



## Oregon Office of Emergency Management

### HAZARD MITIGATION GRANT PROGRAM (HMGP) POST FIRE FUNDING

#### PROJECT APPLICATION - FM #5195

**HMGP-FM-5195-OREGON: 2017 and 2018 Fire  
Seasons**

**DUE BY JANUARY 18, 2019 (Applications will  
be accepted earlier, which starts review  
sooner)**



Photo 1: Ramsey Canyon, 2018 (ODF File Photo)

**Applicant Name:** City of Portland

**Project Title:** Forest Park Wildfire Mitigation

**Estimated Project Cost Total:** \$572,232

**COMPLETE APPLICATIONS MUST BE RECEIVED BY OEM MITIGATION  
NO LATER THAN NOON ON JANUARY 18, 2019.**

### **Hazard Mitigation Grant Program**

The Hazard Mitigation Grant Program (HMGP) was created in November 1988, by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The HMGP assists States, Tribes, and local communities in implementing long-term hazard mitigation measures following a major disaster declaration. This funding source for HMGP is a special Post-Fire appropriation as part of the Bipartisan Budget Act of 2018. The Act contains a provision that authorizes FEMA to provide HMGP assistance as a result of a Fire Management Assistance declaration for events from October 1, 2016, through September 30, 2018.

During the recovery phase of a disaster, local jurisdictions select projects that could reduce property damage from future disasters, and submit grant applications to the State. Indian Tribes and certain nonprofit organizations may also apply; and local governments may apply for assistance to benefit individual property owners and businesses.

The States administer the HMGP by establishing their mitigation priorities, facilitating the development of applications, and submitting applications to FEMA based on State criteria and available funding. The State also manages the project, monitors progress, and evaluates the effectiveness of projects implemented.

FEMA conducts a final eligibility review to ensure compliance with Federal regulations. HMGP projects must comply with Federal environmental laws and regulations, be cost-effective, and be technically feasible.

Federal law requires States and local jurisdictions to have a mitigation plan prior to receipt of HMGP funds. The plan identifies hazards, assesses community needs, and describes a communitywide strategy for reducing risks associated with natural disasters.

### **Before you begin your application...**

All components of this application will be found on the OEM website and downloaded as needed once the redesign of the public web page is complete. The key components are:

- Project Application
- BCA/Property Site Inventory Worksheets for specific projects
- Attachment Index Template
- Required documents/forms depending on project type (i.e. acquisition or elevation)

**Please ensure that you include all necessary pieces for a complete application package. Pay**

special attention to the required documents for your chosen project.

The ***Oregon State Hazard Mitigation Administrative Plan*** describes how the state administers FEMA-funded mitigation grants. This plan includes information on applicant, state and federal responsibilities throughout the application and grant award processes. Contact Angie Lane, State Hazard Mitigation Officer, [angie.lane@state.or.us](mailto:angie.lane@state.or.us), if you would like a copy. The following describes how projects will be selected:

- Hazard mitigation documents from previous disasters should be reviewed to identify projects for possible HMGP funding. In this case, one application submitted under DR 4296 will be moved into FM-5195.
- Projects may be identified from other sources, but in all cases must support Section 201.4/.5 and 201.6 plans in effect for the disaster area in question.
- At the request of the sub-applicant/subrecipient, technical assistance (for example, to discuss potential project alternatives and strategies) can be provided by the State and/or FEMA. Neither the State nor FEMA can provide comprehensive engineering analysis or review; however, engineering costs can be an eligible project expense (as part of an overall HMGP project) when approved by the State and FEMA in advance. Subapplicants can choose to develop and submit their own project “full” BCA results at their expense, or hire a contractor (which is considered a pre-award cost). FEMA provides a free BCA Tool that can be used to put the BCA together. A free helpline is available. See Section 10 of this application for more information about BCA.
- Communities that have FEMA-approved, *current* 44 CFR Section §201.6 natural hazards mitigation plans will have ‘top’ priority status and projects identified in these communities can generally be selected and approved quickly if they meet the benefit-cost requirements and have minimal environmental issues.
- For FM-5195, emphasis will be put on those projects that mitigate risk to wildfire, like creating defensible space around structures, conducting fuels treatment within a 2-mile radius of structures, or replacing home building materials with ignition-resistant materials.
- For homes destroyed or damaged by landslides or are threatened by debris slides as a result of the landscape being damaged by a wildfire, private property acquisitions (with subsequent restoration to open space) will be considered early in the HMGP application process.
- For flood losses, homeowners that sustain substantially damaged homes (whether NFIP-insured or not) present high priority mitigation opportunities as well in any presidentially-disaster or in any wet winter in Oregon.
- Local natural hazards mitigation plans are required by FEMA for all mitigation projects submitted for FEMA’s consideration. There will generally be no exceptions in regard to this requirement unless the FEMA Regional Administrator gives special consideration to the community in question. Having a previously FEMA-approved mitigation that has expired is no

different than not having a FEMA-approved mitigation plan whatsoever.

- Eligible projects should:
  - 1) be in conformance with the [State Natural Hazards Mitigation Plan](#).
  - 2) have a beneficial impact upon the designated disaster area, whether or not located in the disaster area;
  - 3) be in conformance with 44 CFR part 9, Floodplain Management and Protection of Wetlands (E.O. 11988), and 44 CFR part 10, Environmental Considerations (E.O. 11990);
  - 4) solve a problem independently or constitute a functional portion of a solution where there is assurance that the project as a whole will be completed. **Projects that merely identify or analyze hazards or problems are not eligible**; and,
  - 5) be cost effective and substantially reduce the risk of future damage, hardship, loss, or suffering resulting from a major disaster (identified with a BCA). The subapplicant must demonstrate this by documenting that the project:
    - a) addresses a problem that has been repetitive, or a problem that poses a significant risk to public health and safety if left unsolved;
    - b) will not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts to the area if future disasters were to occur. Both costs and benefits will be computed on a net present value basis;
    - c) has been determined to be the most practical, effective, and environmentally sound alternative after consideration of a range of options;
    - d) contributes, to the extent practical, to a long-term solution to the problem it is intended to address; and
    - e) considers long-term changes to the areas and entities it protects, and has manageable future maintenance and modification requirements.
- Additionally, eligible projects shall conform with the following State criteria:
  - 1) be based on a hazard vulnerability analysis of the geographic area in question;
  - 2) not encourage development in hazardous areas without appropriate safeguards;
  - 3) meet applicable permit requirements;
  - 4) whenever possible, be designed to accomplish multiple objectives including damage reduction, environmental preservation and/or enhancement, and economic development or recovery; and
  - 5) whenever possible, utilize existing agencies, resources, or programs to implement the project.

Review the [Hazard Mitigation Assistance Guidance](#), (Feb. 27, 2015) for more information on eligible activities and project costs, and guidance for specific project types.

## Application Submittal Guidelines – Read Carefully!

This application has been set up as a form. Each shaded box will expand to accommodate your answers which will appear in a different font color. All other parts of the application are locked. You will not be able to insert documents within the application.

1. **Please complete all elements of the application and answer all questions.**
  - a. Enter “NA” when not applicable.
  - b. Avoid “See Attachment” responses in lieu of a solid narrative in the application (for all parts of this application). Provide a narrative and then refer the reviewer to the specific attachment for additional information.
  - c. When referring to an attachment with several pages, direct the reviewer to the specific page number(s) or section(s).
  
2. **List all attachments on the Attachment Index page.**
  - a. Use a clear, concise name for the attachment.
  
3. **Provide the complete application package to OEM as follows:**
  - a. **PUT ON CD**<sup>1</sup> including all attachments printed **single sided – no back to back pages – maps and photos in color, please**. Other attachments can be black & white.
    - Do not insert the attachments within the application itself. Keep all attachments separate from the application itself. Identify them clearly in the body of the application and on the Attachment Index sheet. Label the attachment files to match the index sheet.
    - Do not rearrange the order of the application.
    - Application, Benefit Cost Analysis and worksheets in **WORD format**. Attachments can be in PDF or Word format.
    - Each document must be clearly identified. Grouping in appropriately named file folders is also helpful. Your goal is to name files and folders in such a way that reviewers can scan through quickly and choose which document they need to review without having to open each document to determine what it is.
  - b. If the entire application file can be sent as an email, then note that the email size limit is 10 MB. Otherwise, options to send files can be providing an ftp site to link to so the SHMO can download from it.
  - c. Sending a paper packet is an option as well. The application would need post-marked by the due date. The mailing address is OEM, Attn: Angie Lane, SHMO, PO Box 14370, Salem, OR 97309-5062.

**If you have any questions please contact the State Hazard Mitigation Office:**

Angie Lane, State Hazard Mitigation Officer, (503) 378-4660, [angie.lane@state.or.us](mailto:angie.lane@state.or.us)

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<sup>1</sup> Regardless of method chosen to turn in the application, it must be submitted in its entirety, not submitted as individual pieces.

## Attachment Index

Use the following template to list any supporting documentation that is **included with your application package**. Please clearly and concisely label each attachment, on this form which corresponds with file name included with the application. In the first column list which section and item (from the HMGP application) the attachment refers to. *Example: Section 2, Item 1.* **If any required documentation is not included on the CD<sup>2</sup>, the application will be considered incomplete and will not be considered for possible funding.**

Section # & Item		Attached Document Name
<b>1</b>	Section 1.2 No. 1, No.3b Section 3.2 No. 3 Section 3.3 No. 1 Section 4.1 No. 1	<b>City of Portland, Mitigation Action Plan (2016)</b>
<b>2</b>	Section 1.2 No. 4	<b>Oregon Natural Hazards Mitigation Plan (2015)</b>
<b>3</b>	Section 1.2 No. 4	<b>City of Portland, Mitigation Action Plan (2016), Table 10-1</b>
<b>4</b>	Section 1.2 No. 4 Section 4.1 No. 3	<b>Single Family Occupancy (SFO) Data from PortlandMaps</b>
<b>5</b>	Section 1.2 No. 4	<b>PBOT Transportation System Plan</b>
<b>6</b>	Section 1.2 No. 4 Section 3.3 No. 1	<b>City of Portland, Mitigation Action Plan (2016), Critical Infrastructure Map</b>
<b>7</b>	Section 3.1 No. 1 Section 4.1 No. 1, 2, 3	<b>HMGP Project Map</b>
<b>8</b>	Section 3.1 No. 1 Section 4.1 No. 1, 2	<b>Multnomah County, Wildland Protection Plan (2011)</b>
<b>9</b>	Section 3.1 No. 1 Section 4.1 No.2	<b>City of Portland, Forest Park Wildfire Risk Reduction Final Report (2008), Focus Area Map</b>
<b>10</b>	Section 3.1 No. 5	<b>Forest Park Desired Future Conditions (2011)</b>
<b>11</b>	Section 3.1 No. 5	<b>Forest Park Incidents Year 1998 to 2019</b>

<sup>2</sup> See Footnote on p. 5 of application



<b>12</b>	Section 4.1 No. 1	<b>Multnomah County, Wildland Protection Plan (2011), Map No. 8</b>
<b>13</b>	Section 4.1 No. 2, No.4	<b>City of Portland, Wildfire Readiness Assessment: Gap Analysis Report (2009)</b>
<b>14</b>	Section 4.1 No. 2	<b>Portland Plant List (2016)</b>
<b>15</b>	Section 4.1 No. 2	<b>HMGP Site Photos</b>
<b>16</b>	Section 4.1 No. 2	<b>HMGP Project Map – Historic Invasive Plant Data</b>
<b>17</b>	Section 4.1 No. 4 Section 7.3 No. 3	<b>Socioeconomic and Demographic Data from City-Data.com</b>
<b>18</b>	Section 4.1 No. 8	<b>PF&amp;R Forest Park Patrol</b>
<b>19</b>	Section 7.5 No. 1	<b>Forest Park Wildlife Report (2012)</b>
<b>20</b>	Section 7.5 No. 1	<b>Status of ESA Listings &amp; Critical Habitat Designations for West Coast Salmon &amp; Steelhead (NOAA Fisheries)</b>
<b>21</b>	Section 10	<b>Benefit Cost Analysis Report</b>
<b>22</b>	Section 10	<b>Benefit Cost Analysis Narrative</b>

