

PUBLIC SAFETY ELEMENT

6.1 INTRODUCTION

State requirements for Safety Elements has evolved over time from the identification of unreasonable risks, such as flooding and seismic hazards, and policies for the protection of the community from such risks, to requiring that climate change vulnerabilities and adaptations be integrated and aligning the General Plan with the Humboldt County Operational Area Hazard Mitigation Plan. The City of Arcata Public Safety Element addresses the protection of life and property from natural hazards, including seismic hazards, such as earthquake and tsunami; geologic hazards including landslides; wildfire; severe weather and flooding; and human-caused hazards including those related to hazardous materials use, storage, transport, and disposal, as well as aviation hazards. This Element also addresses hazards that may be intensified by climate change, including more severe storms that worsen landslides and flooding and droughts and heat that may increase wildfire frequency or severity. The overview of each hazard in this Element includes a summary of the climate change impacts on the hazard based on the climate change vulnerability assessment prepared for the Hazard Mitigation Plan.

This Element is intended to facilitate safety from hazards, achieve racial and social equity, and enhance community preparedness and resilience. Risks can be reduced by considering hazards, and the potential influence of future climate change on those hazards, in land use and development decisions, and by implementing policies and programs to reduce losses to life and property. Effective land use planning, site design, and construction decisions can significantly reduce potential hazard levels and can also facilitate recovery after a disaster.

Overview of Emergency Preparedness. Preparation for, and timely and adequate response to emergencies are essential community services that require planning and community-wide coordination. Emergency preparedness is the combined responsibility of the City, emergency response organizations, and community residents. The City adopted the Hazard Mitigation Plan on March 18, 2020, to guide pre- and post-disaster mitigation of the hazards identified. The City of Arcata Emergency Operations Plan also informs the City's response to and recovery from emergencies/disasters and outlines coordination among departments and regional partners. The 2021 update to the Emergency Operations Plan integrated the Hazard Mitigation Plan's evaluation of hazards affecting the City and the hazard mitigation action plan.

The Arcata Fire Protection District and City Police Department provide critical emergency response services and leadership and serve as the community's primary response agencies in emergency situations. These agencies are most efficient when they can rely on emergency response organizations, such as the Governor's Office of Emergency Services and the County Office of Emergency Services, community groups, and individuals to provide organized support when needed. The Arcata Emergency Response Team (CERT) consists of residents who have been trained in areas such as fire prevention and suppression, light search and rescue, and

disaster medical operations in order to be able to assist their community in an emergency. The Emergency Operations Plan integrates the HPM hazard assessment and identifies the

Overview of Arcata's Potential Seismic and Geologic Hazards. The northern coast is one of California's most seismically active regions, and special precautions must be taken to protect residents from the effects of seismic events and hazards. Faults in and around the community, and the offshore Cascadia subduction zone (a 750-mile long major thrust fault) are considered active. Recent geotechnical studies identify fault zones, as well as areas susceptible to ground shaking, liquefaction, and tsunami run-up that represent safety hazards to the community. The potential for a major seismic event that may generate a tsunami prompted the formation of the Redwood Coast Tsunami Work Group, an organization comprised of local, state, Tribal, federal agencies and non-governmental organizations to define the needs of local jurisdictions to mitigate the North Coast earthquake and tsunami hazard and to promote a coordinated, consistent mitigation program for all coastal areas. The California Geological Survey Seismic Hazards Program has completed probabilistic tsunami hazards modelling and public tsunami hazard area maps for Humboldt County in 2021, which show tsunami inundation potentially impacting the South G Street, South of Samoa, and portions of the Windsong neighborhood. The California Geological Survey is now in the process of developing land use guidance pursuant to the Seismic Hazards Mapping Act for areas subject to potential tsunami inundation that is expected to be available to guide local land use planning by the end of 2022. Geologic hazards also include potential landslides and slope instability on Arcata's hillsides and soil erosion. Mapped hazard areas are shown on Figure PS-a, located in a map pocket at the end of this Element.

