergency Management; Portland Fire & Rescue

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. The Bureau of Development Services, Fire & Rescue, and Office of Emergency Management made efforts to educate homeowners about the risks associated with living in the wildland urban interface and how to manage them. The most recent of these is the comprehensive brochure "Residential Structures and Landscaping in Wildfire Hazard Areas". This information is made available when residents visit the Bureau of Development Services office and through an online search. A coordinated effort by the Bureaus of Development Services, Planning and Sustainability, Office of Emergency Management, and Fire & Rescue should be

designed and implemented to ensure a consistent message to a larger number of homeowners. The message needs to be proactively taken to neighborhood and homeowner associations, displayed on community boards, and actively promoted at public outreach events. Project Wildfire is an example of a community education program that the City of Portland may consider for initial ideas.

### **Action #19**

#### **Establish an information network (e.g., identification, orientation, way-finding and interpretive signage) in Forest Park and Powell Butte.**

Lead: Bureau of Parks and Recreation

Discussion: An established and well-identified information network in Forest Park and Powell Butte could reduce response times for emergency personnel by helping to identify fire or other incident locations. Currently, Forest Park has a number of trails and roads that are not marked with signs. Entrances of most natural area parks do not have basic park identification and orientation signage. Way-finding is inadequate, not maintained, or is simply absent. A signage policy should be developed, funded and maintained to help the public and emergency responders better navigate and assist them with identifying locations accurately.

### **Action #20**

#### **Create incentives to encourage fuel reduction and defensible space.**

Lead: Bureau of Development Services

Discussion: No incentives presently exist for homeowners to create a defensible space or reduce flammable vegetation. An incentive program may encourage homeowners living in wildfire zones to use fire-resistant building materials, plant native vegetation and employ other preventative tactics. Partnering with local building material distributors or landscape companies to help provide incentives is one idea for implementing a program. Consider Title III Funds available to individuals, neighborhoods, subdivisions and similar private residential communities through the Federal Government for projects that help prevent the potential for home ignitions from wildfire.

### **Action #21**

#### **Design and install one or more demonstration areas to showcase wildfire resistant plantings.**

Lead: Bureau of Parks and Recreation, Bureau of Planning and Sustainability

Discussion: Prepare site and conceptual landscape designs for one or more demonstration wildfire resistant plantings using site appropriate native plants at Powell Butte Nature Park, Madrona Park and Fire Station 27 near Forest Park. Identify key fire safe landscape messages and concepts for interpretation and education. Grant funding may be available for this through FEMA.



### **Action #22**

#### **Pursue training with regional and City incident management teams.**

Lead: Portland Office of Emergency Management, Portland Fire & Rescue

Discussion: The use of the National Incident Management System (NIMS) and Incident Management Teams (IMTs) are national standards at every large wildfire event. These standards guide life safety operations, stabilize incidents, and conserve property loss. Opportunities exist with State and Federal IMTs to gain further training and education in incident management. By next fire season, Portland Fire & Rescue and other City IMT members will be pursuing these training opportunities to improve and enhance their existing knowledge of IMT operations. Currently, POEM has been developing a City incident management team. The added knowledge gained by PF&R staff from State and Federal training will greatly assist the work of the City to develop a Portland IMT.

## **PRIORITY THREE**

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### **Action #23**

#### **Develop a cross-bureau plan for evacuation of citizens in high fire risk areas in the event of a severe wildfire.**

Lead: Portland Office of Emergency Management, Portland Police Bureau, Multnomah County Sheriff's Office, Bureau of Transportation

Discussion: The *City of Portland Natural Hazard Mitigation Plan* identifies a number of actions that require the development of evacuation plans in the event of a human-made or natural hazard. This action reiterates the need to develop evacuation plans for residential and employment areas with the highest wildfire risk. This Action will be one of the first topics addressed by the new Wildfire Technical Working Group (identified as Action #1).

### **Action #24**

#### **Develop critical GIS map layers for fire response and planning in Portland natural areas.**

Lead: Bureau of Parks and Recreation, Portland Fire & Rescue, City of Portland GIS Services

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. A general set of GIS map layers exist for Forest Park and Powell Butte. These include roads, trails, utilities, fire hydrants, boundaries and facility locations. Additional layers that would help with wildfire planning and operations include: sensitive habitats, fuel beds, access (include slope and terrain), water sources (engine and helicopter), ODF protection district boundary and structures.