For additional attachments add a supplemental attachment index and record it as “Supplemental Attachment Index” in #40. Fill out accordingly and include with completed application and attachments **on CD.**

## SECTION 1 Application Summary

### 1.1 Applicant Information

1. Name of Applicant Organization/Agency: **City of Portland**
2. County: **Multnomah**      3. Congressional District:      4. Legislative District
5. Federal Tax ID # **93-6002236**      6. DUNS # **054971197**      7. County ID #
8. Is the agency registered in [SAM](#)?  Yes       No
9. Type of Organization/Agency:  
 State Government     Local Government     Special District     Indian Tribe  
 Registered Private Nonprofit providing essential government-like services.  
(Please include a copy of the Articles of Incorporation)
10. Primary Contact Name for this Application (*The individual directly involved in overseeing the grant*): **Michael Wong**
11. Title: **Financial Analyst**
12. Phone: **(503) 823-3743**    13. Fax: **(503) 823-6106**    14. Email:  
**michael.wong@portlandoregon.gov**
15. Mailing Address:    **55 SW Ash Street, Portland, OR, 97204**
16. Application prepared by: **Portland Fire & Rescue: Michael Wong, Deputy Chief Don Russ;**  
**Portland Parks & Recreation: Kendra Petersen-Morgan, Becca Shively, Marshall Johnson**

### 1.2 Mitigation Plan Information

1. Does the jurisdiction have a current **FEMA approved** multi-hazard mitigation plan?  
 Yes       No       Pending Approval (Please explain)

**(City of Portland, Mitigation Action Plan (2016), Attachment 1)**

2. FEMA Approval Date of Current Plan **11/18/16**      Expiration Date **11/17/20**

3. Is the proposed project identified in the plan?  Yes       No

a. If yes, cite where it is in the mitigation plan and what its priority is:

**N/A**

b. If no, how is the project linked to the plan's goals and mitigation strategy?

**The proposed project is consistent with the goals outlined in the City of Portland's Mitigation Action Plan (2016). These goals include protecting life and reducing injuries; minimizing the disruption of essential infrastructure and services, and; protecting, restoring, and sustaining natural systems (City of Portland, Mitigation Action Plan (2016), Page 17-2, Attachment 1).**



The hazardous fuels reduction we propose will reduce the risk and spread of wildfire to residential neighborhoods in the Wildland-Urban Interface (WUI). The project's outreach and education activities will equip residents to undertake additional, protective actions on their property by creating defensible space.

Both components of this project will improve protection of public resources, vital transportation arterials, and a Critical Energy Infrastructure (CEI) near the project area.

These actions will protect the natural systems in Forest Park from rapid wildfire spread. Fuels reduction followed by re-planting of native and fire-resilient species will prevent soil erosion, improve the park's ecological health, and restore wildlife habitat.

4. Describe how the proposed project relates to or is consistent with the [State's Enhanced Mitigation Plan](#):

This proposed project aligns with three of eleven strategic goals defined in the State of Oregon's Enhanced Mitigation Plan as shown below (Oregon Natural Hazards Mitigation Plan (2015), Page 1280, Attachment 2):

**State Goal No. 1: Protect life and reduce injuries resulting from natural hazards.**

The intended scope of work would reduce the risk of rapid wildfire spread and protect residents neighboring Forest Park.

Portland Parks & Recreation (PP&R) and Portland Fire & Rescue (PF&R) intend to collaborate on a hazardous fuels reduction project targeting a 500-acre area in Forest Park. Directly adjacent is the Linnton community, which was identified by the City of Portland's Wildfire Technical Committee as a high-priority Community at Risk (CAR) (City of Portland, Mitigation Action Plan (2016), Table 10-1, Attachment 3).

PF&R and PP&R will also partner with the non-profit Forest Park Conservancy to conduct homeowner outreach and education in park-adjacent Linnton neighborhoods, equipping residents to undertake protective actions on their property by creating defensible space.

The Linnton communities that neighbor the proposed project area consist of 192 Single Family Occupancies (SFO) (SFO Data from PortlandMaps, Attachment 4). Using a conservative estimate of two occupants per SFO, there are approximately 384 people living immediately adjacent to the proposed project area.

**State Goal No. 2: Minimize public and private property damages and the disruption of essential infrastructure and services from natural hazards.**

The proposed hazardous fuels reduction project would minimize wildfire damage and disruption to private residential properties, public resources, critical transportation arterials, and a Critical Energy Infrastructure (CEI).

As previously noted, there are 192 SFO's adjacent to the project area. The total Building Replacement Value (BRV) for these homes is \$62,028,014 (SFO Data from PortlandMaps, Attachment 4).

This project would also minimize wildfire damage to infrastructure within the park boundaries, such as utility corridors, water towers, recreational trails, and street arterials. NW Germantown Road runs east and west directly through the proposed project area, and is a vital arterial that supports motor vehicle, bicycle, and pedestrian traffic. It should also be noted that NW Germantown Road is a designated Secondary Emergency Response street as

classified in the Portland Bureau of Transportation System Plan (PBOT Transportation System Plan, Attachment 5).

Adjacent to this area is U.S. Highway 30/NW St. Helens Road, a vital north-south arterial for commercial and private motor vehicle traffic. This route is a critical distribution line that supports economic commerce. Parallel to Highway 30 is also the Burlington Northern Santa Fe (BNSF) heavy freight rail line. Disruption of this critical infrastructure could create a significant impact to commerce and the economy.

Portions of the project area are approximately 800 to 1,500 feet from a vital petroleum storage facility. NuStar Energy L.P., located at 9420 U.S. Highway 30/NW St. Helens Road, was identified in the FEMA-funded and City-adopted Portland Mitigation Action Plan as a CEI. This complex has the capacity to store 1,191,000 barrels of fuel oil, gasolines, diesel, ethanol and biodiesel and is a key component of a resilient fuel distribution network. This is essential to the City of Portland’s continuity of operations in the event of a catastrophic event. See Attachment 6 for a visualization of the critical infrastructure adjacent to Forest Park (City of Portland, Mitigation Action Plan (2016), Attachment 6).

**State Goal No. 4: Minimize the impact of natural hazards while protecting, restoring, and sustaining environmental processes.**

The proposed project area contains sections of highly prevalent invasive species (ivy, clematis, non-native blackberry, laurel and holly). A majority of the hazardous fuel reduction planned for the site entails the removal and control of this fuel loading. This will restore and protect the long-term health of Forest Park by removing ladder fuels that allow fire to spread into the tree canopy, and by removing ground fuels that weaken trees and lower forest health, increasing the park’s vulnerability to future wildfire damage. Subsequent re-planting of native species will restore the project site, improve wildfire resilience, reduce erosion, and enhance ecosystem health. An increased presence of native species along with ongoing project maintenance will promote a resilient ecosystem.

**1.3 National Flood Insurance Program (NFIP Compliance)**

Provide documentation from the [NFIP](#) State Coordinator that your community currently has **no** outstanding NFIP or CAV issues/violations and that you have a “compliant” flood ordinance approved and adopted by the of award.

1. Please provide the date of your most recent National Flood Insurance Program (NFIP)

Community Assistance Visit (CAV):

2. Did your community have any CAV/NFIP issues/violations from this visit?  Yes  No

**N/A**

**1.5 Project Information**

1. Project Title: **Forest Park Wildfire Mitigation**

2. Project Cost Estimate\*: **\$429,174**

**\*This does not include the required 25% match, which brings total costs to \$572,232**

3. Hazard(s) the proposed project will mitigate:

- Flood     Wind     Earthquake     Landslide  
 Wildfire     Other

4. Type of Project:

- Acquisition & Demolition     Elevation     Floodproofing  
 Stormwater Management     Relocation     Seismic Retrofit  
 Minor Flood Control     Climate Resilience  
 Other (Please describe) **Wildfire Mitigation / Hazardous Fuels Reduction and Creation of Defensible Space**

5. Check **all** item(s) the project may impact:

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Wetlands                      | <input type="checkbox"/> Water Quality                    | <input checked="" type="checkbox"/> Health & Safety      |
| <input type="checkbox"/> Floodplain                    | <input type="checkbox"/> Coastal Zone                     | <input type="checkbox"/> Historic Resources              |
| <input type="checkbox"/> Public Controversy            | <input type="checkbox"/> Fisheries                        | <input checked="" type="checkbox"/> Vegetation removal   |
| <input type="checkbox"/> Toxic or Hazardous Substances | <input type="checkbox"/> Potential for Cumulative Impacts | <input type="checkbox"/> Threatened & Endangered Species |
| <input type="checkbox"/> Previously undisturbed soil   | <input type="checkbox"/> Other                            |  |

6. Is this project located in a Special Flood Hazard Area (SFHA) as defined by the NFIP?

- Yes     No

7. Is this site covered under or connected to a Project Worksheet under the Public Assistance Repair and Restoration Program?     Yes     No

a. If yes, Project Worksheet Number(s)

b. Describe why this mitigation measure was not included as part of this project:

8. Is the proposed project part of a larger project?     Yes     No

a. If yes, please explain:

\*Projects that cost more than one million dollars require notification to and approval from FEMA Headquarters and may require additional time for approval.

### 1.6 Additional Information for Acquisition/Elevation/Relocation Projects

N/A

Include documentation of [voluntary interest](#), certification that the property owners are Nationals of the United States or qualified aliens ([FEMA Form 90-69B](#)) and copies of the sample deed restriction ([FEMA Model Deed Restriction](#)) and the [model statement of assurances for property acquisition projects](#). The voluntary interest form must be signed by **each** homeowner either by using individual signed statements or through a group sign-up sheet. The statement of assurances is signed by the applicant agent.

If the property or properties were substantially damaged during the event, include documentation provided to the property owner(s) from the building official for each property.

For projects including more than one property, include a list of primary and alternate properties, include the address and owner name. Alternate properties may be approved after the initial award for the primary properties should overall funding be available under the HMGP for this disaster or should any of the primary properties fall out of the project. For large projects, enter primary and alternate properties into a spreadsheet and include on application disc.

1. Will the intended use of the acquired property comply with 44 CFR Part 80, FEMA [Property Acquisition and Relocation for Open Space](#) and the current [Hazard Mitigation Assistance Unified Guidance, February 27, 2015](#).  Yes  No

N/A

2. Upon consultation with the US Army Corps of Engineers (USACE), are any of the proposed properties under consideration for future construction or planned improvements? Please include copies of clearances or any relevant letters/emails concerning this consultation.

Yes  No  Unsure

N/A

3. Upon consultation with the Oregon Department of Transportation (ODOT), are any of the proposed properties under consideration for use for future, planned improvements or enhancements to the federal aid systems, or other state transportation projects? Include copies of clearances or any relevant letters/emails concerning this consultation.

Yes  No  Unsure

N/A

- a. If yes, the affected property will not be eligible for this grant.

N/A

4. Is pre-event market value being used to in the proposed property valuations?

Yes  No  Unsure

N/A

5. Was the property damaged during the event?  Yes  No  Unsure

N/A

- a. If yes, provide documentation of damages and/or insurance claims.

N/A

- b. If no, provide history of damages and/or insurance claims from prior events.

N/A

### 1.7 Additional Elevation Project Information

For all properties, include a copy of the elevation certificate ([FEMA Form 81-31](#)) or equivalent information/data used to determine the first floor elevation, a signed copy of the [Model Acknowledgement of Conditions for Mitigation of Property in a Special Flood Hazard Area](#) and a statement from the appropriate building official or structural engineer that the structure appears to be capable of elevation.

N/A

### 1.8 Additional Relocation Project Information

For all properties, include a statement from the appropriate building official or structural engineer

that the structure appears to be capable of relocation.

**N/A**

### **1.9 Project Affecting Floodplains or Wetlands**

For projects affecting floodplains or wetlands, including, but not limited to acquisition or elevation projects, the Applicant must provide public notice to the community. The requirement at 44 Code of Federal Regulations Part 9.8 states that a community must provide the public with adequate information and an opportunity to comment at the earliest possible time during project/application development. Include a copy of the public notice.