The Cascadia Subduction Zone

North of the Mendocino Triple Junction, the Gorda Plate and its northern extension, the Juan de Fuca Plate, move eastward on a collision course with the North American Plate. The Gorda Plate slowly descends beneath the North American Plate along the Cascadia Subduction Zone. Most scientists believe that the upper 50 miles or so of the contact between the Gorda Plate and the North American Plate is locked. This boundary is called the megathrust.

Source: [Living on Shaky Ground](#).

Humboldt State University

Potential Flooding Hazards Overview. Arcata is bordered by the Mad River to the north and bisected by several streams. These watercourses and their associated floodplains have been altered over time and are subject to future change. They have the potential, during peak flows, to overtop their banks with sufficient volume and velocity to damage adjacent structures, facilities, and natural areas. The California Division of Safety of Dams maintains dam breach inundation mapping for Matthews Dam on the Mad River in Trinity County. A dam breach could inundate portions of Boyd Road area and the Mad River Parkway area. A number of Arcata's creeks have been modified with culverts, channels, and coverings. These structures inhibit natural infiltration and flood protection, resulting in increased flood volumes and velocities downstream. There is strong community interest in returning local creeks to more natural conditions, and incorporating measures, such as detention basins and natural infiltration, that will reduce flood velocities and



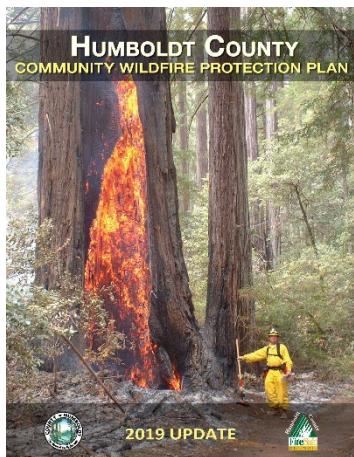
volumes.

ARCATA'S DRAINAGE MASTER PLAN GOALS INCLUDE:

- Minimize increases in the volume and the flow of stormwater runoff associated with new development, so as to minimize increases in the hazards and the costs associated with flooding.
- Minimize the erosion potential from a development or construction site so as to prevent deposition of sediment into streams and other receiving water bodies.
- Maintain the integrity of stream hydrology by preventing stream channel erosion so as to sustain the hydrologic functions of streams.
- Reduce the pollutant load in stormwater runoff from developing and urbanizing areas so as to preserve the natural biological functions of streams and other receiving water bodies (and flood management and stream habitat quality).
- To the extent practical, acquire easements and properties necessary for effective drainage management.

Fire Hazards Overview. Despite the coastal influences and moist climate, the Office of the State Fire Marshal has classified the Planning Area surrounding the City as “Moderate” Fire Hazard Severity Zone with small pockets of “High” fire severity, indicating the relative level of wildfire hazard. Areas throughout the State are aggregated into Moderate, High, or Very High zones, based on fuel loading, slope, fire weather, and other relevant factors including areas

where winds may be a major cause of wildfire spread. In addition to state Fire Hazard Severity Zone mapping, the U.S. Forest service has identified approximately 70 percent of the City as a wildland urban interface, or “WUI”, which is the area where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.



The portions of the Planning Area outside City limits are within State Responsibility Area, which means that CAL FIRE is financially responsible for preventing and suppressing wildfires, as defined in Section 4102 of the Public Resources Code. All areas in State Responsibility Areas are zoned with a wildfire hazard rating, including non-wildland areas and water bodies. Areas within City

boundaries are Local Responsibility Area. The Arcata Fire Protection District (Fire District) boundary includes the City and sphere of influence, and most of Planning Area. The upper Jacoby Creek area and a portion of the Planning Area on the western side of Fickle Hill Road contain rural residential development and are outside the boundaries any fire related district.