**Action #25****Review and update the *Forested and Wildland Interface Areas Fire Protection Plan*.**

Lead: Portland Fire & Rescue

Discussion: The *Forested and Wildland Interface Areas Fire Protection Plan* establishes the operational responsibilities of departments and bureaus of the Portland municipal government and supporting agencies. Contact information, equipment and apparatus are not up-to-date for each bureau. A thorough review by the City of Portland Wildfire Technical Working Group, including the representatives from each bureau and agency listed in the Plan should be undertaken every 2-3 years or as needed. Any update/edits will be communicated to all involved stakeholders. As of June 2009, this Plan was being updated.

**Action #26****Re-Invigorate Neighborhood Emergency Teams (NETs) with concrete projects.**

Lead: Portland Office of Emergency Management

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. NETS are citizens trained by the Portland Office of Emergency Management and Portland Fire & Rescue to provide emergency disaster assistance within their own neighborhoods. NET members receive basic training on how to save lives and property until the professionals can arrive. Currently the NETs located in communities around Forest Park and Powell Butte are not fully active. As an integral part of emergency planning, NETs should be reinvigorated and duties extended, such as being trained in assisting community evacuation efforts in the event of a wildfire. An appropriate level of training is the National Wildland Coordinating Group (NWCG) S-130/S-190 basic wildfire training course required of all wildland firefighters. This action does not imply that NETs will participate in wildland firefighting tactics, but rather that NETs be trained to better understand the environment they would be working in and to fill support roles in wildland firefighting operations. Initial training should focus on NETs that serve the Forest Park and Powell Butte neighborhoods, but future basic wildfire training should be provided for all NETs that operate in and around city natural areas.

**Action #27****Improve the system for identifying new construction in areas subject to wildfires and communicating the potential for natural hazards to the affected land owners.**

Lead: Bureau of Development Services

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. While requirements for new construction in wildfire hazard areas are in place, this information is not consistently communicated to applicants during the permitting process. The current system to access this information is GARTH, a standalone GIS data viewing client, and is available to plans examiners in the Bureau of Development Services. Consistent use of GARTH by plans examiners needs to occur. This will require review of current plans examination processes and staff training to ensure everyone is familiar with GARTH and its applications.

### **Action #28**

**Assess and communicate the capacity of the water infrastructure (e.g., pipes, hydrants, water reservoirs).**

Lead: Water Bureau, Portland Fire & Rescue

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. Water systems in new residential developments in the wildland urban interface provide a fire flow of 1750 gallons per minute for two hours. This flow is available from two simultaneously flowing hydrants and is concurrent with peak day water demands. A large fire may cover an area that would encompass several hydrants, producing a need to identify fire flow requirements for more than two hydrants at a time. Representatives from Portland Fire & Rescue should meet with Water Bureau representatives to identify standards for flow rates and durations and to establish a process for evaluating the current system.

### **Action #29**

**Review the feasibility of adopting portions of state or nationally recognized wildfire interface codes to strengthen building standards in Wildfire Hazard Zones.**

Lead: Portland Fire & Rescue, Bureau of Development Services

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. The wildland urban interface codes are a model for requiring stricter building standards for new structures in interface areas. Applying these codes to new development areas will reduce the risk of a fire burning down buildings. A multi-bureau committee will need to review documents such as the Urban Wildland Hazard Zone Report and Proposal, the Urban Wildland Interface Code, Senate Bill 360 (Oregon Forestland-Urban Interface Fire Protection Act), and other urban wildfire management approaches to identify appropriate standards. The outcome of this action could require changes to state building codes through the State Building Board.

**Action #30****Identify conditions of approval and mitigation strategies that could be applied to new development or redevelopment in high risk areas.**

Lead: Bureau of Development Services, Bureau of Planning and Sustainability

Discussion: This action was previously identified in the *City of Portland Natural Hazard Mitigation Plan*. The City of Portland cannot prevent development in areas that are already platted, but can limit development or impose standards. This action will provide a flexible tool to incorporate a wildfire risk management measure into site and building design, taking into account site-specific characteristics. What is envisioned is a boilerplate set of conditions of approval and mitigation measures to use in land use reviews for development proposals in wildfire areas. This will create consistency in requirements and assist staff in identifying potential requirements at pre-application conferences that will apply to development proposals in wildfire areas. Non-regulatory tools can be emphasized as part of the development process. Educational tools, such as brochures, can be provided to the applicants.

