Environment and Critical Areas Element

The City of White Salmon is committed to preserving and enhancing the quality of the environment and protecting critical areas for the important ecological and social functions they provide within the community.

Background

Existing Conditions

The City of White Salmon is located in the spectacular canyon known as the Columbia River Gorge where the Columbia River travels through the Cascade mountain range. The surrounding area includes sheer cliffs that overlooks Washington's north side of the Columbia River and, on the south side, Oregon's mountains and waterfalls. Because of the surrounding area's unique geological, historical, and cultural attributes, the Gorge was designated a federally protected National Scenic Area in 1986. Managed by the National Forest Service and the Columbia River Gorge Commission, the Columbia River Gorge National Scenic Area has a number of protections that preserve and enhance the various attributes of the Gorge, including historic, cultural, and natural resources, as well as scenic views.

Development and growth in the National Scenic Area is primarily concentrated in Urban Exempt Areas, including White Salmon. The broader National Scenic Area is regulated to protect and enhance cultural, natural, scenic, and recreational resources within the Gorge. The City of White Salmon is one of thirteen designated Urban Exempt Areas under the National Scenic Area. As a result, it is a primary focus area for growth and development within the Gorge and is exempt from National Scenic Area regulations. Moreover, while the National Scenic Area maintains land outside of the city much closer to its natural state; urban development is promoted within White Salmon and its adjoining, unincorporated Urban Exempt Areas.

White Salmon and the surrounding areas include a diverse mix of natural environments and systems. The Columbia River serves as the city's southern boundary and offers habitat for a variety of aquatic and riparian species. The city's Columbia River frontage is roughly a mile in length, spanning east and west of the existing Hood River-White Salmon interstate bridge. Jewett Creek runs along the eastern portion of the city, and the White Salmon River is roughly half a mile west, bordering the Urban Exempt Areas. Terrestrial habitats associated with existing vegetation are abundant, and forest and shrub land dominate large portions of the northern, western, and eastern outskirts of White Salmon. Common tree species within the city include Oregon White Oak (*Quercus garryana*), a state-protected species; Black Cottonwood (*Populus balsamifera trichocarpa*); Ponderosa Pine (*Pinus ponderosa*); and Douglas Fir (*Pseudotsuga menziesii*). The prevailing winds moving through the Gorge help curtail pollution and ensure high air quality in White Salmon. The city of White Salmon and its Urban Exempt Areas lie in a transition zone between the maritime climate west of the Cascade mountain range and the dry continental climate of the intermountain region to the east. This transition zone is characterized by mild, dry summers and cool, wet winters. The Gorge serves as an airflow conduit, equalizing air pressures between the west and east side of the Cascades. The Gorge normally experiences strong, westerly winds in the summer and cold, easterly winds in the winter. The city receives an average of 31 inches of precipitation per year, which mostly comes in the form of rainfall from October to May. In July, the average daily high temperature is 82 degrees Fahrenheit, with an average daily low temperature of 55

degrees Fahrenheit. Winter temperatures are also mild; in December, the average daily high temperature is 40 degrees Fahrenheit, with an average daily low temperature of 30 degrees Fahrenheit.

Existing Plans and Development Regulations

The City of White Salmon has adopted a number of plans and development regulations to ensure that the environment is protected and enhanced (see Table 1). These various plans and development regulations balance the need for environmental protections with other demands, such as economic development, private property rights, and public infrastructure (see Appendix X, _____).

Table 1: Existing Plans and Development Regulations

Plan or Development Regulation
Title 18, Environment, White Salmon Municipal Code Including: • Critical Area Ordinance (18.10) • Environmental Protection (SEPA Review) (18.20) • Shorelines Master Plan and Program (18.30) • Tree Ordinance (18.35)
Title 15.28, Floodplain Construction Restrictions, White Salmon Municipal Code Including: • Requirements for new development to identify flood hazard risks • Building and site requirements in flood-prone areas
Title 13.08, Water Department, White Salmon Municipal Code Including: • Pollution of water supply prohibited
Title 13.01, Construction Permitting, White Salmon Municipal Code Including: • Recommendations for landscaping and irrigation plan • Stormwater runoff control standards • Erosion and sedimentation control standards