The Fire District maintains three fire stations, two located within the City (the Arcata Station at 631 9th Street and the Mad River Station at 3235 Janes Road) to provide rapid response to all incidents within its service area. The Fire District maintains effective mutual aid agreements with Humboldt Bay Fire, Samoa Peninsula Fire Department, Blue Lake Fire Protection District, Fieldbrook Fire Department, KFPD, Westhaven Volunteer Fire Department, and CAL FIRE.

Hazardous Materials Overview. Human exposure to hazardous materials and conditions must be minimized to ensure the wellbeing of the community. Reducing this exposure must include cleaning up contamination from the past and avoiding use of hazardous materials in the future. Hazardous materials used primarily in wood products processing and auto-related operations have resulted in site and groundwater contamination that remain today. Minimizing future health hazards can be accomplished by:

1. Elimination of many toxic substances.
2. Substitution of environmentally safe alternatives.
3. Safer handling and disposal procedures of those materials still available.

There is community interest in replacing harmful substances and materials with biodegradable and less damaging substitutes, and cleaning up existing contaminated sites.

Airspace Protection Overview

The Humboldt County Airport Land Use Compatibility Plan Airspace Compatibility Policy Map for California Redwood Coast-Humboldt Airport (Figure 4-3) shows the aircraft precision instrument approach path from the southwest for California Redwood Coast-Humboldt Airport overlaying portions of the City limits and Planning Area. The Federal Aviation Administration establishes standards to protect airspace by defining imaginary surfaces that limit maximum building heights above ground level in areas around airports. The California Redwood Coast-Humboldt Airport approach surfaces are hundreds of feet above ground level within the City and new development will likely not pose new hazards, or become an obstruction, to navigation. Nonetheless, new development in areas underlying airspace protection areas, as identified in Airspace Compatibility Policy Map for California Redwood Coast-Humboldt Airport, should be evaluated to ensure that such development does not result in hazards to air navigation by penetrating approach surfaces or creating other hazards to navigation such as hazardous wildlife attractants, sources of glare, light displays which could disorient pilots, and sources of electromagnetic interference.

Climate Change Adaptation and Resiliency Overview

The City of Arcata recognizes that the current hazard risk landscape is changing, and will continue to change, as the impacts of climate change affect ocean levels, weather and climatic patterns, extreme heat, soil and forest humidity and fire risk, among other environmental factors. The City is responding to these significant challenges by planning adaptation pathways and by building stronger, more resilient social networks, governmental systems, and partnerships to address the added stressors we anticipate climate change will bring.

Some of this work has been initiated, but much is left to be done. Consistent with state guidance, the City has conducted vulnerability assessments for sea level rise, has drafted policy to guide our response, and is developing adaptation strategies that are flexible to meet the needs of the community. This body of work is included in the Local Coastal Element, the Coastal

Zoning Ordinance, and the adaptation planning associated with these regulatory documents.

The City has also adopted the Countywide Hazard Mitigation Plan. These documents address the near-term correlated impacts of climate change and significant hazard events. But the mid-term effects of increased fire hazard, and other hazards that will change in the next 50 years, should be assessed and addressed over the General Plan planning period.

This Element addresses policy that supports regional planning and action collaborations, land-use that has a positive climate impact, and strategies to build resilient networks and systems to help our community adapt, accommodate, and respond to current and future impacts of climate change. The adaptation policies generally seek to reduce greenhouse gas emissions. The resilience policies seek to build community connections.

Guiding Principles and Goals.

- A. Establish and maintain emergency response capabilities and services at both the City and neighborhood levels.
- B. Promote seismic safety by restricting development in high risk areas, and strengthening buildings and infrastructure to withstand seismic events.
- C. Recognize that certain slopes and soils lack stability and are best left undisturbed.
- D. Establish and maintain sufficiently sized flood areas along Arcata's watercourses, to accommodate flood flows without damaging property or injuring residents.
- E. Reduce fire hazards through prevention and suppression.
- F. Protect residents and the natural environment from exposure to hazardous materials and substances.
- G. Promote a sense of security and safety by maintaining and supporting police services.
- H. Promote social services and programs that improve the physical and mental wellbeing of community residents.
- I. Continue participating in the Humboldt-Del Norte Hazardous Materials Response Joint Powers Authority, and promote hazardous materials reductions and safe handling.
- J. Promote measures that address climate change impacts on the natural and built environment through protection, adaptation, accommodation, and resiliency.