**V. NEXT STEPS**

The 30 actions listed above represent an ambitious yet achievable program. Each bureau is responsible for providing the highest level of service possible given available resources, including staffing, equipment and funding. Resources are always limited, and priorities may need to be adjusted accordingly. Some of the actions do not require additional funds, but rather better coordination and communication among stakeholders, allowing early implementation. Other actions require funding that may be available through federal and state grants that will take longer to obtain. Appendix D provides a list of available grant sources. The following initial steps are suggested to begin moving towards implementation.

- Present this report's findings and recommendations to appropriate managers or elected officials, and secure their endorsement.
- Identify and appoint a representative from the Portland Office of Emergency Management to lead the City of Portland Wildfire Technical Working Group that will monitor and report on progress towards implementation.
- Identify internal and external funding sources available for each action and/or bureau.
- Align actions with current or upcoming opportunities.
- Align actions with any already identified projects planned for the near future.
- Integrate applicable action items into the updated *City of Portland Natural Hazard Mitigation Plan*.
- Address wildfire risk in all natural areas of the City of Portland through the development of a Community Wildfire Protection Plan.



## BIBLIOGRAPHY

The following is a list of resources that have been referenced during the planning process. Some have been used as primary or direct resources for this report, while others have provided secondary information or will provide direct information for subsequent parts of the plan.

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## TECHNICAL TERMS

The following is a list of technical terms that are used in this report.

**Federal Emergency Management Agency (FEMA)** – The primary mission of the Federal Emergency Management Agency is to reduce the loss of life and property and protect the Nation from all hazards, including natural disasters, acts of terrorism, and other man-made disasters, by leading and supporting the Nation in a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation. FEMA is a part of the Department of Homeland Security.

**GARTH** – GARTH is a standalone GIS data viewing client used by the City of Portland. The primary purpose is for the examination of plans by the Bureau of Development Services (BDS).

**Incident Management Team (IMT)** – The incident commander and appropriate general staff or command staff personnel assigned to manage an incident. Teams vary in size and experience and are assigned based on availability of the teams and complexity of the incident.

**National Incident Management System (NIMS)** – The National Incident Management System provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment.

**National Wildfire Coordinating Group (NWCG)** – The National Wildfire Coordinating Group (NWCG) is made up of the USDA Forest Service; four Department of the Interior agencies: Bureau of Land Management (BLM), National Park Service (NPS), Bureau of Indian Affairs (BIA), and the Fish and Wildlife Service (FWS); and State forestry agencies through the National Association of State Foresters. The purpose of NWCG is to coordinate programs of the participating wildfire management agencies so as to avoid wasteful duplication and to provide a means of constructively working together. Its goal is to provide more effective execution of each agency's fire management program. The group provides a formalized system to agree upon standards of training, equipment, qualifications, and other operational functions.

**ORZ-604 or WAZ-604** – These are the identified National Oceanic and Atmospheric Administration fire weather forecasting zones for the Portland Metropolitan area and lower Clark County in Washington.

**S-130/S-190** – S-130/S-190 refers to the basic wildland fire training course required of all firefighters before they can work on the wildland firelines. S-130 and S-190 are two different courses, but since they are usually taken together the basic wildland fire training is called "S-130/S-190" or "S-130/190" for short. Basic wildland fire training also includes some other courses. The list of courses usually included in "S-130/S-190" are: S-130: Firefighter Training; S-190: Introduction to Wildland Fire Behavior; I-100: Introduction to the Incident Command System; and S-132: Standards for Survival.

**Senate Bill 360 (Oregon Forestland-Urban Interface Fire Protection Act)** – The Oregon Forestland-Urban Interface Fire Protection Act, often referred to as Senate Bill 360, enlists the aid of property owners toward the goal of turning fire-vulnerable urban and suburban properties into less-volatile zones where firefighters may more safely and effectively defend homes from wildfires. Basically, the law requires property owners in identified forestland-urban interface areas to reduce excess vegetation, which may fuel a fire, around structures and along driveways. In some cases, it is also necessary to create fuel breaks along property lines and roadsides.



**Title III Funds** – These are federal funds received by a county under title III of the Secure Rural Schools Act to the extent the funds are used in implementing the Firewise Communities program or developing a community wildfire protection plan.