**N/A**

## SECTION 2 Applicant Agent and Project Manager Information

The HMGP program requires both a Primary and Alternate Applicant Agent be formally authorized. **The Applicant Agent is the designated contact whom the jurisdiction has authorized to apply for and receive grant funding.** The Applicant Agent certifies that the applicant will fulfill all requirements of the Hazard Mitigation Grant Program. For clear and direct communication, jurisdictions may want to make this the same person who will have management responsibility if grant funding is awarded. To provide continuity and ease of grant administration, OEM would like to work with a single point of contact throughout the application, award and reimbursement processes.

A formal designation of Applicant Agent and Alternate Applicant Agent may be made using any method normally used by the jurisdiction.

A resolution or other formal method of designation, specifically naming the Applicant Agent and Alternate Applicant Agent for the Hazard Mitigation Grant Program **must** be included in this application in order for the application to be considered eligible.

### 2.1 Applicant Agent Information:

Name: **Ted Wheeler** Title: **Mayor**

Telephone: **(503) 823-6862**

Fax: **(503) 823-5384**

Address: **1120 SW 5<sup>th</sup> Avenue, Rm 1250, Portland, OR 97204**

E-mail: **ginger.damron@portlandoregon.gov**

Organization: **City of Portland**

### 2.2 Alternate Applicant Agent Information:

Name: **Ginger Damron (GMD)**

Title: **Financial Analyst**

Telephone: **(503) 823-6862**

Fax: **(503) 823-5384**

Address: **1120 SW 5<sup>th</sup> Avenue, Rm 1250, Portland, OR 97204**

E-mail: **ginger.damron@portlandoregon.gov**

Organization: **City of Portland**

### 2.3 Project Manager Information (1):

Name: **Michael Wong**

Title: **Financial Analyst**

Telephone: **(503) 823-3743**

Fax: **(503) 823-6106**

Address: **55 SW Ash Street, Portland, OR 97204**

E-mail: **michael.wong@portlandoregon.gov**

Organization: **Portland Fire & Rescue**

### Project Manager Information (2):

Name: **Kendra Petersen-Morgan**

Title: **Natural Areas Supervisor**

Telephone: **(503) 823-4492**

Fax:

Address: **400 SW Fairview Blvd, Portland, OR 97221**

E-mail: **kendra.petersen-morgan@portlandoregon.gov**

Organization: **Portland Parks & Recreation**



## SECTION 3 Proposed Project

A narrative discussion of at least three project alternatives (from No Action to the most effective, practical solution) and their impacts, both beneficial and detrimental is required. It is expected that the jurisdiction has completed sufficient analysis to determine the proposed project can be constructed as submitted and it supports the goals and objectives of the FEMA approved hazard mitigation plan.

### 3.1 Proposed Project

1. Description of Proposed Project (overview of project; include # of structures):

**Portland Parks & Recreation (PP&R) and Portland Fire & Rescue (PF&R) intend to collaborate on a hazardous fuels reduction project targeting a 500-acre area in Forest Park, and directly surrounding the community of Linnton. To reduce the rapid spread of wildfire to residences and critical infrastructure, activities will include understory enhancement, fuel ladder removal and pruning, and the creation of defensible space wherever park property in the Wildland-Urban Interface (WUI) falls within the “home ignition zone” of adjacent residences (these occurrences have been mapped - see HMGP Project Map, Attachment 7).**

**PF&R and PP&R will also partner with the non-profit Forest Park Conservancy to conduct homeowner outreach and education in park-adjacent Linnton neighborhoods, providing information on local wildfire risk and guidance on creating defensible space on private property. This community was identified as a “community at risk” in Multnomah County’s 2011 Community Wildfire Protection Plan, and a Focus Area in the 2008 Forest Park Wildfire Risk Reduction Final Report (Attachments 8 and 9). There are 192 Single Family Occupancies (SFO) neighboring the proposed project area. Using a conservative estimate of two occupants per SFO, there are approximately 384 people living immediately adjacent to the targeted project area. The total Building Replacement Value (BRV) for these homes is calculated at \$62,028,014.**

**This project would minimize wildfire damage and disruption to residential properties, public resources, critical transportation arterials and a Critical Energy Infrastructure (CEI). It would also restore and protect the long-term health of Forest Park, enhancing fire-resiliency, improving natural ecological functions, and benefiting wildlife.**

2. Total Project Costs\*     **\$572,232**

**\*This includes our project cost estimate (\$429,174) and our 25% match (\$143,058)**

3. Benefits of the Proposed Project (from BCA Worksheet Section 10)     **\$494,545**

4. Benefit – Cost Ratio (from BCA Worksheet Section 10)     **26.89**

5. Provide an overview of past damages in the area including approximate costs. Include information for presidential level disasters as well as state or local level declarations. **Include any supporting documents.** Costs should include damages to structures and infrastructure in the project area as a result of the hazard. Additional costs should include the cost to the local government to respond to victims of the hazard in the project area, any interruption to local businesses, losses of public services, and costs for temporary housing of the affected population etc.

Date	Level of Event	Type or Extent of Damages	Indirect Costs
<b>Stand Replacing Fires</b> <b>(Forest Park Desired Future Conditions (2011), Page 2, Attachment 10)</b> <i>There have been three stand-replacing fires in Forest Park over the past 120 years. These fires resulted in over 1,400 acres within the park being impacted by fire.</i>			
09/1889	Stand-replacing fire	Burned approximately 400 acres in Forest Park.	Unknown
08/1940	Stand-replacing fire	Known as "Bonny Slope Fire." Burned 170 acres in Forest Park, 11 structures damaged.	Unknown
08/1951	Stand-replacing fire	Burned 900 acres in Forest Park.	Unknown
<b>Other Fire Incidents in Forest Park</b> <b>(Forest Park Incidents Year 1998 to 2019, Attachment 11)</b>			
06/1999	Unauthorized burning	Portland Fire & Rescue responded to and extinguished an illegal campfire.	Unknown
05/2002	Unauthorized burning	Portland Fire & Rescue responded to and extinguished an abandoned campfire.	Unknown
06/2003	Unauthorized Burning	Portland Fire & Rescue responded to and extinguished an abandoned campfire.	Unknown
06/2009	Grass and brush fire spanning 4000 square of the park.	Lightning strike to a tree ignited the fire which spread to surrounding brush and grass. Portland Fire & Rescue extinguished the fire.	Unknown
07/27/2010	Two simultaneous fires at different locations within the park.	Portland Fire & Rescue responded to a small grass fire caused by illegal use of fireworks within the park. A witness extinguished the fire by using water and stomping on it before the fire crew arrived. At the same time, Portland Fire & Rescue responded to 15 lineal feet of spot burning that occurred to cotton wood seed in another area within the park.	Unknown

6. Describe how the proposed project will reduce or eliminate the need for future state or federal disaster assistance.

**The proposed project would allow PF&R and PP&R to significantly reduce fuel loads in a critical target area of Forest Park and establish conditions that can more easily and affordably be maintained into perpetuity. By removing ground and ladder fuels, reducing the likelihood of rapid wildfire progression through the park, and improving overall forest health, the park will be less vulnerable to wildfire and pose a lower risk to nearby residences, businesses and critical infrastructure. The outreach and education efforts in this project will also promote defensible space measures on private property, lowering the need for disaster assistance for loss and damages to the built environment in the Wildland-Urban Interface.**

**Strengthening the fire resilience of Forest Park could potentially enable Portland Fire & Rescue's fire suppression resources to confine incipient fires to the area of origin—reducing the need to enact the State of Oregon Conflagration Act. Establishing and maintaining an ecologically-healthy park with native vegetation will make Forest Park more resilient to future threats and thereby protect surrounding communities and infrastructure.**

### **3.2 Alternate Project #2**

Describe an alternative project that would be the next best solution if the primary alternative is not accomplished. It could be an entirely different mitigation method or a significant modification to the design of the current proposed project. Please include a Scope of Work, engineering details (if applicable), estimated budget and the impacts of this alternative.

1. Scope of Work: Provide enough detail to describe the project for the evaluation panel to decide the best course of action for the state. Include any appropriate diagrams, sketch maps, amount of materials and equipment, dimensions of project, amount of time required to complete, etc.

**The best alternative to our proposal would be a defensible space program for eligible owners of Single-Family Occupancies in the Linnton community. In contrast to our proposed project, which entails fuels reduction within park boundaries along the Wildland-Urban Interface, the scope of this work would be smaller-scale and occur within private property only.**

**Portland Fire & Rescue or a partnering non-profit would assist homeowners by conducting wildfire risk assessments of residential properties. These assessments would produce prescriptions for structural modifications and/or vegetation management treatments to create fire resistive structures and defensible space within the home ignition zone. Grant funds would be offered through a homeowner cost-share program, supporting approved defensible space activities. These activities could be implemented by the homeowner or a contracted professional.**

**While this project has many potential benefits, it would not manage fuels within the third, outer-most home ignition zone for many Linnton residences, which for many falls within Forest Park boundaries. This alternative also poses feasibility concerns. Such a project would require community notifications, obtaining right-of-access agreements, developing the administrative structure to execute cost-share agreements, and conducting hazardous fuels assessments of individual properties for a BCR analysis. This is not achievable in the timeframe of this grant and its performance period.**

**Portland Fire & Rescue is interested in implementing a project of this nature in the future, to complement the large-scale fuels reduction work proposed in this application. The bureau plans to begin the necessary pre-work to position for future funding**

**opportunities at a later date.**

2. Describe the surrounding environment. Include information regarding both natural (i.e., fish, wildlife, streams, soils, plant life) and built (i.e., public services, utilities, land/shoreline use, population density) environments.

**Forest Park is located on the northeast-facing slope of the southernmost segment of the Tualatin Mountain Range, a narrow, westerly extension of the Oregon Coast Range ecoregion. The park landscape is deeply dissected by 30 miles of intermittent and perennial streams originating along the crest of the slope and draining eastward to the Willamette River. At nearly 8 miles long and 1 mile wide, the park encompasses nearly 5,200 acres between four major arterial roads - NW Newberry Road, NW Skyline Boulevard, West Burnside Road, and NW St. Helens Road.**

**The park's steep terrain and silty soils support a diversity of plant species. Forest Park is a *Westside Lowlands Coniferous-Hardwood Forest* with a canopy dominated by Douglas fir, maples, grand fir, red alder, Western red cedar, and Western hemlock. Ferns, forbs and shrubs are common in the native understory. The forest canopy, creeks, and terrain provide habitat to over 100 species of birds, 50 species of mammals, and 400 species of invertebrates. The park also contains three fish-bearing streams with resident trout: Balch Creek, Saltzman Creek and Miller Creek. Salmonids have been documented in Forest Park only within Miller Creek, confirming that there is fish passage to the Willamette.**

**Approximately half of the park is in good ecological health, supporting native species and proper watershed function. The other half is significantly impacted by the presence of invasive species and weedy trees, most prominently ivy, clematis, non-native blackberry, laurel, and holly. This has resulted from a history of disturbance caused by logging, wildfire, and the park's extensive interface with residential and urban development.**

**Although mostly forested, the park includes infrastructure such as utility corridors, trails, water towers, and roads that cut through the park such as NW 53<sup>rd</sup> Avenue and Germantown Road. Along its northeastern boundary is NW St. Helens Road, a busy commuting and trucking route that spans an industrial corridor of tank farms and pockets of residential communities.**

**U.S. Highway 30/NW St. Helens Road, located east of Forest Park and west of the Willamette River, is a vital north-south arterial for commercial and private motor vehicle traffic. This route is a critical distribution line that supports economic commerce. Parallel to Highway 30 is also the Burlington Northern Santa Fe (BNSF) heavy freight rail line.**

**As previously mentioned, portions of the project area are proximate to a vital petroleum storage facility that was identified in the FEMA-funded and City-adopted Portland Mitigation Action Plan as a CEI. It is essential to City of Portland's continuity of operations in the event of a catastrophic event.**

**The Linnton neighborhoods adjacent to the proposed project area consist of 192 Single Family Occupancies (SFO). Using a conservative estimate of two occupants per SFO, there are approximately 384 people living immediately adjacent to the targeted project area.**

3. Describe any positive environmental impacts of the project.

**This alternative offers similar environmental benefits to our current proposed work, but**  
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across a reduced area.