6.2 POLICIES

The Public Safety Element contains the following policies:

- PS-1 Emergency Preparedness
- PS-2 Seismic Hazards
- PS-3 Other Geologic Hazards and Airspace Protection
- PS-4 Flood Hazards
- PS-5 Fire Hazards
- PS-6 Hazardous Materials
- PS-7 Crime Prevention and Response
- PS-8 Climate Adaptation and Resiliency

POLICY PS-1 EMERGENCY PREPAREDNESS

Objective: Ensure that the City, its residents, businesses, agencies, and organizations are prepared for emergencies or disasters and have effective response and recovery plans in place.

- PS-1a **City Emergency Response Plan.** The City shall maintain a comprehensive response plan for emergencies, including seismic events, tsunamis, slope failures, floods, storms, fires, and materials spills or contamination. The plan will provide for timely and coordinated response to emergencies that threaten community residents, property, and vital services. The plan will identify City and other emergency response agencies that should be contacted, and also identify neighborhood resources available for more localized assistance and relief.
- PS-1b **Evacuation routes/transportation facilities.** Emergencies such as floods, storms, fires, tsunamis, and hazardous materials spills may necessitate immediate evacuation of affected areas. A map of evacuation routes shall be included in City and neighborhood emergency response plans. These plans will include evacuation methods using a variety of available modes for transportation. An emergency access plan shall be developed for access to the east side of town (east of State Route 101) after a major seismic event.

While a majority of the neighborhoods in the City have at least two potential evacuation routes in the event of an emergency, there are some areas with only one evacuation route. Residential areas with only one evacuation route include upper Diamond Drive, California Avenue, Fickle Hill Road, Beverly Way, a portion of Beverly Drive, and others in the Grotzman Creek drainage. The City's emergency operations plan shall identify and

include evacuation options for these areas and shall include public education and outreach.

PS-1c **Disaster preparedness coordination using the Standardized Emergency Management System.** City staff responsible for emergency response shall be trained in Standardized Emergency Management System (SEMS) implementation, which is necessary to receive reimbursement from the State of California for disaster response related costs. This training includes instruction about the Incident Command System (ICS) which is used to manage emergency incidents or non-emergency events.

APPLICATIONS FOR THE INCIDENT COMMAND SYSTEM:

- Fires, hazardous materials (HAZMAT), and multi-casualty incidents.
- Multi-jurisdiction and multi-agency disasters.
- Wide area search and rescue missions.
- Pest eradication programs.
- Oil spill response and recovery incidents.
- Single and multi-agency law enforcement actions.
- Air, rail, water, and ground transportation accidents.
- Planned events (celebrations, parades, concerts).
- Private sector emergency management programs.
- State or local major natural hazards management.

PS-1d **Siting and design of critical facilities.** Adequate shelter and continued operation of essential services, including communications, medical treatment, water delivery, fire and police services, and key transportation facilities are vital for responding to emergencies. These facilities and services shall be located and designed to withstand disaster impacts and have backup systems, such as emergency generators and water storage (including private and open water sources), that allow for their continuous operation during emergencies. New critical facilities shall not be located in areas with high physical hazards, including high liquefaction potential, flood zones, and tsunami hazards. Critical facilities shall be designed to be functional at peak capacity, following a magnitude 7.7 earthquake in the Mad River fault zone.

PS-1e **Development & design standards for emergency response.** New and renovated structures, as well as streets, driveways, and alleyways, shall be designed to provide adequate entry and exit by emergency vehicles and personnel. This includes visible street numbering, emergency vehicle turn-arounds, accessible building entry points and stairways, lighting, and interior evacuation routes.