**Urban Wildland Interface Code** – The provisions of this code, in addition to the provisions of the 2003 International Fire Code, applies to the construction, alteration, moving, repair, maintenance and use of any building, structure or premises within the wild-land interface areas in this jurisdiction. The objective of this code is to establish minimum regulations consistent with nationally recognized good practices for the safeguarding of life and property. Regulations in this code are intended to mitigate the risk to life and structures from intrusion of fire from wildland fire exposures and fire exposures from adjacent structures and to mitigate structure fires from spreading to wildland fuels.

## APPENDIX A

### TECHNICAL ADVISORY COMMITTEE PROFESSIONAL EXPERIENCE

The Technical Advisory Committee (TAC) consists of five professionals with expertise in varying disciplines of wildfire management. The TAC provided invaluable information for the City of Portland to consider when analyzing how to improve the current wildfire mitigation and response system. The professional experience of the five professionals is provided below.

**Barbara Kennedy**, Cooperative Fire Specialist,  
Forest Service Pacific Northwest Region

#### Professional Experience

Barbara Kennedy is the Cooperative Fire Forester for the Pacific Northwest Region of the Forest Service, and has been so since 1996. She is responsible for interagency cooperation, agreements, and Cooperative Fire grant programs, in order to improve fire protection capabilities on state and private lands, and mitigate wildfire risk in communities. She serves as the facilitator for the National Wildfire Coordinating Group Wildland Urban Interface Working Team, and as Technical Advisor to the Northwest Fire Protection Compact in the Northwestern US and Canada. She began her work for the Forest Service in 1975 and has worked in a number of capacities, including District Ranger and Public Affairs Officer. She graduated from Portland State University with a BS in Geography.

**Doug Koellermeier**, Deputy Chief-Operations,  
Bend Fire and Rescue

#### Professional Experience

Doug Koellermeier is a career Firefighter with over 33 years in the fire service. He currently serves as Deputy Fire Chief in charge of Operations with the City of Bend Fire Department. In his 28 years with Bend Fire Department he has served in many capacities including Firefighter, Engineer, Captain, Battalion Chief, Paramedic and now Deputy Chief/Operations Chief. Bend Fire Department's protection area covers 132 square miles with a population of approximately 100,000. The protection area is unique in that there is a high risk to summer wildland interface hazards and has been the scene of a number of significant wildland fire incidents. Bend and the Central Oregon area are nationally recognized for their wildland interface incidents and their management and mitigation efforts over the years. Doug has also been intimately involved in public education and fire prevention efforts throughout his career.

He is just completing his Bachelors in Fire Administration (June 09) and has his AAS in Fire Science and holds his certificate in Wildland Fire Suppression. He is certified through state and national

fire training agencies in a number of both wildland and structural fire operational and command officer positions. He also serves as Deputy Incident Commander of the Oregon State Fire Marshal Office Incident Management Team (red team).

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**Roger D. Ottmar**, Research Forester

USDA Forest Service Pacific Northwest Research Station, Pacific Wildland Fire Sciences Laboratory

**Professional Experience**

Roger Ottmar is a Research Forester with the Fire and Environmental Research Applications Team, Pacific Northwest Research Station at the Pacific Wildland Fire Sciences Laboratory located in Seattle, Washington. He has been involved with fuels, fire, and smoke related research for over 30 years and is leading efforts to continue the development of 1) a natural fuels photo series; 2) fuel consumption and emission production models by combustion phase and fuelbed layer for forested and non-forested fuel types across North America; and 3) a system to characterize fuelbeds. Roger has authored over 100 research publications and final reports and has served as principal investigator on more than 75 grants, agreements (including 13 Joint Fire Science Projects), and coops between other USDA Forest Service Research Stations, governmental agencies, private corporations, and Universities. Roger also teaches over 30 lessons per year at land management Rx training sessions including Smoke management, Fire effects, and Burn Boss. Roger has received an honorary Doctorate of Philosophy from the University of Idaho (2008), thirteen USDA Forest Service Certificates of Merits, USDA Forest Service Chief's Award for Technology Transfer (2006), PNW Station Technology Transfer Award (2006), National Fire Plan for Excellence in Research Award (2005), Outstanding Service in Fire Management Award (2002), and Pacific Northwest Region Excellence in Prescribed Fire Award (1999) and the PNW Research Station Vision Award (1993), and PNW Station Technology Transfer Award (1991).