Creating defensible space on private property may include vegetation management activities that reduce fuel loads through removing invasive species and replanting with less flammable native understory plants. This modification, as with our proposed project, may result in improved erosion management and wildlife habitat conditions. When ivy is allowed to dominate a vegetation community, it suppresses growth of native plant species that support wildlife; ivy species also have a shallow root system compared to their native counterparts and may inhibit erosion control (City of Portland, Mitigation Action Plan (2016), Page 9-13, Attachment 1).

Defensible space measures may also include structural actions that have a neutral environmental impact, such as removing non-vegetation fuels (e.g. firewood and debris) from under decks, in siding and around windows; and using fire resistive building materials such as Class A fire-rated roofing products.

Through both measures – vegetation management and structural modifications – the reduction of wildfire risk on private property may indirectly render a broader environmental benefit by reducing the likelihood of wildfire spread from the built environment to Forest Park. Residential ignition sources could be controlled at the source and prevented from spreading to natural areas where greater environmental damage is possible.

4. Describe how the proposed project will reduce or eliminate the hazard's effects and risks, and the need for future state or federal disaster assistance.

This alternative offers similar hazard mitigation benefits to our current proposed work, but in a reduced area. The approach directs funding to support smaller-scale vegetation management on private property and structural modifications, supporting homeowners in their own wildfire mitigation efforts through technical and financial support for defensible space measures. This would not reduce the fire risk inside the adjacent Forest Park property, but it would strengthen the fire resiliency of the private homes that neighbor the park, potentially enabling Portland Fire & Rescue's fire suppression resources to confine incipient fires to the area of origin—reducing the need to enact the State of Oregon Conflagration Act. It may also indirectly provide hazard mitigation to Forest Park by reducing the likelihood of wildfire spread from private property to the park.

5. Total Project Costs of this Alternative: **\$572,232**

Additional Comments:

This alternative would make use of the full amount offered to us in this grant (\$429,174) and requiring the same 25% match (\$143,058).

### 3.3 No Action Alternative #3

1. Explain what the effects/impacts will be if no action is taken.

Without fuels reduction treatments in the project area, forest health will decline as climate change brings an increased wildfire risk to the region - resulting in greater hazard and difficulty in suppressing wildfire in the Wildland-Urban Interface (WUI) between Forest Park and the

community of Linnton.

Significant portions of the project area are infested with invasive weed species, including ivy, clematis, non-native blackberry, laurel, holly and other invasive plants. A no action alternative would allow weeds to persist and spread into healthy portions of the project area, increasing wildfire risk, and degrading the health of the forest ecosystem.

The dominance of invasive species in the Forest Park area has many ecological and environmental implications impacting the health of native plants by resource competition, alteration of natural hydrological processes and suppression of natural forest regeneration. The spread of ivy, clematis, non-native blackberry, laurel and holly would likely result in an understory dominated by mid-story, shade tolerant invasive trees and vines that suppress germination of conifer trees, leading to a gradual loss of existing native trees as invasive vines degrade their health. This weakened forest health contributes to reduced fire resilience and enhanced wildfire risk.

Invasive weed species, such as ivy and clematis, bring ladder fuels into the tree canopy, increasing the risk of a canopy fire and enhancing fire impact and intensity to affected trees. Once established, a canopy fire is very difficult for firefighters to suppress. Additionally, non-native blackberry present throughout the project area can be a fire accelerant. In 2001, invasive plants contributed to a 43-acre wildfire in Portland that began when an ignition from a passing train ignited a slope covered with non-native blackberry (Portland Plant List, 2016, Attachment 14).

The effects of climate change are also worsening fire conditions in Forest Park. Wildfire season in the City of Portland typically runs from the months of June through October. However, recent climate change studies – including the 2015 National Climate Assessment – indicates that the length of this seasonal period is increasing. Portland is consistently receiving warmer and drier than average weather, causing earlier springs and hotter summer temperatures. This impacts multiple elements of the wildfire system: fire behavior, ignitions, fire management, and vegetation fuels. Hot dry spells create the highest wildfire risk. Increased temperatures may intensify wildfire danger by warming and drying out vegetation. Climate change may also increase winds that spread fires and thunderstorms producing lightning that ignite fires. Increased wildfires could release stores of carbon and further contribute to the buildup of greenhouse gases.

If no action is taken, Single Family Occupancies, commercial structures, transportation arterials, and a Critical Energy Infrastructure (CEI) neighboring Forest Park will remain at risk and vulnerable to a potential wildfire event in the park. This includes risk to the nearby corridor of tank farms which is located approximately 800 to 1,500 feet from portions of the project area (City of Portland, Mitigation Action Plan (2016), Attachment 6).

2. Is there potential for degradation of already poor environmental conditions?  Yes  No  
a. If yes, describe:

Non-native species will continue to propagate, reducing the health of the forest ecosystem and increasing the fuel load within the park. This increase of non-native species will compete against the native fire-resilient plant species. Fire conditions in the park will continue to worsen due to persistent propagation of invasive species as well as climate change.

Additional Comments:



## SECTION 4 SCOPE OF WORK

The Scope of Work describes the objectives, methodology, feasibility, outcomes, timeline, milestones, resources, deliverables, and benefits of, as well as reasons for, the proposed project. The narrative must establish the **“who, what, where, when, and how” of the proposed project** and the anticipated timeline. Applicants must demonstrate that the project can be completed within a three year Period of Performance (PoP). **Please provide latitude and longitude of project location, in decimal degrees.**

**The latitude and longitude of the project location is -122.7848, 45.5909 decimal degrees.**

IT IS VERY IMPORTANT TO REMEMBER that your application may be viewed by a person who doesn't know about your community. Your goal is for that person **to “see” and understand** the need for, the scope of, and the value of your project to your community.

FEMA [resources](#) can assist in developing the Scope of Work, feasibility, and effectiveness for projects. These are guidelines only.

### 4.1 Scope of Work Narrative Guidelines

Please provide a **clear and detailed** written response about the proposed project using the *guidelines* listed below. Please include a discussion on all components and actions, the amount of materials and equipment, the dimensions of the project and any appropriate diagrams, references, supporting documentation, sketch maps, etc.

1. Describe the problem(s) to be mitigated and the current conditions. What is the intended outcome of the project? What members of the population directly or indirectly benefit from the proposed project?

**The City of Portland is adjacent to one of the largest urban parks in the United States. Forest Park is surrounded on three sides by industrial and residential development and contains 5,200 acres of forest vegetation dominated by Douglas fir, maples, grand fir, red alder, Western red cedar, and Western hemlock. Ferns, forbs and shrubs are common in the native understory.**

**The steep slopes of Forest Park face into strong, dry, east winds that funnel out of the Columbia River Gorge seasonally in autumn. Increased patterns of hot, dry summers and earlier springs have increased the wildfire risk. Potential ignition sources abound in and at the periphery of the park, including a high number of park visitors, transient campers, and the many transportation routes bisecting and paralleling the park. Many of the developments that hug the west side of Forest Park were built without consideration of the path of historic fires. The eastern exposure of the park is adjacent to a State highway and a railway.**

**Prevalent invasive plant species in the park include ivy, clematis, non-native blackberry, laurel and holly. These species lack natural enemies, grow and reproduce quickly, and are able to thrive in a wide variety of conditions in Forest Park. These characteristics allow the invasive species to invade new habitats and out-compete native plants, resulting in dense thickets of a single plant species. The presence of invasive species can make fires hotter, more difficult to control and more likely to continue to spread (City of Portland, Mitigation Action Plan (2016), Page 5-10, Attachment 1).**

**Invasive plants can also act as “fuel ladders” which facilitate the ability of a fire to travel into the tree canopy of conifers. This is particularly concerning – and a higher risk – in the HMGP PROJECT STATEWIDE APPLICATION 2017 – REVISED September 10, 2018**

**Wildland-Urban Interface (WUI) where ladder fuels are next to structures. A fuel ladder in a home's yard can elevate fire into a single, highly flammable tree (such as a conifer) near a house and can more easily cause sparks and embers to be lofted and carried to other fuels.**

**The risk of loss to homes, businesses, and critical infrastructure near the WUI is significant and growing due to the buildup of these invasive fuels. Many at-risk homes are located near the top of large ridges, gulches, and canyons which can intensify fire behavior and induce faster rates of flame spread.**

**Members of the population who would directly benefit from the proposed project include the Linnton community, business owners, utilities, commuters along U.S. Highway 30/NW St. Helens Road, and park users. Although not directly adjacent to the 500-acre project area, the Forest Heights residential development consisting of 1126 homes, 684 high-density units, and 160 apartments, is at the top of Skyline Ridge two-miles to the southwest and would indirectly benefit.**

**The City of Portland Mitigation Action Plan identifies wildfire as a high probability with medium to low impact hazard (overall risk ranking of medium) for the city overall. For the West/Northwest reporting area of the city, where Forest Park is located, the wildfire risk is identified as high (City of Portland, Mitigation Action Plan (2016), Section 16, Attachment 1). While the historical wildfire occurrence in Forest Park is relatively low, with the last significant fire occurring in 1951, several key conditions have increased wildfire risk since then. Recreational and transient activity has risen throughout the park resulting in a steady increase in illegal burning incidents. Additionally, in recent years drought conditions have created risk conditions in Forest Park that are unprecedented.**

**A wildfire hazard risk assessment was conducted by Multnomah County and the results were published in the 2011 Multnomah County Wildland Protection Plan. Substantial portions of the WUI along Forest Park's boundary were identified as high risk for wildfire based on risk assessment scoring associated with wildfire hazards, wildfire risk, community values, protection capabilities and structural vulnerability (Multnomah County Wildland Protection Plan (2011), Chapter 5, Attachment 8). Many of the homes in this area have limited road access and are located above gulches and canyons which can intensify fire behavior and induce faster rates of flame spread. Please see Attachment 12 for a wildfire risk map of Multnomah County. The map shows locations by overall wildfire risk ratings of low, medium, high, or extreme. The proposed target area is labeled in the map as high and extreme wildfire risk (Multnomah County Wildland Protection Plan (2011), Page 52, Attachment 12)**

**In order to address the wildfire risk concerns described above, Portland Fire & Rescue (PF&R) and Portland Parks & Recreation (PP&R) are proposing hazardous fuels reduction actions in a 500-acre project area in Forest Park, directly surrounding the residential neighborhoods of Linnton. Please refer to the HMGP Project Map for details and the geospatial coordinates (HMGP Project Map, Attachment 7). Hazardous fuels removal would reduce the risk of rapid wildfire spread to the community as well as critical infrastructure and businesses in the nearby industrial zone. Through this work, fire-resistant ecosystems would be restored within the Park and a more fire resilient landscape would be created in the WUI.**

- 2. Provide a detailed description of the project and the specific work components to implement and construct it. How will the project be implemented and by whom? Include a description of any associated construction activities such as temporary access roads or staging yards.**

**The proposed project is designed to address hazardous conditions in the Wildland-Urban Interface (WUI) between Forest Park and the adjacent community of Linnton, resulting in**  
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greater protection of homes and critical infrastructure such as roads, powerlines, water towers, and utilities. To achieve this, the project will implement hazardous fuels reduction within Forest Park that both reduces wildfire risk in the project area and creates defensible space around structures inside or adjacent to the park. The project also supports education and outreach with neighboring landowners to promote community-driven efforts to create defensible space on private property.

**Hazardous Fuels Reduction:**

This project will reduce high fuel loads and invasive plant populations in the project area using manual, mechanical and chemical best management practices. Hazardous fuels reduction would occur within a 500-acre area in Forest Park, adjacent to residential neighborhoods in the Linnton community (see HMGP Project Map, Attachment 7). The work would occur within a half mile or less of structures in those neighborhoods, where we have used a map-based assessment to identify 192 Single Family Occupancies (SFO) that are estimated to house approximately 384 people.

This work helps fulfill the recommendations of the 2009 City of Portland Wildfire Readiness Assessment report, which recommends the alignment of fuels reduction efforts with invasive weed management programs, to maintain safe fuel levels and re-establish native fire-resistant plants in key areas, including Forest Park (City of Portland, Wildfire Readiness Assessment: Gap Analysis Report (2009), Action #5, Attachment 13). This work has also been prioritized as the most likely to significantly reduce the vulnerability of homes and infrastructure around the park, per a field assessment and consultation provided by Oregon Department of Forestry in December 2018.