PS-1f **Citizen training/Community Emergency Response Teams.** The City of Arcata Police Department, in cooperation with the Humboldt CERT Coalition and the Humboldt County Office of Emergency Service, coordinates the organization and training of the Arcata Community Emergency Services Response Teams (CERT). The CERT program is essential for mobilizing neighborhood response to emergencies. The CERT program shall be expanded to all neighborhoods.

The logo for the Arcata Community Emergency Response Team (CERT). It features the word "ARCATA" in green at the top, "CERT" in large green letters in the center, and "COMMUNITY EMERGENCY RESPONSE TEAM" in white text at the bottom. The background of the logo includes a stylized illustration of a town with houses, trees, and a river.

PS-1g **Humboldt County Operational Area Hazard Mitigation Plan (Hazard Plan).** The 2019 Humboldt County Operational Area Hazard Mitigation Plan and City of Arcata Annex is adopted by reference into the General Plan. General Plan policies and actions shall support its goals and objectives and incorporate policies and programs to address vulnerabilities identified in the City of Arcata Annex.

PS-1h **Severe Weather Hazards.** Ensure that utilities, buildings, and infrastructure in the City can meet vital community needs during and after severe weather.

POLICY PS-2 SEISMIC HAZARDS

Objective: Protect existing and new structures from seismic hazards. Identify and map seismic hazards and assure that any development within such hazard areas does not proceed until geologic and soils conditions are adequately investigated and appropriate mitigation measures, if any, are incorporated into development plans.

PS-2a **Development within fault zone/surface rupture areas.** The City shall maintain current seismic information that identifies fault zones and probable surface rupture areas. Development in these areas shall be avoided, unless it can be demonstrated that structures and facilities can be designed to withstand effects of faulting and surface rupture. Building setbacks from faults, surface ruptures, and other seismic hazards, as specified in the most current Uniform Building Code, shall be maintained.



PS-2b **Mitigation of ground-shaking hazards.** Arcata will experience ground-shaking during an earthquake. The City maintains seismic data files that identify areas where ground-shaking will most likely damage buildings and infrastructure. New construction and renovation shall incorporate the most current and effective seismic engineering measures to strengthen building foundations and infrastructure in these areas.

PS-2c **Mitigation of surface rupture and groundshaking hazards.** The City's Alquist-Priolo Special Studies Zone map (Figure PS-a) and Geologic Hazard Land Use Matrix (Table PS-1) identify areas highly susceptible to surface rupture and groundshaking. Construction in these areas shall be restricted, unless it can be demonstrated, in geotechnical reports prepared by qualified personnel, that structures and facilities can be designed to withstand liquefaction hazards induced by seismic events.

PS-2d **Requirement for and review of "Geotechnical Reports."** New building and

infrastructure construction, and substantial renovations in areas with seismic hazards, shall incorporate geotechnical report specified measures into project design. Geotechnical reports shall be required for structures or infrastructure in seismic hazard areas. Required reports, prepared by a registered geologist, certified engineering geologist, or registered engineer with expertise in seismic engineering, shall recommend mitigation for seismic impacts and identify alternative solutions. The City may require independent review of the geotechnical reports.

PS-2e **Shoreline hazards (tsunami inundation, tidal flooding).** State of California Geological Survey Seismic Hazards Program probabilistic tsunami hazards modelling and public tsunami hazard area maps for Humboldt County indicate that the Arcata Bay shoreline and adjacent areas, between McDaniel Slough and Mad River Slough including the South G Street, South of Samoa, and portions of the Windsong neighborhood, could be inundated by tsunami run-up. The City shall prohibit the location of critical facilities in the tsunami run-up area, use California Geologic Survey Guidelines for Evaluating and Mitigating Tsunami Hazards when evaluating land use proposals within the tsunami hazard zone, and use available emergency broadcasting systems to communicate tsunami warnings. Should coastal access within the tsunami run-up zone be provided in the future, appropriate evacuation route signage shall be posted.