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**Ron Wakimoto**, Professor of Forest Fire Science

University of Montana College of Forestry

**Professional Experience**

Dr. Ronald H. Wakimoto is a Professor of Forestry at The University of Montana, Missoula. He received his B.S. in Forestry and M.S. and Ph.D. in Wildland Resource Science from the University of California at Berkeley. He began his faculty career at the University of California, Berkeley in 1976 and has been at The University of Montana since 1982 teaching and conducting research in wildland fire management. He teaches academic

courses in wildland fire management, fuel management, and fire ecology. Dr. Wakimoto currently conducts research on the effectiveness of fuel management treatments, smoke quality and quantity from smoldering combustion, and crown fire spread. In 1988 and 1989 Dr. Wakimoto was one of two academics to serve as technical advisors to the National Fire Policy Review Team following the Yellowstone events. In 1997 he gave testimony on Wildfire Policy to the U.S. House Agriculture Committee. In 2000 he gave testimony on the Montana fire-fuel situation to the U.S. House Natural Resources Sub-Committee on Forests and Forest Health. In 2001 he gave testimony to the same committee concerning the implementation of the National Fire Plan. In 2004 Dr. Wakimoto was elected a Fellow by the Society of American Foresters. In 2006, Dr. Wakimoto taught a 5 day course on fire ecology and prescribed burning in Monger, Bhutan. In 2008 he returned to Bhutan to help run a workshop on disaster preparedness and fire management strategy development for the Kingdom.

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**Jen Warren**, National Fire Plan Coordinator  
Oregon Department of Forestry

**Professional Experience**

Jen Warren is the National Fire Plan Coordinator for the Oregon Department of Forestry. In her position she leads the development of Community Wildfire Protection Plans (CWPPs) throughout the state of Oregon providing technical assistance to communities. These plans aim to develop wildfire-adapted communities which are knowledgeable about the risks of wildfire and better prepared to withstand one should it occur. Jen assists communities with collaboratively identifying their Wildland-Urban Interface (WUI), local priorities for community fire protection, forest resource management, and methods for reducing risks to life and property from wildfire. In addition to her National Fire Plan duties, she serves as the statewide liaison to the national Firewise Communities program, providing technical expertise on reducing wildfire risks using fire-resistant construction and landscaping around homes and businesses in the WUI. She is a resource for communities working toward a common goal: reducing the loss of lives, property and resources to wildland fire by building communities compatible with their natural surroundings.

## APPENDIX B

### TECHNICAL ADVISORY COMMITTEE INTERVIEW RESULTS

The following is a list of suggested actions that the Technical Advisory Committee identified for consideration during this process. Proposed actions are grouped into three categories: Planning and Mitigation; Operations, Incident Management, and Training; and Vegetation Management and Ecology. While this list is not exhaustive, it may act as a good indication of the City of Portland’s readiness level to cope with wildfire before, during, and after an event.

#### PLANNING AND MITIGATION

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- Modify relevant codes (e.g., zoning and building codes) to provide a streamlined process that will allow residents to reduce or treat flammable vegetation near homes (at least within 100 feet of buildings) in identified urban wildfire interface zones.
- Implement a fire danger rating system to educate and alert public park users and neighbors about the seasonal potential for wildland fire.
- Assess and communicate the capacity of the water infrastructure (e.g., pipes, hydrants, water reservoirs).
- Develop a holistic code framework to integrate fuel management, building construction, and street systems that facilitate fire apparatus access, public evacuations, etc.
- Offer tax incentives or grant assistance to encourage homeowners to make their homes and properties fire safe. (E.g., Project Wildfire has programs for low income families and partnerships with local building material suppliers).
- Consider Multnomah County's Secure Rural Schools Title III funding.
- Educate local residents, particularly within urban wildfire interface zones, about wildland fire risks and steps that can be taken to create fire safe communities (e.g., brochures, pamphlets, public service announcements, neighborhood association meetings, etc.).
- Request additional FEMA funds for projects.
- Create or update mutual aid agreements with nearby jurisdictions - U.S. Forest Service, Oregon Department of Forestry, and other agencies trained and equipped in wildland firefighting.
- Adjust code provisions as needed to allow homeowners to salvage or treat fuels after a major natural event, such as disease, blowdown, or fire.
- Use provisions of Firewise Communities to educate city staff, managers, elected officials, and the public on how to make a defensible space near homes and businesses.