**Description of Work:**

PP&R will contract with professional forest management crews that will use manual, mechanical and chemical best management practices to reduce hazardous fuel loads and invasive vegetation surrounding the Linnton neighborhoods. These crews are selected based upon their ability to move on foot through the forest using hand-held equipment causing minimal disturbance. This work includes cutting and applying herbicide to invasive trees, shrubs, ground cover and vines. Crews will be state licensed herbicide applicators and will be supervised by PP&R staff in accordance with PP&R's Integrated Pest Management program. In addition, crews will engage in selective pruning to reduce fuel sources and ladder fuels in strategic locations.

Contractors will provide all supplies, herbicide, equipment, tools and plants. PP&R staff will manage contractors and oversee all work, including permitting, inspections, mapping, progress tracking and reporting.

Following this invasive plant removal work, contractors, staff and volunteer crews will re-plant sites with low-growing native species of shrubs and ground covers, preventing erosion and restoring healthier conditions. In consultation with the Oregon Department of Forestry, species will be chosen that promote long-term fire resilience and minimize hazardous fuels. Although no plant is considered fire-proof, there are many native plants that have fire-resistant properties such as higher leaf moisture content, less deadwood accumulation, and water-like sap with lower resin levels. The Portland Plant List is a City of Portland reference document with information about local native plants, including classified native trees and shrubs that are "fire accelerants" – explaining their range of flammability characteristics. On the list of fire accelerant "neutral" species are options like vine maple, ocean spray, Indian plumb, mock orange, red current, thimbleberry, salmonberry, elderberry and snowberry (Portland Plant List (2016), Introduction, Attachment 14). In addition, revegetating with low stature plants, such as sword fern, will reduce the potential for ground fire and ladder fuels.

Ground disturbance is limited to bareroot planting, which involves the creation of a small slot in the soil and the installation of the plant in this space. Soil is not removed from the area nor excavated. There will be no staging of equipment within the project area. Any chipping would occur in an established disturbance area, such as an existing access road.

Summary of Proposed Work			
Activity	Species Targeted	Method/Equipment Used	Disposal Method
Reduce surface fuels	Ivy ( <i>Hedera sp.</i> ) Non-native blackberry ( <i>Rubus sp.</i> )	Herbicide application with backpack sprayers, manual removal directly adjacent to trails and surface water areas.	Treated vegetative matter left in place to decompose after treatment.
Reduce ladder fuels	Ivy on trees ( <i>Hedera sp.</i> ) Non-native blackberry ( <i>Rubus sp.</i> ) Clematis ( <i>Clematis vitalba</i> )	Cut vines from trees with hand held equipment (e.g. pole saws, chainsaws) and treat stump with herbicide applied by spray bottles.	Cut and scatter - vegetative matter decomposes after treatment.
	Low limbed cedar ( <i>Thuja plicata</i> )	Limb-up trees, where appropriate, to reduce ladder fuel effect, using hand held equipment (e.g. pole saws, chainsaws).	All material to stay in park. Cut and scatter or haul into isolated clusters.
	Holly ( <i>Ilex sp.</i> ) Laurel ( <i>Prunus sp.</i> )	Hand-cut and stump-treat invasive weedy trees and shrubs with hand held equipment (e.g. pole saws, chainsaws) and treat stump with herbicide applied by spray bottles.	All material to stay in park. Cut and scatter or haul into isolated clusters.
Planting	Low-growing native shrub and ground covers that promote fire resilience (e.g. ferns)	Contract and volunteer crews plant bare root and container plants with hand held tools, (e.g. spades).	N/A
<p><i>Note:</i> While this project does propose the removal of invasive weedy trees, we are not proposing the removal of other live or dead trees in the park. In addition to management and regulatory reasons for that choice, it does not appear that it would increase the efficacy of our efforts by doing so, per our field-assessment with the Oregon Department of Forestry in December 2018.</p>			

**Defensible Space Education & Community Outreach:**

Since the Eagle Creek Fire of 2017, there is heightened concern and awareness of wildfire risk in the Wildland-Urban Interface within the Portland-Metro area. Neighbors to Forest Park have sought a high level of City engagement and communication about actions and opportunities to protect residences and the park. This project hopes to build on this increased awareness of risk, and a higher willingness by the public to take voluntary action to mitigate wildfire.

There has never been a comprehensive effort to conduct defensible space treatments on private properties adjacent to Forest Park. To pilot this necessary work, Portland Parks & Recreation (PP&R) and Portland Fire & Rescue (PF&R) will partner with the Forest Park Conservancy (FPC), a non-profit organization that works to protect and promote the ecological health of Forest Park and its surrounding lands. The City of Portland will support FPC by producing outreach materials (e.g. instructional brochures and factsheets) that provide guidance on defensible space and hazardous fuels reduction on private land around homes. FPC staff will then provide door-to-door outreach to Linnton residents living adjacent to the project area, distributing these materials and speaking directly with community members and collaborating with community centers and local businesses. To date, FPC has been engaged with the Linnton community for two years through their Canopy Weeds Program, which targets invasive vines (ivy and clematis) on private properties directly adjacent to Forest Park. This partnership will allow FPC to: 1) expand their direct engagement with landowners to reach additional residences, 2) develop educational materials about home ignition zones and defensible space, and 3) connect landowners to a local Firewise Community effort.

<b>Summary of Proposed Work</b>		
<b>Activity</b>	<b>Materials Used</b>	<b>Total Number of Contacts</b>
Door-to-Door Flyering	Door Hanger	120 homes/direct contact
Outreach at Community Events	Door Hanger Lawn Signs Press release content	100 people at each event/4 events minimum during grant duration
Project information along project perimeter	Lawn Signs	Estimated 350 people viewing during grant duration
Press Release and media blitz	Interviews and press coverage	285 media and community partners 1,000-1,500 views
Outreach along Hwy 30 Transportation Corridor	Billboard near St Johns Bridge (During high fire season, May-October)	68,000 passes per week
Web Page	Content: Wildfire risk and prevention in and around Forest Park	320,000-400,000 views over two years



### **Selection of High-Impact Project Area:**

The overall project boundary was chosen for the following reasons:

- The project area is designated, through the 2011 Portland Fire and Rescue Wildfire Risk assessment, as High/Extreme for fire risk due to steep slopes and composition of vegetation; the adjacent neighborhoods are designated as “Communities at Risk.” The neighborhoods contain a large concentration of roads, infrastructure and residential properties extending into the interior of Forest Park. Because of these factors, this area was also identified as a priority focus area in the City of Portland Wildfire Readiness Assessment (City of Portland, Forest Park Wildfire Risk Reduction Final Report (2008), Focus Area Map, Attachment 9).
  - The contractors hired by PP&R will work only on City-owned park property, allowing for access without the need for additional permits of entry.
  - There is a community-driven effort underway to establish a Firewise Community in Linnton. The local neighborhood association is partnering with Oregon Department of Forestry, Forest Park Conservancy, and West Multnomah Soil & Water Conservation District to begin public education and engagement activities to address their local fire risk. Because of this heightened community awareness, this proposed project will build on existing local momentum.
  - The project area is directly adjacent to highway, railroad and industrial/oil tank fields that pose higher potential fire risks.
  - Field assessments confirm that forested portions of the park within a half mile of residences in this area have high levels of fuel loading by invasive weeds, including ivy, non-native blackberry, clematis, holly and laurel (HMGP Site Photos, Attachment 15). Data collected in the project area from the past decade documented 2,236 invasive trees (e.g. holly and laurels) in the project area (see HMGP Project Map – Historic Invasive Plant Data, Attachment 16). Although this does not represent a comprehensive survey and periodic treatments by City staff or contractors subsequently treated a portion of those trees, the data indicates the prevalence of those species and site visits to the project area have confirmed that most of the infestation present is along the northeastern boundary of the park, closest to the Linnton communities with the highest fire risk.
  - East facing slopes such as in this project area are subject to high winds and more extreme climate conditions, enhancing vulnerability to wildfire.
  - Existing park roads and trails provide access for vegetation management and increase efficiency of fuel reduction actions.
  - Ability to utilize FPC which has established community trust to provide door-to-door outreach to the residents living adjacent to the project area.
3. Identify the properties to be mitigated, all properties must be identified, including additional, alternate properties that may be substituted should one or more of the properties be withdrawn for eligibility or other reasons.

**The project will target a 500-acre area for fuels reduction work. The project involves City of Portland public land inside Forest Park. Please refer to the FEMA Hazard Mitigation Grant Program Project Map (HMGP Project Map, Attachment 7) and the SFO Worksheet (SFO Data from PortlandMaps, Attachment 4).**

4. Briefly describe the natural environment (i.e. fish, wildlife, streams, soils, plant life), the built environment (i.e. public services, utilities, land/shoreline use), and the socioeconomic environment (demographics, etc)



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. At 5,200 acres, Forest Park is a varied and continuously evolving forest ecosystem. The current condition of the forest is a mosaic of deciduous, mixed and coniferous stands. About 70% of the park's forest stand is dominated by deciduous or mixed canopy trees, a condition that reflects both past logging and fire history. The remaining 30% of the forest is conifer-dominated. Most of the park is even-aged second growth forest, approximately 80-100 years old. Common tree species are Douglas fir, maples, grand fir, red alder, Western red cedar, and Western hemlock.

Project Area Stand Conditions							
Forest Type	Acres (approx.)	% Tree Canopy	% Invasive Cover	% Slope	Typical canopy species (% cover, diameter)	Typical mid-story species	Ecological Health
Deciduous forest	70	60-80%	15-50%	30-60%	Big leaf maple (20-75%, 10-30") and Douglas fir (10-20%, 10-20")	Vine maple, OR grape, ivy, sword fern, snowberry	Poor, Fair
Evergreen forest	105	75-90%	15-80%	30-60%	Douglas fir (1-30%, 20-30+") and big leaf maple (20-50%, 10-20")	Vine maple, OR grape, hazelnut, ivy, sword fern, snowberry, red huckleberry	Poor, Fair, Good
Mixed evergreen-deciduous forest	310	65-95%	1-85%	30-60%	Douglas fir (1-50%, 20-30+") and big leaf maple (20-75%, 10-20"), Western red cedar (20-50%, 10-20"), hemlock (1-20%, 10-20")	Vine maple, OR grape, holly, sword fern, red huckleberry, salmonberry	Poor, Fair, Good
Mixed evergreen-deciduous woodland	10	50%	70%	60-80%	Douglas fir (1-10%, 30+"), hemlock (1-10%, 20-30") big leaf maple (20-50%, 10-20"), and Western red cedar (1-10%, 10-20")	Vine maple, ivy, sword fern	Poor

Mixed evergreen-deciduous shrubland	5	20%	95%	60-80%	Big leaf maple (10-20%, 5-10")	Ivy, blackberry, clematis	Severely Degraded
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Overlooking the Willamette River, the park stretches for nearly eight miles along the northeast slope of the Tualatin Mountains. Forest Park is a peninsula of forest bounded on three sides by urban development. To the east, is the community of Linnton, Portland’s largest industrial area and home to approximately 600 individuals in approximately 256 residences (192 of which adjacent to our project area). 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.

Forest Park’s mosaic of deciduous, mixed and coniferous stands are less prone to sustained and large-scale crown fires than other forest compositions. However, there are additional risks posed by the topographical and climactic conditions of the site. According to the 2009 City of Portland Wildfire Readiness Assessment, under present conditions, dry season fires pushed by an east wind could move upslope through favorable vegetation (e.g., conifer trees & brushy areas) 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 (City of Portland, Wildfire Readiness Assessment: Gap Analysis Report (2009), Page 4, Attachment 13). A long-term key issue is the management of natural vegetation near homes adjacent to the park, the area where fire risk is highest (see Multnomah County’s “Portland Fire and Rescue Overall Wildfire Risk” for a map of risk ratings: <https://www.portlandoregon.gov/fire/article/530167>). Our project area falls within an “Community at Risk” area.