Critical Areas

The Washington State Growth Management Act (GMA) requires that all local governments adopt regulations to protect the five "critical areas" in the state; wetlands, critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas (defined below). Klickitat County and cities within it are not required to fully plan under the GMA but are required to plan for the protection of these critical areas. As a "partially planning" city under GMA, White Salmon must use best available science (BAS) to justify regulation of critical areas and guide future regulation updates. This includes identifying, designating, and protecting critical areas through a Critical Area Ordinance (CAO) (Revised Code of Washington [RCW] 36.70A). White Salmon's CAO is included as Chapter 18.10 of the White Salmon Municipal Code and includes development standards and restrictions when building on or near a critical area. Critical areas in White Salmon are displayed on Figures X – X.

Wetlands

The purpose of the critical areas provisions concerning wetlands is to protect existing wetlands and maintain no net loss of their functions and values. Wetland ratings, which determine protective buffers

and other regulatory standards, are based on the Washington State Department of Ecology's (Ecology) guidance documents.

Critical Aquifer Recharge Areas

Critical aquifer recharge areas, a regulated critical area under RCW 36.70A, are not present within White Salmon and, therefore, are not regulated by its CAO.

Fish and Wildlife Habitat Conservation Areas

The purpose of regulating the use of fish and wildlife habitat conservation areas is to preserve and protect those areas with which anadromous fish, threatened and endangered species, and species of local importance have a primary association. While most of White Salmon's land areas are designated for urban growth, and while new development as well as redevelopment is encouraged by adopted land use policies, it is important that future growth and development occur in a manner that is sensitive to the natural habitat resources of the city and Urban Exempt Areas. The primary fish and wildlife habitat conservation areas within White Salmon include streams and their riparian areas and Oregon white oak woodlands. Development has presented a particular challenge for the preservation of Oregon white oak woodlands, and the City is looking to balance protection of this species with the need to provide flexibility to developers.

Frequently Flooded Areas

Frequently flooded areas can present significant hazards to health, safety, and property under inappropriate land uses. Floodplains and other areas subject to flooding perform important hydrological functions and may present a risk to persons and property. Classification of frequently flooded areas should include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency (FEMA). Flood maps for Klickitat County are currently in the process of being updated by FEMA. Floodplains are protected through White Salmon's floodplain construction restrictions in Chapter 15.28 of its code in compliance with FEMA requirements.

Geologically Hazardous Areas

Geologically hazardous areas can include areas susceptible to landslides, erosion, and seismic hazards from earthquakes. Steep slope areas, which are often indicative of underlying landslide or erosion hazards, are prevalent in White Salmon. Geologically hazardous areas can pose a threat to public safety and property or infrastructure damage when inappropriate development is sited in areas of hazard. Areas susceptible to one or more of the following types of hazards are designated as geologically hazardous areas.

Landslide Hazard Areas

Landslide hazards exist in areas with certain "unstable" soils and in documented areas of previous landslides, usually in unconsolidated or partially consolidated sediments. Human activities, such as diversion of water from rooftops and paved areas, improperly placed and compacted fills, dumping of debris, road and utility cuts into hillsides, excavation for building sites, and failure of retaining walls, can also increase the potential for landslides.

Erosion Hazard Areas

Erosion hazards are associated with slopes with certain surface water and geological characteristics. The most effective means of erosion control is a set of construction management practices that limit

clearing, require mitigation, limit soil disturbance to dry seasons of the year, and require revegetation and maintenance of developed sites to prevent erosion after development.

Seismic Hazard Areas

Seismic events can cause damage as result of landslides, soil liquefaction, and/or high-amplitude ground shaking. Areas underlain by soils of low density in association with shallow groundwater are liquefaction hazard areas and may include river drainages, beach areas, ponds, and lakes. The impact of seismic activity can be mitigated through regulatory requirements, including adherence to building codes that require earthquake-resistant design and construction. The International Building Code regulates the design and construction of buildings located in seismic hazard areas.