## **OPERATIONS, INCIDENT MANAGEMENT, AND TRAINING**

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- Have backup capacity that allows fire response to large incidents while still providing support for smaller incidents.
- Provide clear direction for Incident Commanders regarding when and how to ask for additional City resources and/or mutual aid from neighboring jurisdictions.
- Include in standards the provision of adequate crew rehabilitation in case of extended incidents. (Wildfires can last days or weeks).
- Assess and communicate the human, economic, and environmental risks in the incident area to all incident personnel.
- Be familiar with and adhere to the policies set in the Oregon Fire Service Mobilization Plan.
- Develop an all-incident evacuation plan for Forest Park and Powell Butte. Coordinate to determine who will implement this plan. Communicate the plan with neighbors.
- Be prepared to set up an Emergency Operating Center to allow for interagency coordination and develop a unified command structure.
- Resource type (e.g., Type I, II, III) all emergency personnel and equipment based on FEMA standards. Resource typing definitions provide emergency managers with the information they need to request and receive the resources they need during an emergency or disaster.
- Identify local staging areas for emergency personnel and evacuees.
- Communicate the daily fire danger rating to all field staff throughout the fire season. Staff engines as necessary.
- Establish training standards for Bureau of Parks and Recreation field staff. At a minimum, training should include how to properly size-up a wildland fire.
- Create a wildfire hazards map and communicate it to all field personal.
- Coordinate resource orders for outside support through the State Fire Marshal's office.
- Institute a training and qualifications standard for all firefighters equivalent to the National Interagency Incident Management System Wildland Fire Qualifications. This could include completion of the S-130 and S-190 courses.
- Ensure all incident personnel are trained for basic wildland firefighting (e.g., firefighters, park technicians, maintenance workers, drivers, public information officers).
- Train all firefighters in engine operations and hand line construction techniques.
- Provide training for initial attack as well as prescribed burning.

- Encourage trained personnel to take part on National Interagency Incident Management Teams.
- Train personnel in the Incident Command System.
- Provide wildland firefighting personal protective equipment for initial attack.
- Equip initial attack fire engines and park maintenance vehicles with basic wildland firefighting equipment. Develop a standard appropriate for each bureau.
- Conduct a preseason meeting with neighboring jurisdictions to discuss upcoming wildland fire season, staffing levels, communication plan, resources, and other important information.
- Implement and review mutual aid agreements established by the Bureau of Fire and Rescue.
- Create and practice the communications plan with all potentially responding bureaus and outside jurisdictions. Ensure all initial attack personnel can communicate with each other.
- Designate a Public Information Officer for each incident to ensure accuracy and consistent information to the public.

## **VEGETATION MANAGEMENT AND FIRE ECOLOGY**

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- Designate a core group of staff from the Bureau of Parks and Recreation and the Bureau of Fire and Rescue to develop and implement prescribed burn plans. Encourage staff rotation in implementing the plans to provide training opportunities.
- Ensure that all fire personnel (Fire, Parks, other) on a prescribed burn are qualified for assigned tasks (e.g., Burn Boss, Ignition Boss, etc.).
- Investigate if U.S. Forest Service has funds for implementing prescribed burn plans.
- Consider a training partnership between the Bureau of Parks and Recreation and the Forest Service Research Rocky Mountain office in Missoula. This partnership can benefit parks staff by improving their understanding of fire ecology as it relates to local fuels.
- Consider utilizing state prison workers on work release programs for fuel treatments.
- Use Fuel Bed Mapping to help predict fire behavior and crown fire potentials for Forest Park and Powell Butte and assess fuel bed treatment effectiveness.
- Develop a prescribed burn management plan to reintroduce fire in Forest Park and Powell Butte for ecological and fuel reduction purposes.
- Consider managing vegetation through thinning and off-site utilization in addition to or in lieu of prescribed fire.