The steep eastern slopes of Forest Park face into strong, dry winds that funnel out of the Columbia Gorge seasonally in autumn. Increased patterns of hot dry summers and earlier springs have increased the wildfire risk. Many of the developments that hug the west side of Forest Park were built without consideration of the path of historic fires. The eastern exposure of the park is adjacent to a State highway and a railway and, in the Linnton community, has the highest concentration of residential development extending into the interior of the forested park land. The risk of loss of homes and businesses built at this Wildland-Urban Interface is significant and growing due to the buildup of hazardous wildfire fuels which includes large biomasses of invasive species (ivy, clematis, non-native blackberry, laurel and holly).

Although mostly forested, the park includes infrastructure such as utility corridors, trails, water tower buffers, and roads that cut through the park such as NW 53<sup>rd</sup> Avenue and Germantown Road. Along its northeastern boundary is U.S. Highway 30/NW St. Helens Road, a busy commuting and trucking route that spans an industrial corridor of tank farms and pockets of residential communities.

U.S. Highway 30/NW St. Helens Road, located east of Forest Park and west of the Willamette River, is a vital north-south arterial for commercial and private motor vehicle traffic. This route is a critical distribution line that supports economic commerce. Parallel to Highway 30 is also the Burlington Northern Santa Fe (BNSF) heavy freight rail line.

As previously mentioned, portions of the project area are proximate to a vital petroleum storage facility that was identified in the FEMA-funded and City-adopted Portland Mitigation Action Plan as a CEI. It is essential to City of Portland’s continuity of operations in the event of a catastrophic event.

The Linnton communities that neighbor the proposed project area consist of 192 Single Family Occupancies (SFO). Using a conservative estimate of two occupants per SFO, there are approximately 384 people living immediately adjacent to the targeted project area.

According to 2000-2006 socioeconomic and demographic data from City-Data.com, the Linnton community has a median household income of \$92,159, a f. The median resident age in the area is 46.8. The population by sex is listed as 47.6% female and 52.4% male (City-Data.com, Attachment 17).

- Outline the work schedule for all proposed project tasks (e.g., survey, appraisal, permitting, inspection requirements, site preparation), and significant milestones throughout the entire period of performance. (See Section 6 of this application for Project Completion Schedule Summary.)

<b>Work Schedule</b>		
<b>Work</b>	<b>Description</b>	<b>Dates</b>
<b>Pre-Application Period</b>		
Project development	Field assessment of fuel conditions and recommended treatments with Oregon Department of Forestry.	December 2018
<b>Year 1</b>		
Begin Neighbor outreach and community education	FPC contacts homeowners in neighborhoods adjacent to project area and distributes defensible space materials. Method will be door-to-door contact and outreach at 2 community events. Partners will launch public information tools (press coverage, website, public education along Highway 30).	May 2020 – October 2020
Project development	Permitting, surveying project boundaries, contracting.	May– August 2020
Initial invasives treatment	PP&R Contractor applies herbicide to ivy, blackberry, clematis and other invasives in the project area.	September- November 2020
Invasive vine and weedy tree removal/ treatment	PP&R Contractor cuts ivy and clematis vines from trees, and cuts invasive trees and applies herbicide to stumps.	September 2020 – June 2021
Selective cedar limbing	PP&R Contractor cuts strategic low growing cedar branches to reduce ladder fuel.	September 2020 – June 2021
<b>Year 2</b>		
Re-launch neighbor outreach and community education	FPC contacts homeowners in neighborhoods adjacent to project area and distributes defensible space materials. Method will be door-to-door contact and outreach at 2 community events. Partners will launch public information tools (press coverage, website, public education along Highway 30).	May 2021 – October 2021
Follow up	PP&R Contractor applies herbicide to ivy, blackberry,	September-

invasives treatment	clematis and other invasives remaining in the project area.	November 2021
Planting	PP&R Contractor and volunteers plant native understory species throughout project area.	December 2021- March 2022

6. Describe the feasibility and effectiveness provided by the proposed project, including engineering design parameters and copies of or references to the following:
- Proposed schematic or detailed engineering drawings, or engineering design
  - Applicable building code/edition or engineering standard used (e.g., for drainage projects this may be a state or local standard or requirement)
  - Level of protection provided by the proposed project (i.e., building code/edition, wind speed, debris impact standard)
  - Any residual risk to the structure from the hazard after project implementation (i.e., adequacy of the structural systems, roof coverings, building envelope, or local load path continuity)

**The City of Portland has extensive history and staff experience in natural area restoration, enhancement and land management. During the past two decades, Portland has aggressively pursued opportunities to restore its natural areas from urban impacts, including large-scale invasive and weedy plant removal. Several hundreds of acres of forestland in Forest Park alone have been restored to healthy conditions since 2015 in the Balch Creek watershed, located in the southern-most portion of the park. Staff experienced in this project oversight will be dedicated to the proposed project, including a natural areas Ecologist and Botanical Technicians who manage vegetation in over 6,000 acres of City owned natural areas.**

**The City has tested methods and protocols for this work. PP&R uses the Integrated Pest Management (IPM) system when designing projects that involve management of invasive weeds in Forest Park. IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques. Techniques utilized include cultural, biological, physical, mechanical, and chemical control. This program carefully addresses potential health and environmental impacts and consistently reviews available science-based information to inform decision making.**

**Through the collective work of several local government, research and non-profit environmental agencies, a widely accepted set of best management practices (BMPs) are used to control common invasive plants like ivy, clematis, non-native blackberry, laurel and holly in Pacific Northwest forests like Forest Park. In addition to PP&R, the other partners utilizing these BMPs in similar environments include the City of Portland Bureau of Environmental Services (BES), Portland office of the Nature Conservancy and the Four County Cooperative Weed Management Area (CWMA).**

**The City uses a model of invasive control and native plant community restoration that combines manual, mechanical and chemical treatment by volunteers and contractors, followed by replanting with native herbaceous, shrub and tree species at appropriate density to reset the forest on a healthy trajectory. Monitoring and follow up retreatment of invasive species will continue in the project areas to ensure that invasives are not allowed to return to a level that impacts the health of the forest.**

**PF&R and PP&R have the resources and capacity to maintain this work after the life of the grant. For the past two decades, the City has maintained a stewardship program and relationships with non-profit partners to recruit a large volunteer base that assists with manual**

removal of ivy and other invasive plants, as well as replanting those areas with native plant species.

Based on years of experience utilizing the proposed schedule of treatments, we are confident these treatments will create forest conditions that are more resilient and fire-adapted. In areas where we have conducted similar treatments, monitoring shows that invasive species are effectively reduced, suppressed native seed banks are able to regenerate once invasive cover is removed and revegetation results in a more diverse and ecologically resilient plant community.

7. Identify any long-term maintenance requirements, frequency of required maintenance, responsibility for project maintenance and a funding source for project maintenance costs.

Portland Parks & Recreation has a long-standing track record for the vegetation management of natural areas throughout Portland. The project area is within the “active” natural area management portfolio of the bureau. The long-term maintenance plan for the project area includes additional vegetation maintenance treatments. These treatments are scheduled on an annual basis, during adaptive management monitoring sessions which occur in the early spring and summer. Treatments include herbicide application, mechanical cutting, and manual labor to control vegetative ladder and ground fuels. A single treatment is typically adequate to control these flammable invasive species on an annual basis for a period of two years, and every other year beyond. Vegetation management of the site is budgeted on an annual basis in the City Portland Parks & Recreation natural area maintenance budget. The estimated annual cost is \$15,000.

8. Describe all other projects that are currently being implemented or expected to be implemented that will affect the proposed project.

PF&R conducts an annual Forest Park Patrol Program in support of the City-wide Forested and Wildland Interface Areas Fire Protection Plan. This plan is primarily designed for the detection and suppression of forest and brush fires in the forested, rural and urban areas of the City. The Forest Park Patrol allows PF&R to become familiar with this large, 5,200-acre park and its features. During the patrol, crews evaluate and document the condition and accessibility of the fire lanes, trails, access roads, and water supplies in the park, assess the current risk of fire danger in the park, observe and take actions to mitigate any unsafe acts or activities that may contribute to the fire danger in the park, and assist in ensuring our fire lanes remain accessible (PF&R Forest Park Patrol, Attachment 18).

In 2018, the Forest Park Patrol Program assisted with fuels reduction in Forest Park by providing fire suppression equipment and on-site personnel during mowing/fine fuel removal in the summer months. These routine treatments are important during Portland’s hot, dry season when the park is most vulnerable to ignitions. The Forest Park Patrol Program will continue to offer on-site assistance during the activities in this grant.

Other local wildfire mitigation efforts include a community-driven initiative to establish a Firewise Community program in Linnton. PF&R and PP&R have offered their support and technical assistance to the parties running this effort and will engage the community however needed as they build this program. To date, three community meetings have occurred with Linnton residents, partner agencies and non-profit organizations such as Forest Park Conservancy. Solicitation is ongoing to enroll homeowners into the Linnton Firewise Community program.

The Canopy Weed Program is a partnership between Forest Park Conservancy (FPC) and West Multnomah Soil & Water Conservation District to remove invasive ivy and clematis from private

property surrounding Forest Park. The crew provides labor to remove invasive vines from trees, but also engages landowners through outreach and education. This program has been in place for the past eight years (and 2 years in Linnton) and is known throughout the neighborhoods that surround Forest Park. Outreach material on the creation of defensible space will be incorporated into this program and training will be provided so that crew members can educate landowners on these established and accepted practices. Guidance on content will be provided by PF&R and the Oregon Department of Forestry.

#### 4.2 Scope of Work Documentation Guidelines

Whenever possible, data that is being used to document existing conditions, or the hazard itself, must be obtained from recognized sources such as federal agencies (e.g., USGS and NOAA), state agencies, and academic organizations. The references and/or supporting documentation from qualified and credible sources (e.g., professional engineer or local government records) should be included when using local data. Any deviations from standard procedures, methods, techniques, or best practices must be thoroughly explained and documented.

#### All supporting documents must be included on the project disc.

Examples of documentation, where applicable to the project include:

- *Engineering Reports*
- *Proposed schematic or detailed engineering drawings*
- *Photographs*
- *Maps*
- *Sketches and/or drawings*
- *Flood Insurance Studies [FIS]*
- *Flood Insurance Rate Maps*
- *Hydrology & Hydraulic studies*
- *FIRMettes to document location of structure(s) in relationship to floodplain*
- *Elevation Certificates*
- *Tax records, Assessor reports*

Applicants must identify the proposed project location (enter latitude and longitude in decimal degrees) and the extent of the proposed project through a graphic and visual representation location on at least a 1:24,000 scale United States Geological Survey (USGS) topographic map, a site plan, and any relevant photographs provided with the project application.



## SECTION 5 Budget and Funding Sources

### 5.1 Estimated Total Costs for Proposed Project

Use the budget categories below for the proposed project. All anticipated project costs should be detailed over the useful life of the project and include all pre-construction and construction tasks, including overhead, administrative expenses, permits and all ancillary costs. Reasonable project cost estimates are essential. **Do not use lump-sum costs.** Projected or increased costs due to a delayed project starting date should be built into the appropriate budget line item. **Do not include contingency costs as a separate line item**; these costs must be built into appropriate budget line items. **Do not include grant management costs (time spent preparing and submitting reimbursement requests, quarterly reports, etc.); these costs are not reimbursable.** Please include any spreadsheets or supporting project cost documentation along with the application.

**Pre-Award Costs** – Costs incurred to develop the project and application from the opening of the application period until the date of grant award are within the pre-award timeframe.

Use the budget template below for your proposed project. **Provide sufficient details for application reviewers to determine eligibility.** You **must include** additional documentation to justify these costs. If your project includes multiple structures (e.g., elevation or acquisition project) prepare separate budget pages for each structure.

TOTAL PROJECT COSTS <i>(p represents pre-award cost)</i>	\$ ESTIMATE
Contractor Costs	<b>\$424,274</b>
In-House PP&R Contractor Costs	<b>\$4,900</b>
Land, structures, rights-of-way, appraisals, etc.	
Administrative Costs	<b>\$127,777.53</b>
Relocation expenses and payments	
Architectural fees	
Engineering fees	
Project inspection fees	
Site work	
Demolition and removal	
Construction	
Equipment	
1p. Portland Fire & Rescue pre-award admin wages	<b>\$7,932.20</b>
2p. Portland Fire & Rescue pre-award admin fringe	<b>\$1,957.29</b>
3p. Portland Parks & Recreation pre-award admin wages	<b>\$3,023.90</b>
4p. Portland Parks & Recreation pre-award admin fringe	<b>\$2,367.08</b>
2p. Land, structures, rights-of-way, appraisals, etc.	
3p. Architectural fees	
4p. Engineering fees	
5p. Other architectural and engineering fees	
6p. Project inspection fees	

<b>TOTAL PROJECT COSTS</b>	<b>\$ \$572,232</b>
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## 5.2 Cost Estimate Narrative

1. If using a contractor, specify all tasks the contractor will be responsible for, the expected product/results, the estimated costs associated with each task and what the staff involvement will be for each task.