Shorelines

The Shoreline Management Act (SMA) of 1971 requires most local governments, including all counties and about 250 cities and towns, to develop and implement Shoreline Master Programs (SMPs). The SMA's overarching goal is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The city of White Salmon has approximately 1 mile of frontage on the Columbia River, which is identified as a "shoreline of statewide significance," and as such, is required to develop and implement an SMP. The City's current SMP, effective as of December 26, 2017, serves to

1. Guide future development of the City's shorelines in accordance with local goals and in compliance of the SMA
2. Ensure that development of the shoreline will result in no net loss of ecological function
3. Provide for preservation and enhancement of shoreline ecological resources
4. Provide a fair and equitable process for applicants and the public to review and comment on shoreline development proposals

The City of White Salmon's SMP works in tandem with a variety of other federal, state, and City agencies and regulations to ensure that the shoreline of the Columbia River continues to provide its ecological functions.

Stormwater Quality

Urban areas, such as White Salmon, often have increased stormwater runoff as a result of more impervious surface relative to nonurban areas. Pavement, buildings, parking lots, and other urban development prevent or restrict natural water infiltration during and after rainfall events. Increased water runoff can carry pollutants that are potentially harmful into streams and rivers, putting both human health and wildlife health at risk. In the city of White Salmon, stormwater management is regulated by Title 13.01 of the White Salmon Municipal Code. Generally, the City's stormwater runoff control standards seek to minimize the amount of impervious surface and encourage on-site infiltration. Low-impact development techniques, such as permeable paving, raingardens, bioswales and other bioretention control methods, and preservation of on-site, native vegetation are all encouraged through the City's stormwater control standards.

White Salmon is not a permittee under the State of Washington's National Pollutant Discharge Elimination System Phase II permit because it does not operate a stormwater system that discharges to a water of the United States and it is not located in a designated Urbanized Area; defined by the U.S. Census Bureau as a land area comprising of one or more places that together have a residential

population of at least 50,000. Because White Salmon is not a National Pollutant Discharge Elimination System permittee, it is not required to regulate runoff using the state's stormwater manual. In the future, however, the City may be required or may optionally choose to regulate stormwater runoff using the state's manual to improve water quality in the community.

Air Quality

Several geographical and environmental factors affect the air quality in White Salmon. Its unique location in the Gorge, proximity to Interstate 84, and seasonal wildfires in the region all contribute to increased particulate matter and other air pollutants. Due to the city's surrounding topography, emissions from vehicle travel and other particulate matter can get boxed in around White Salmon during periods of low wind. However, east-west winds that travel through the Gorge clear out trapped particulate matter and smog. During regional wildfire events, those same winds can bring dangerous levels of wildfire smoke through the Gorge and into the city. During these primarily seasonal events, air quality in White Salmon can consistently reach levels that are unhealthy for sensitive groups, and occasionally reach levels that are unhealthy for all groups. Air quality in White Salmon is monitored by Ecology's Central Regional Office, which is responsible for monitoring air quality in White Salmon and advising both the public as well as agencies of air quality standards, health hazards, and regulations. Ecology uses regulations and other controls in accordance with the provisions of the Federal Clean Air Act.

Wildfire Risk

The city of White Salmon and its Urban Exempt Area is a prime example of a wildland-urban interface with strong potential for a catastrophic wildfire event that could destroy properties and threaten human life. The following conditions are found throughout, or in certain portions of the area. Some areas have all, or most, of these conditions.

- Steep slopes, some in excess of 60 percent,
- Strong winds in the Columbia River Gorge during much of the fire season,
- Light, "flashy" vegetation fuels consisting of brush and/or uncut grass,
- Heavy fuel loads of mature conifer and hardwood trees with brush underneath,
- Access road and street problems including single means of ingress and egress, narrow drives, and turning radius limitations
- Homes with no, or very limited, defensible space; and
- Numerous homes with combustible construction materials; i.e., shake roofs, cedar siding, wood decks.