NUMBER	ACTION	LEAD	CATEGORY	EXTERNAL FUNDING AVAILABLE	KNOWN PUBLIC SUPPORT	TECHNICAL FEASIBILITY	NEEDED TO ALLOW FOR OTHER ACTIONS	TIME SENSITIVE	MEETS MULTIPLE PROJECT GOALS	TOTAL
<b>PRIORITY LEVEL ONE</b>										
1	Convene a standing City of Portland wildfire technical working group.	POEM	Planning and Mitigation			3	3	3	3	12
2	**Identify and map the wildland urban interface area in the City of Portland, starting with the area around Forest Park.	Planning and Sustainability	Planning and Mitigation			3	3	2	1	9
3	Modify existing regulations (e.g., environmental overlay zone code) to improve the permitting process and increase the defensible space around homes, while continuing to protect significant natural resource values and functions.	Planning and Sustainability	Planning and Mitigation			3	3	3	2	11
4	Integrate, as appropriate, fire prevention goals and provisions into City policies, plans, and codes. Identify and address ambiguities or conflicts among City requirements.	Planning and Sustainability; Fire; POEM	Planning and Mitigation			3	2	3	3	11
5	Secure funding for continued, long term vegetation management projects.	Parks; BES	Vegetation Management and Fire Ecology	Federal, State		3	2	3	3	11
6	Conduct a wildland firefighter training audit of Portland Fire & Rescue.	Fire invites external Fire Agency	Operations, Incident Management, and Training			3	3	3	1	10
7	Develop wildland firefighting standards for Portland Fire & Rescue that meet State of Oregon and the National Wildfire Coordinating Group (NWCG) standards.	Fire	Operations, Incident Management, and Training			3	3	3	1	10
8	Analyze and prioritize emergency vehicle access routes.	Parks	Operations, Incident Management, and Training			3	1	3	3	10
9	Conduct a periodic tri-county wildfire coordination meeting.	POEM	Operations, Incident Management, and Training			3	1	3	2	9
10	Revisit mutual aid agreements to ensure they are current and applicable.	Fire; POEM	Operations, Incident Management, and Training			3	3	2	1	9
11	Establish an agreed upon fire danger rating system and develop agency protocols.	Fire	Operations, Incident Management, and Training			3	3	2	1	9
12	**Conduct annual wildland firefighter training for Portland Fire & Rescue personnel.	Fire	Operations, Incident Management, and Training			3	1	2	1	7
13	**Improve enforcement of park rules in Portland Parks and Recreation managed natural areas and open space tracts on approved land divisions.	BDS; Fire	Planning and Mitigation			3	1	1	2	7
14	**Create a radio communication plan with wildfire response stakeholders.	Fire	Operations, Incident Management, and Training			3	1	1	1	6



NUMBER	ACTION	LEAD	CATEGORY	EXTERNAL FUNDING AVAILABLE	KNOWN PUBLIC SUPPORT	TECHNICAL FEASIBILITY	NEEDED TO ALLOW FOR OTHER ACTIONS	TIME SENSITIVE	MEETS MULTIPLE PROJECT GOALS	TOTAL
<b>PRIORITY LEVEL TWO</b>										
15	<i>Design and conduct a study to determine the effectiveness of maintenance agreements that are established when new land divisions are approved to manage vegetation in open space tracts.</i>	BDS; Fire	Planning and Mitigation			3	2	1	2	8
16	<i>Conduct wildfire training for wildfire response stakeholders.</i>	Parks; Maintenance	Operations, Incident Management, and Training			3	1	1	3	8
17	<i>Develop a comprehensive vegetation treatment program that includes both mechanical methods and prescribed fire.</i>	Parks	Vegetation Management and Fire Ecology	Federal, State		2	2	1	3	8
18	<i>Educate landowners within the Wildfire Hazard Zone generally, and within Urban Wildland Interface Zones specifically about wildfire hazards.</i>	POEM; Fire	Planning and Mitigation			3	1	1	2	7
19	<i>Establish an information network (e.g., identification, orientation, wayfinding and interpretation signage) in Forest Park and Powell Butte.</i>	Parks	Operations, Incident Management, and Training		Yes	3	1	1	2	7
20	<i>Create incentives to encourage fuel reduction and create defensible space.</i>	BDS	Planning and Mitigation			3	1	1	2	7
21	<i>Prepare a site plan and conceptual landscape design for demonstration wildfire resistant plantings.</i>	Parks	Vegetation Management and Fire Ecology			3	1	1	2	7
22	<i>Pursue training with regional and City incident management teams.</i>	Fire	Operations, Incident Management, and Training			2	1	3	1	7