<b>Hazardous Fuels Removal – Contractor Costs</b>				
	Treatment	Cost/Ac	AC	Cost
<b>Year 1</b>				
	Cut, stump treat holly and other weed trees	\$150	255	\$38,250
	Cut tree ivy 6' high, stump treat	\$150	150	\$22,500
	Cut blackberry and other brush	\$500	30	\$15,000
	Limb up dense low growing cedar	\$150	10	\$1,500
	Spray blackberry, clematis and ground ivy	\$500	190	\$95,000
	Hauling, bucking and/or chipping	\$220	15	\$3,300
			Subtotal	\$175,550
<b>Year 2</b>				
	Spray blackberry and ground ivy (follow up)	\$500	190	\$95,000
	Plants and planting	\$850	150	\$127,500
			Subtotal	\$222,500
	<b>Grand Total</b>			<b>398,050</b>
<b>Staff Involvement:</b> PP&R's Ecologist or Botanic Technician will provide be physically present during all contracted work to provide technical oversight, as is required by PP&R policy. Prior to contractor work, PP&R's Ecologist or Botanic Technician conduct all necessary permitting, surveying of project boundaries, and administrative oversight of contracts.				

<b>Defensible Space – Outreach &amp; Education – Contractor Costs</b>			
Activity	Description	By	Cost
Staff Time (2 years)	Public outreach and technical assistance to Linnton residents	Forest Park Conservancy	\$ 11,273.10
Printing costs of outreach material (2 years)	Lawn signs, door hanger, seasonal Firewise messaging on billboard adjacent to Forest Park, web page	Contractor	\$ 14,950.90
<b>Grand Total</b>			<b>\$26,224</b>
<b>Staff Involvement:</b> PP&R and PF&R staff will be deeply involved in the design of outreach materials, objectives, and workplan. PP&R staff will also incur in-house contracting expenses for the concept design and materials used for this outreach, totaling \$4,900. That is represented in-house contracting line item.			

2. Include any comments or clarifications to the cost estimates in the above budget summary, including the make-up of pre-award costs (e.g, preliminary engineering, BCA development, etc.).

**Hazardous Fuels Removal:**

**City of Portland will contract for the following work with State-licensed contractors with experience applying herbicide to control non-native invasive vegetation in sensitive natural areas on-foot and with backpack sprayers. For all contractor tasks, City staff will provide access to sites, permitting, traffic control signage, public notices, maps and boundary markers, and will be present during work to provide contractor oversight. Contractors will comply with all regulatory requirements, provide all herbicide, other materials and equipment necessary to complete the job. A detailed description of the tasks is as follows:**

**Spray non-native blackberry, clematis and ground ivy: Contractor will use backpack sprayers for a foliar application with City-approved herbicide at an approved concentration to target plant species identified by City staff. Coverage with herbicide will meet product label requirements and will be adequate to effectively kill treated plants. It is the applicators responsibility to identify target vegetation and to avoid impacts to non-target vegetation.**

**Cut and stump treat holly and other weed trees: Contractor will use hand saws, chainsaws, pole saws or other similar equipment to treat target woody plants by cutting the plant to the ground and immediately applying a City approved herbicide at an approved concentration to the entire cut portion of the stump. When cutting vines, vines will be cut at the ground and again 6 feet high from the ground, or at a similar adequate height to reduce the potential of the vine to act as a fuel ladder.**

**Limb up dense low growing cedar: Cut cedar branches of trees specified by City staff. Equipment used will be hand saws, chainsaws, pole saws or similar.**

**Hauling, bucking and/or chipping: Cut trees, brush and branches will be piled in isolated clusters, chopped into small pieces and scattered in the woods or chipped with a chipper and scattered, as directed by City staff.**

**Plants and planting: Contractor shall provide plants of species, stock size and of local genetic stock as directed by City staff. Contractor is responsible for transport of plants to project site, and proper installation of plants in locations and at planting densities specified by City staff.**

**See Section 4.1.2 for a Summary of Proposed Work.**

**Defensible Space – Outreach & Education**

**PP&R will work with graphic design and communications staff within its bureau to develop the education and outreach concepts and materials needed by Forest Park Conservancy (FPC) for their outreach efforts. Materials production will be contracted, and community engagement will be provided by staff of FPC.**

**See Section 4.1.2 for a Summary of Proposed Work.**

**Pre-Award Costs**

**Pre-award costs consists of the following: 196 hours of grant application development, 15 hours of BCA research and development, and 74.5 hours of grant project planning.**

### 5.3 Applicant Funding Source(s) – Non-Federal Match

The state Hazard Mitigation Grant Program is a grant **reimbursement** program. Jurisdictions must have sufficient resources to assure completion of the project, including any cost overruns. **Advances of funds are not allowed, except in the case of property acquisition where funds can be advanced for the closing of properties.**

The federal share of a grant award for this project is 75 percent of the total, eligible costs. The non-federal cost share is 25 percent.

The applicant share may not include funds from other federal agencies or sources, except for those with authorizing statutes that explicitly allow the funds to be used as a cost-share for other federal grants. Other funds that you are applying for may be included if you can certify that you will be able to cover the eligible costs should the other funds be denied.

**In-Kind Contributions** - The applicant share can include in-kind contributions (i.e. donations) of time of staff and/or volunteers, equipment use or rental, donated materials, etc. Any portion of the non-federal share to be met through an in-kind contribution must identify the contribution by budget category from the previous page and estimated value of the contribution specifically identified in the table below.

If you do not identify in-kind contributions in this application, we will be unable to consider them when processing reimbursement requests following grant award.

In the table below, identify the source(s) and amount(s) of the non-federal share of the project costs. Include the amounts for the federal and state share.

<b>SOURCE OF FUNDS</b>	<b>\$ ESTIMATE</b>
<b>Federal 75%</b>	<b>\$429,174</b>
<b>Local Hard Matching Contributions: Administrative and Project Staff Wages and Fringe</b>	<b>\$143,058</b>
<b>Local In Kind Contributions (Please identify, if applicable):</b>	
<b>Equipment</b>	<b>\$</b>
<b>Materials</b>	<b>\$</b>
<b>Staff Time</b>	<b>\$</b>
<b>Volunteer Time</b>	<b>\$</b>
<b>Other (Please Identify)</b>	<b>\$</b>
<b>Total 25% Applicant Cost Share (Hard and In Kind totals)</b>	<b>\$</b>
<b>TOTAL ALL SOURCES</b>	<b>\$572,232</b>

This application is incomplete if the local share is not specified OR if insufficient local share is identified.

**Additional Comments:**

## SECTION 6 Schedule of Work/Milestone

### Work cannot start until funding has been obligated toward the project.

List the major milestones in the proposed project and provide an estimated timeline for each activity, (e.g. designing, engineering, permitting, land acquisition, demolition, construction, removal of debris, etc.) not to exceed three years. If approved and funded, you will be held to the overall timelines as established in this section (number of months to complete), as this is a scored element of the application.

MILESTONE Description of Activity/Task	# Months to Complete	Est. Completion Date
<b>Outreach to neighbors and community, year 1</b>	<b>6</b>	<b>May 30, 2020</b>
<b>Permitting and contracting</b>	<b>5</b>	<b>August 31, 2020</b>
<b>Initial fuel reduction treatments</b>	<b>10</b>	<b>June 30, 2021</b>
<b>Outreach to neighbors and community, year 2</b>	<b>6</b>	<b>May 30, 2021</b>
<b>Follow up fuel reduction treatments</b>	<b>3</b>	<b>November 30, 2021</b>
<b>Planting</b>	<b>4</b>	<b>March 31, 2022</b>

Completion of all work must be submitted prior to DATE, 90 days before the end of the Period of Performance.

Total Time Required To Complete This Project: **Two Years**

Additional Comments:



## SECTION 7 Environmental Data (Proposed Project Only)

All projects must comply with the National Environmental Policy Act (NEPA). Applicants are required to provide the necessary information for FEMA's Environmental Review Team. Applicants are responsible for compliance with all applicable federal, state, and local regulations, codes, and standards and for securing the necessary permits and approvals.

### **Resources:**

FEMA's Environmental Planning and Historic Preservation Program (EHP)

<http://www.fema.gov/plan/ehp/index.shtm>

EHP Review Process

<http://www.fema.gov/plan/ehp/ehpreview/index.shtm>

Useful Information for Expediting the EHP Review

<http://www.fema.gov/plan/ehp/ehpreview/usefulinfo.shtm>

Historic Preservation Information

<http://www.fema.gov/plan/ehp/hp/index.shtm>

Good Project Descriptions to Expedite EHP Reviews

<http://www.fema.gov/plan/ehp/ehpreview/projdesc.shtm>

Principal Environmental & Historic Preservation Laws

<http://www.fema.gov/plan/ehp/ehplaws/index.shtm>

Useful Environmental Links

<http://www.fema.gov/plan/ehp/envinformation/links.shtm>

### 7.1 Floodplains and Wetlands Disclosure (EO 11988 and EO 11990)

1. Is there a wetland, as defined by either the U.S. Fish and Wildlife Service or the Clean Water Act, on the site or within the immediate vicinity?  Yes  No
  - a. If Yes, Complete the 8 step process outlined below to show compliance with Executive Order 11990 (Wetland Protection).
2. Is this project located in a Special Flood Hazard Area (SFHA) as defined by the NFIP?  
 Yes  No
  - a. If Yes, Complete the following 8-Step Process to show compliance with Executive Order 11988 Floodplain Management.
3. Describe any outstanding issues of compliance with Executive Orders 11988 and 11990, if applicable.  
**N/A**

### 7.2 8-Step Process (For Action Only in Wetland or Special Flood Hazard Area)

More info on the [8 Step Process](#). Answer questions as "Yes" or "No".

**Step 1:** Determine whether the proposed action is located in a wetland and/or the 100-year floodplain (500-year floodplain for critical facilities), or whether it has the potential to affect or be affected by a floodplain or a wetland.

Is the action located in a floodplain or wetland, or may it potentially affect these areas? It

may or may not be designated on a FEMA Flood Insurance Rate Map.  Yes  No

If YES, you must continue through steps 2-8 and make sure to describe your compliance with each step in detail. If NO, you are finished with the 8-step process.

Step 2: Notify the public at the earliest possible time of the intent to carry out an action in a floodplain or wetland, and involve the affected and interested public in the decision-making process.

Step 3: Identify and evaluate practicable alternatives to locating the proposed action in a floodplain or wetland (including alternative sites, actions and the no action option). If a practicable alternative exists outside the floodplain or wetland, FEMA must locate the action at the alternative site.

Step 4: Identify the full range or potential direct or indirect impacts associated with the occupancy or modification of floodplains and wetlands and the potential direct and indirect support of floodplain and wetland development that could result from the proposed action.

Step 5: Minimize the potential adverse impacts and support to or within floodplains and wetlands that were identified under step 4, restore and preserve the natural and beneficial values served by floodplains, and preserve and enhance the natural and beneficial values served by wetlands.

Step 6: Re-evaluate the proposed action to determine first, if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate the hazards to others, and its potential to disrupt floodplain and wetland values. Second, if alternatives rejected at step 3 are practicable in light of the information gained in steps 4 and 5, FEMA shall not act in a floodplain or wetland unless it is the only practicable location.

**N/A – Do Not Answer.**

Step 7: Prepare and provide the public with a finding and public explanation of any final decision that the floodplain or wetland is the only practicable alternative.

Step 8: Review the implementation and post-implementation phases of the proposed action to ensure that the requirements of the order are fully implemented. Oversight responsibility shall be integrated into existing processes.