A Community Wildfire Protection Plan was prepared for the cities of White Salmon and Bingen and the Urban Exempt Areas in 2004. The plan identifies high wildfire hazard risk areas and lists priority projects designed to reduce the level of risk throughout the planning area. In 2009, the City received a grant from the Forest Service to be used specifically to assist homeowners to create defensible space around their structures.

Climate Change

Climate change can be defined as changes in global or regional weather patterns attributed largely to increased levels of greenhouse gas (GHG) emissions in the atmosphere. GHG emissions are overwhelmingly caused by human actions. Carbon dioxide (CO_2) makes up the vast majority of GHGs,

followed by methane (CH_4), and nitrous oxide (N_2O). These gases are omitted into the atmosphere from the combustion of fossil fuels, such as coal, oil, and natural gas. According to the Environmental Protection Agency, the transportation sector was the largest emitter of GHGs in the United States, primarily from burning fossil fuels for cars, trucks, ships, planes, and trains. This was followed by electricity production, industry, and commercial and residential uses. The effects of climate change are apparent at the continental and global scale and are increasingly being felt at the regional and local level. Effects of a changing climate may lead to a greater number – and more intense – heat waves, droughts, wildfires, heavy rains, floods, and landslides, as well as rising surface water temperatures that could affect resident and migratory fish species and their habitats, threatening their long-term survival. Common strategies for reducing greenhouse gas emissions include deploying renewable energy sources such as wind and solar, enhanced energy efficiency in buildings, and the preservation of forests.

Goals and Policies

The following goals and policies seek to ensure that the social and ecological functions of environmental systems and critical areas are protected, impacts to these resources are properly mitigated to achieve no net loss of functions, and environmentally conscious development is encouraged within the city of White Salmon in conformance with the City's adopted CAO and other applicable regulations.

GOAL E/CA-1: Protect, maintain, and improve the environmental quality of White Salmon.

Policy E/CA-1.1: Periodically review and amend subdivision, drainage, land clearing, grading, critical areas, and other land use and development regulations as needed to protect resources and the public health, safety, and welfare of White Salmon residents.

Policy E/CA-1.2: Educate the public with programs and literature on habitat enhancement and protection. Appropriate subjects include maintenance of natural vegetation, installation of artificial habitats (e.g., bird and bat boxes), green construction, proper disposal of pollutants, and proper use of fertilizers, herbicides, and pesticides.

Policy E/CA-1.3: Conserve natural resources through nonregulatory and regulatory methods that may include development regulations, ecologically sensitive design, and restoration programs.

Policy E/CA-1.4: Encourage participation in City-run community cleanup events.

Policy E/CA-1.5: Protect and improve the City's air quality, groundwater quality and quantity, and surface water quality, while minimizing public and private costs.

Policy E/CA-1.6: Encourage low-impact development methods where appropriate. This includes clustering to retain native vegetation and use of permeable pavement, soil amendment, green roofs, green streets, and other methods.

Policy E/CA-1.7: Coordinate with Klickitat County and the Washington State Department of Natural Resources to conserve and protect groundwater resources of the city and Urban Exempt Areas.

Policy E/CA-1.8: Encourage the planting and maintenance of aesthetically attractive, native, and low-maintenance vegetation throughout the city by private individuals and volunteer organizations.

Policy E/CA-1.9: Ensure immediate restoration of land after vegetation removal and grading through phased clearing and grading, replanting standards, and other appropriate engineering and revegetation techniques.

Policy E/CA-1.10: Require all public and private properties to be clean, free of litter or debris, and in good repair.

Policy E/CA-1.11: Maintain and expand, when appropriate, the City's recycling program, including consideration of a city-wide composting program.

Policy E/CA-1.12: Consider participating in innovative environmental quality efforts, such as In-Lieu Fee Programs and Voluntary Stewardship Programs.

GOAL E/CA-2: Identify, protect, restore, and enhance White Salmon's critical areas to preserve their social and ecological functions, ensure public safety, and prevent loss of private property.