NUMBER	ACTION	LEAD	CATEGORY	EXTERNAL FUNDING AVAILABLE	KNOWN PUBLIC SUPPORT	TECHNICAL FEASIBILITY	NEEDED TO ALLOW FOR OTHER ACTIONS	TIME SENSITIVE	MEETS MULTIPLE PROJECT GOALS	TOTAL
<b>PRIORITY LEVEL THREE</b>										
23	<i>Develop a cross-bureau plan for evacuation of citizens in high fire risk areas in the event of a severe wildfire.</i>	POEM; Police; Transportation; Multnomah County Sherriff	Planning and Mitigation			3	1	1	1	6
24	<i>Develop critical GIS map layers for fire response and planning in Portland natural areas.</i>	Fire; Parks; GIS	Operations, Incident Management, and Training			2	1	1	2	6
25	<i>Review and update the Forested and Wildland Interface Areas Fire Protection Plan.</i>	Fire	Operations, Incident Management, and Training			3	1	1	1	6
26	<i>Re-Invigorate Neighborhood Emergency Teams (NETs) with concrete projects.</i>	POEM	Planning and Mitigation			3	1	1	1	6
27	<i>Improve the system for identifying new construction in areas subject to wildfires and communicating this information to the affected land owners.</i>	BDS	Planning and Mitigation			3	1	1	1	6
28	<i>Assess and communicate the capacity of the water infrastructure (e.g., pipes, hydrants, water reservoirs).</i>	Fire; Water	Planning and Mitigation			3	1	1	1	6
29	<i>Review the feasibility of adopting portions of state or nationally recognized wildfire interface codes to strengthen building standards in Wildfire Hazard Zones.</i>	Fire; BDS	Planning and Mitigation			2	1	1	1	5
30	<i>Identify conditions of approval and mitigation strategies that could be applied to new development or redevelopment in high risk areas.</i>	BDS; Planning and Sustainability	Planning and Mitigation			2	1	1	1	5

## APPENDIX D

### FUNDING SOURCES

#### Grant Resources

This is a partial list of available grant sources for implementing some of the actions suggested in this report. For more information about eligibility, deadlines, and how to apply, please visit the following websites.

##### FEMA Pre-Disaster Mitigation Grant Program

<http://www.fema.gov/government/grant/pdm/>

##### FEMA Firefighter Assistance Grant Program

<http://www.firegrantsupport.com/>

This includes Assistance to Firefighters Grant (AFG) “Fire Grants” , Staffing for Adequate Fire and Emergency Response Grants (SAFER), and Fire Prevention and Safety Grants (FP&S).

##### Firewise Communities

[http://www.firewise.org/usa/grant\\_funding\\_sources.htm](http://www.firewise.org/usa/grant_funding_sources.htm)

Provides a list of grants through government and non-profit organizations.

##### Interagency National Fire Plan Community Assistance

<http://www.nwfireplan.gov/Grants.htm#Brochure>

This grant provides a collaborative process for awarding funds to hazardous fuels reduction projects on non-federal land in the Wildland-Urban Interface. Applications will be evaluated by a three step local, state and federal review based on the criteria outlined for each of the program categories. Eligible projects must be adjacent to Federal Land and identified in a Community Wildfire Protection Plan (CWPP) completed by February 6, 2009. Collaborated CWPP projects must implement fuels treatments in the wildland-urban interface. Counties, cities, state and local government agencies, federally recognized Tribes, universities, colleges, and state-chartered non-profit organizations in Oregon and Washington may all apply. No more than two proposals per county may be submitted and they must be in high-risk areas as identified in the statewide risk assessment.

### **Oregon Department of Forestry**

<http://egov.oregon.gov/ODF/FIRE/grantopps.shtml>

Provides a list of grants administered through the State of Oregon.

### **Secure Rural Schools and Community Self-Determination Act (SRS Act) Title III Funds**

These projects are submitted directly to County Commissioners for the county in which the project is taking place. Anyone can submit projects, but only very specific projects will be considered. Those are:

- Search, Rescue, and Emergency Services
- Community Service Work Camps
- Forest Related Educational Opportunities
- County Easement Purchases (*for recreation or conservation purposes*)
- Fire Prevention and County Wildfire

### **Urban Land Institute Community Action Grants**

<http://www.uli.org/CommunityBuilding/CommunityActionGrants.aspx>

Grants are awarded for creative, innovative community outreach, research, or education programs. By encouraging new ideas and supporting the most entrepreneurial projects, all communities can benefit because successful projects can be replicated.