**N/A – Do Not Answer.**

Public notification and involvement is required for projects in or affecting a floodplain or wetland. ([44 CFR Part 9](#), Floodplain Management and Protection of Wetlands)

Please provide the following information for projects in or effecting a floodplain or wetland.

HMGP PROJECT STATEWIDE APPLICATION 2017 – REVISED September 10, 2018

1. Describe the recent public involvement in the alternative project development and selection process, especially activities involving those individuals that this project may directly or indirectly impact. Include documentation of public meetings and all other public outreach efforts, to include publication of meeting notices, meeting agendas and minutes, etc.
  
2. How has your jurisdiction coordinated the project and possible impacts of this project with neighboring jurisdictions, including counties, cities, states, tribes, fire, police, public works, and utilities? Please explain.
  
3. Will this project affect upstream/downstream/neighboring jurisdictions? Explain, in detail, to what extent this affect will be, and why the problem has not been addressed in the past, either by your jurisdiction or inter-jurisdictionally with the other interests?

### 7.3 Environmental Justice (Executive Order 12898)

1. Are there concentrations of minority or low-income populations in or near the project area?
  - Yes     No
  - a. If Yes, explain:

**The Linnton community consists of an estimated 5.2% multiracial, 4.4% Asian, 2% Hispanic, 1.3% American Indian, and 0.9% black individuals. 10.3% of residents live below the poverty level.**

2. Would they be disproportionately impacted by this project?  Yes     No  
 If Yes, discuss how the project will provide sufficient benefits to outweigh the described impact(s). Also, describe any additional minimization measures that will be taken.

**N/A**

3. Cite the sources of information and include any socio-economic data used to make the above determinations.

**Based on 2000-2016 data from City-Data.com (City-Date.com, Attachment 17)**

### 7.4 Toxic and Hazardous Substances

1. Are there any toxic or hazardous substances in the project area? (Describe any underground storage tanks, above ground storage tanks, septic systems or other potential contaminants). **A waiver of liability form will be required prior to release of any funds.**
  - Yes     No     Potentially
  - a. If yes or potentially, describe
  
2. Is the project site currently or has it been previously used as a commercial/industrial site?
  - Yes     No

If Yes, describe **N/A**

If Yes, a Phase 1 ESA (Environmental Site Assessment) will be required which can be reimbursed through the grant, if awarded (this is an eligible pre-award cost). If the Phase 1 ESA determines there are potential toxic or hazardous substances on the property, then FEMA will require a Phase 2, and possibly a Phase 3 ESA, none of which can be reimbursed by this grant.

**7.5 Endangered Species and Habitats (Endangered Species Act - ESA)**

1. Are there any threatened, endangered, or sensitive species or habitats known to be on or near the project site?  Yes  No

a. If Yes, describe and include any supporting documentation

**The following species could occur in or adjacent to the project area based on location and habitat type. Their occurrence is unlikely for the reasons given in column three (Forest Park Wildlife Report (2012), Wildlife Inventory, Attachment 19).**

<b>ESA listed species Common name</b>	<b>Presence</b>	<b>Findings of the Forest Park Wildlife Report (2012)</b>
Red Tree Vole	Historical	“Although Forest Park habitat appears suitable for red tree voles, targeted surveys in the old-growth forest canopy in 2012 found none. Red tree vole habitat in the north Oregon Coast Range has been mostly eliminated by logging and stand-replacing fires, and the voles are mostly extirpated from that region, so naturally occurring recolonization of the park is unlikely.”
Northern Spotted Owl	Not critical habitat	“The northern spotted owl was a probable historical breeding resident based on habitat descriptions by Lewis and Clark and land surveyors. Even today this species is sometimes found in the park, though it does not breed there. In 2009 an individual northern spotted owl was observed and photographed at the southern park boundary, but this individual was likely a dispersing juvenile and not a breeding adult. Remnant older forest stands in Forest Park may provide adequate breeding sites for northern spotted

		owls, but declining spotted owl population in Oregon due to habitat loss, and the strong, detrimental competition from the invasive barred owl are reducing the potential for spotted owl breeding in the park.”
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Using NOAA Fisheries’ data, our project area was found to fall within the critical habitat of six ESA-listed salmonids (see table below) (Status of ESA Listings & Critical Habitat Designations for West Coast Salmon & Steelhead, Attachment 20). However, due to access limitations in the project area (all perennial streams are culverted), the presence of these species is extremely unlikely. Ongoing fish surveys through the Portland Area Watershed Monitoring and Assessment Program (PAWMAP) of Portland’s Bureau of Environmental Services (BES) have found only three perennial streams in Forest Park that support fish populations, none of which are in our project area. Only one of those streams – Miller Creek, in the northern-most section of Forest Park – has documented presence of salmonids.

Listed Salmonid Species Common name
Columbia River Chum Salmon (Threatened)
Lower Columbia River Chinook Salmon (Threatened)
Lower Columbia River Coho Salmon (Threatened)
Lower Columbia River Steelhead (Threatened)
Upper Willamette River Chinook Salmon (Threatened)
Upper Willamette River Steelhead (Threatened)

The following species could occur in or adjacent to the project area based on location, but not based on the habitat type of the project area (Forest Park Wildlife Report (2012), Wildlife Inventory, Attachment 19).

ESA listed species	Common name	Presence
<i>Eremophila alpestris strigata</i>	Streaked Horned Lark	Not critical habitat
<i>Lomatium bradshawii</i>	Bradshaw's Desert-parsley	No
<i>Lupinus sulphureus</i> ssp. <i>kincaidii</i>	Kincaid's Lupine	No
<i>Sidalcea nelsoniana</i>	Nelson's Checker-mallow	No
<i>Howellia aquatilis</i>	Water Howellia	No
<i>Erigeron decumbens</i>	Willamette Daisy	No

2. Is the project located in or near a waterway or other body of water?  Yes  No
3. Will there be any modification of the waterway or body of water?  Yes  No

## 7.6 Hydraulic Code Compliance (RCW 77.55.100-180)

1. Is the proposed project located below the Ordinary High Water Line in the bed of any salt or fresh water of the state?  Yes  No

a. If Yes, describe and include any supporting documentation

N/A

## 7.9 Code Compliance Assurance

1. Will the project meet all applicable codes and standards for the area in which it is located?

Yes  No

a. If NO, please describe the exemptions or variances that will be required.

N/A

## 7.10 Coastal Zone Management (Public Law 92-583, 16 U.S.C. Sec. 306)

1. Does this project affect a land use, water use, or natural resource of the coastal zone? The CZMP applies to all activities within coastal counties as well as activities outside these counties, which may impact Oregon's coastal resources.  Yes  No

a. If Yes, send a brief description of the project, a project site map, and a completed CZM Federal Consistency form to the following email: [angie.lane@state.or.us](mailto:angie.lane@state.or.us)

## 7.11 Historic and Archaeological Resources (Public Law 96-515, Sec. 96)

1. Is there a potential for archaeologically-significant resources to be located on or near the site?  Yes  No  Unsure

2. Are there structures in the project area that are 49 years or older?  Yes  No

a. If yes to either Question 1 or 2, list any structure 49 years or older below and/or description of potential archaeologically-significant resources. Provide the date/age of the building and the date of any remodel. Provide any known historical knowledge of the site, such as past use, owners or renovations.

b. If yes, have you made contact with the [State Historic Preservation Officer](#) to determine the historic significance of each structure 49 years or older and/or the potential for archaeological resource impact?  Yes  No

Explain:



**SECTION 9 Certifications and Assurances**  
**FEMA Form 20-16B: Assurances – Construction or Field Projects Only**

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the nonfederal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or state.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 USC Sections 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 CFR 900, Subpart F).
9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 USC Section 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
10. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (PL 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as

amended (20 USC Sections 1681- 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 USC Section 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 USC Sections 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (PL 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (PL 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) Sections 523 and 527 of the Public Health Service Act of 1912 (42 USC Sections 290-dd-3 and 290-ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 USC Section 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (PL 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and Federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
  12. Will comply with the provisions of the Hatch Act (5 USC Sections 1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
  13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 USC Sections 276a to 276a-7), the Copeland Act (40 USC Section 276c and 18 USC Section 874), and the Contract Work Hours and Safety Standards Act (40 USC Sections 327-333) regarding labor standards for federally assisted construction subagreements.
  14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (PL 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
  15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (PL 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 USC Section 1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 USC Section 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (PL 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended (PL 93-205).
  16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 USC Section 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
  17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC Section 470), EO 11593 (identification and
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preservation of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 USC Section 469a-1 et seq.).

18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.
19. Will comply with all applicable requirements of all other Federal laws, Executive Orders, regulations, and policies governing this program.
20. Will comply with the minimum wage and maximum hour provisions of the Federal Fair Labor Standards Act (29 USC Section 201), as they apply to employees of institutions of higher education, hospitals, and other nonprofit organizations.
21. Will obtain approval by the appropriate Federal agency of the final working drawings and specifications before the project is advertised or placed on the market for bidding; that it will construct the project, or cause it to be constructed, to final completion in accordance with the application and approved plans and specifications; that it will submit to the appropriate Federal agency for prior approval changes that alter the cost of the project, use of space, or functional layout, that it will not enter into a construction contract(s) for the project or undertake other activities until the conditions of the construction grant program(s) have been met.
22. Will operate and maintain the facility in accordance with the minimum standards as may be required or prescribed by the applicable Federal, State, and local agencies for the maintenance and operation of such facilities.
23. Will require the facility to be designed to comply with the "American Standard Specification for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped," Number A117.- 1961, as modified (41 CFR 101-17.703). The applicant will be responsible for conducting inspections to ensure compliance with these specifications by the contractor.
24. If any real property or structure thereon is provided or improved with the aid of Federal financial assistance extended to the applicant, this assurance shall obligate the applicant, or in the case of any transfer of such property, any transfer, for the period during which the real property, or structure is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits.
25. In making subgrants with nonprofit institutions under this Comprehensive Cooperative Agreement, it agrees that such grants will be subject to OMB Circular A-122, "Cost Principles for Nonprofit Organizations" included in Vol. 49, Federal Register, pages 18260 through 18277 (April 27, 1984).

Authorized Signature \_\_\_\_\_

Authorized Applicant Agent: \_\_\_\_\_  
(Please Print Name)

Date:

Alternate Authorized Signature \_\_\_\_\_

Authorized Alternate Applicant Agent: \_\_\_\_\_  
(Please Print Name)

Date:

## SECTION 10 Benefit Cost Analysis

Benefit Cost Analysis (BCA) is done using the latest FEMA methodology and benefit-cost module *BCA Software*. FEMA and OEM will review the BCA for all proposed mitigation projects to determine whether the information provided in the application demonstrates the following:

- BCA is prepared in accordance with accepted FEMA BCA practices.
- Project is cost effective (over the life of the project the project's benefits exceed the project's costs).
- BCA components are credible and well documented.

**BCA Waiver:** ONLY for acquisition of substantially damaged properties in floodway or floodplain, and for planning grants (meaning, you do not have to do a BCA for these project types).

**Pre-Calculated Benefits:** You may not have to do a BCA if you fall under a pre-calculated benefit for these project types –

- Elevations.
- Fuels Treatment.
- Property Acquisition.

Contact Angie Lane, SHMO, at [angie.lane@state.or.us](mailto:angie.lane@state.or.us) to find out if a BCA is required for one of the project types noted above.

**Environmental Benefit:** You may use environmental benefits to move the BCR above 1.0 or higher, however you must already have a .75 prior to using environmental benefits. Contact the BCA Helpline for questions regarding environmental benefits.

**BCA Narrative:** You must include the .zip file that is exported from the BCA software, after completing the BCA. In addition, you must provide a narrative that describes the situational information utilized when creating the BCA and then also describe how you determined past damages/past damage history, and benefits. Append the .zip file as a separate document from the BCA Narrative.

**The State does not perform BCA for sub-applicants, so the applicant would need to hire a contractor or utilize the BCA tool themselves.** The State Hazard Mitigation Officer keeps a list of contractors that have conducted BCA's for other sub-grantees. Contact Angie Lane, State Hazard Mitigation Officer, (503) 378-4660, [angie.lane@state.or.us](mailto:angie.lane@state.or.us).