PS-2f **Failure of Matthews Dam.** All new buildings designed for human occupancy or use that are located in the area of potential inundation resulting from a catastrophic failure of Matthews Dam shall have an early-warning system and evacuation plan in place for those persons living and working there.

PS-2g **Earthquake-resistant building and infrastructure standards.** The current Uniform Building Code standards for strengthening buildings and infrastructure to withstand earthquakes shall be enforced. The competency of existing road and utility networks shall be evaluated and, where necessary, upgraded to withstand the most current ground acceleration standards.

PS-2h **Public information and disclosure.** Redwood Coast Tsunami Work Group (RCTWG) and the City of Arcata have earthquake/tsunami web-based mapping and awareness information that is available to the public. The RCTWG and the City will continue to make the most current information available to help the community prepare for and respond to seismic events.



THE REDWOOD COAST TSUNAMI WORK GROUP:

- Prepares and distributes earthquake education materials.
- Maintains an informative and comprehensive website with interactive tsunami zone maps
- Provides information when significant earthquakes occur.
- Conducts workshops for emergency planners, teachers and others.
- Has speakers for community group conferences and meetings.
- Operates the Humboldt earthquake hotline.

POLICY PS-3 OTHER GEOLOGIC HAZARDS AND AIRSPACE PROTECTION

Objective. Protect existing and new structures from non-seismic geologic hazards such as unstable slopes and soils. Require that all non-seismic geologic hazards be adequately addressed and mitigated. Ensure new development does not result in hazards to air navigation.

PS-3a **Slope stability hazards.** Slope areas greater than 15%, shown on Figure PS-a, and certain less steep slopes with erosive soils may become unstable if disturbed. The City shall restrict grading, vegetation removal, and new construction in areas with unstable soils unless it can be demonstrated that these activities can occur without impacts. All grading of slope areas shall follow natural contours to maximize stability.

PS-3b **Grading standards for erosion and sedimentation control.** The design, extent, and location of grading shall minimize disturbance of the natural terrain and land features and shall not impact offsite areas. Trees and native vegetation shall be retained around graded areas to stabilize hillsides; retain moisture; reduce erosion, siltation and nutrient runoff; and retain the natural beauty of the area. Cleared areas susceptible to erosion shall be stabilized so that no materials are transported offsite.

PS-3c **Hillside development standards.** The land areas subject to hillside development standards are shown in Figure PS-a. Development on lands within these areas shall be subject to the following standards:

1. Each new lot created in areas subject to hillside development standards shall be required to contain a contiguous buildable area of at least 4,000 square feet. All parts of the building area shall have a natural slope of less than 15%. No more than 4,000 square feet of any existing lot which was legally created prior to adoption of this plan, and does not meet the preceding 15% standard, may be disturbed for development.
2. At least 50% of the area of any lot undeveloped as of the date of this plan shall be included in a "natural area" which shall remain in a natural, ungraded, undeveloped state. All slopes in excess of 25% shall be included in the natural area.

3. Vegetation removal in the natural area of each lot shall be subject to review and approval by the City.
4. All access roads and driveways shall be kept to the minimum feasible width and shall be designed to minimize grading and disruption of vegetation.
5. Access roads shall not exceed 15% slope for any distance. Individual driveways shall not exceed 17% slope.
6. Access roads or driveways shall be designed to avoid steep slopes and shall not have cuts exceeding fifty feet (50') nor fills exceeding twenty-five feet (25') in height.
7. The design, scope and location of grading for development should cause the minimum disturbance of the terrain and natural features of the land. Unavoidable grading should complement natural landforms. Mass grading of large pads and terraces shall not be permitted.
8. All manufactured slopes shall be planted or otherwise protected from the effects of storm run-off and erosion.
9. Time limits to avoid extensive grading during the wet season shall be imposed on new developments.
10. Any necessary conditions to control erosion and assure site restoration shall be required by the City. Measures shall include short-term controls to minimize erosion at construction sites and long-term controls for minimizing sedimentation and maintaining water quality.
11. Development in areas subject to development standards should demonstrate a concern for the view of the hills as well as the view from the hill.