Policy E/CA-2.1: Use Best Available Science when identifying critical areas and best management practices when developing near and within critical areas and associated buffers.

Policy E/CA-2.2: Strengthen interagency coordination and cooperation with agencies who have jurisdiction over critical areas, including working with Klickitat County during annexations of land within the Urban Exempt Areas to identify and protect critical areas.

Policy E/CA-2.3: Ensure that land subject to natural disasters and hazards be designated for uses that avoid or minimize loss of life and property.

Policy E/CA-2.4: Avoid impacts to critical areas and their associated buffers when constructing public facilities. Where unavoidable, necessary public facilities should be designed to minimize impacts, restore impacted critical areas to the extent practicable, and mitigate unavoidable impacts to the critical areas and associated buffer.

Policy E/CA-2.5: Emphasize protection of riparian areas and designated wildlife habitat that are connected to other critical areas or large blocks of open space.

Policy E/CA-2.6: Accommodate deviations in critical area resource protection requirements, provided that alternative methods and designs result in improved functions and values of the critical area and its buffer through study and findings prepared by a qualified professional.

Policy E/CA-2.7: Protect threatened, endangered, sensitive, and candidate species, and their habitats, as identified by federal and state agencies.

Policy E/CA-2.8: Avoid clearing of vegetation that reduces erosion, maintains slope stability, provides wildlife and aquatic habitat, and buffers wetlands and stream corridors.

Policy E/CA-2.9: Implement design solutions in order to protect site-specific critical areas. Solutions may include planned unit developments, cluster housing, low-impact development, and density transfers.

Policy E/CA-2.10: Restrict development on unstable and steep slopes to prevent loss of private property and ensure public safety.

Policy E/CA-2.11: Minimize and mitigate soil erosion during and after construction by using best management practices.

Policy E/CA-2.12: Continue to classify and protect residences and business from frequently flooded areas.

Policy E/CA-2.13: Implement nonregulatory methods to protect critical areas, such as easements or property acquisition.

GOAL E/CA-3: Reduce hazard fuels throughout the City and its Urban Exempt Area to a level that supports fire departments to prevent injury or death to people and to reduce property damage.

Policy E/CA-3.1: Update the City's Community Wildfire Protection Plan each year to address changing conditions.

Policy E/CA-3.2: Establish and maintain a committee to implement the Community Wildfire Protection Plan. The committee should review the Community Wildfire Protection Plan and update it yearly.

Policy E/CA-3.3: Raise community awareness of wildfire risk and what property owners can do to reduce that risk. Make wildfire risk reduction information available to homeowners. Hold "Firewise" public meetings to disseminate information and answer questions about wildfire risk reduction.

Policy E/CA-3.4: Seek grant opportunities to help residents pay for hazard fuel reduction on their property.

Policy E/CA-3.5: Periodically review and consider reasonable regulatory fire protection standards for inclusion in the development code.

GOAL E/CA-4: Address climate change by working towards reducing greenhouse gas emissions, increasing energy efficiency, and improving infrastructure resiliency in White Salmon.

Policy E/CA-4.1: Reduce the reliance on fossil fuels and incorporate renewable energy sources, when appropriate, in municipal operations.

Policy E/CA-4.2: Implement a resource-conservation approach for managing City-operated facilities that aims to reduce energy and water usage and that leads to reduced facility costs.

Policy E/CA-4.3: Develop infrastructure for, and promote the use of, transportation modes that reduce the use of fossil fuels such as biking and walking.

Policy E/CA-4.4: Encourage compact development near commercial areas to decrease sprawl and reduce vehicle miles traveled.

Policy E/CA-4.5: Develop a City building policy and procurement strategy that encourages new building design and remodels of existing buildings that minimize energy and resource consumption,

such as solar panels, insulation retrofits, and efficient air and water heating systems.

Policy E/CA-4.6: Plan and develop capital facilities that are sustainable over the long-term and environmentally sound.

Policy E/CA-4.7: Increase the resiliency of critical infrastructure through monitoring, maintenance, planning, investment, and adaptive technology.