PS-3d **Slope-density land use restrictions.** Slopes greater than 25% are to be designated as natural areas and shall not be included in density calculations. Minimum parcel sizes on slopes shall be contingent on the site's ability to accommodate a building site with adequate access and utilities.

PS-3e **Geotechnical reports.** Geotechnical reports shall be prepared for development of areas with unstable slopes and/or erosive soils. These reports will be prepared by qualified professionals, consistent with Policy PS-2d. Measures to ensure slope and soil stability shall be incorporated into the project design.

PS-3f **Geologic hazard information.** Provide available information, including potential for site slippage, effects of groundwater on slopes and soils, erosion potential, and other hazards, to homebuilders prior to the start of construction.

PS-3g **Airspace protection.** Inform land use action proponents located below the airspace protection surfaces of California Redwood Coast-Humboldt County Airport, as shown in the Humboldt County ALUCP, of the FAA notification requirements defined in Title 14 of the Code of Federal Regulations, Part 77. Evaluate such land uses to ensure that new development will not result in an obstruction or a potential hazard to aircraft in flight such as uses creating electrical interference, confusing lights, glare, or other disturbances are also restricted from areas beneath the airspace protection surfaces.

POLICY PS-4 FLOOD HAZARDS

Objective. Protect current and future populations and property from flood hazards. Assure that new development within floodplains does not proceed until appropriate mitigation measures are incorporated into development plans.

PS-4a **Floodplain Mapping.** The City shall continue participating in the National Flood Insurance Program and maintain the most current Flood Insurance Rate Maps (FIRM) on file. The City shall also continue requesting that the Federal Emergency Management Agency provide hydrographic modeling (using the 1964 flood levels as a benchmark) and an update of flood mapping for the Mad River using the best available information.

The Federal Emergency Management Agency (FEMA) manages the National Flood Insurance Program providing insurance to the public in participating communities. FEMA is the main federal government agency contact during natural disasters and publishes Flood Insurance Rate Maps, which identify flood potential based on a 100-year flood.

PS-4b **Limitations to development adjacent to Arcata Bay and along Bay shoreline (tidal flooding, tsunami, failure of dikes or tide gates).** The Arcata Bottom and other low-lying areas adjacent to Arcata Bay, McDaniel, Butcher's and Gannon Sloughs, and Arcata Marsh are susceptible to flooding from extreme Bay tidal action, tsunami run-up, seiche, dike or tide gate failure, heavy rainfall that can't drain, Mad River flood events. Where not otherwise restricted, habitable structures and related improvements shall be appropriately elevated above flood levels, designed so as not to restrict flood flows, and shall comply with applicable provisions of Resource Conservation and Management Policy RC-2: Streams Conservation and Management, pertaining to Streamside Protection Areas (RC-2b and RC-2c). Land alterations for recreation and natural resource uses shall also not restrict or increase or channelize flood flows in a way that could cause inundation to adjacent areas.

PS-4c **Limitations on development within Flood Zone.** The mapped Flood Zone A as determined by FEMA should be kept free of structures and other obstructions that would restrict flood flows. New construction in Flood Zone A shall be elevated, flood-proofed, designed to not constrict flood flows or drainage, and/or include other features, such as access for evacuation and emergency response, to protect human safety and minimize property damage. Landform alterations shall not impede flood flows in adjacent upstream or downstream areas. Any development in the floodplain must be consistent with City floodplain zoning regulations.

PS-4d Limitations to development within flood hazard zones.

Arcata's creeks and sloughs have the potential to cause localized flooding and shall be maintained to allow the flow of floodwaters. Structures and other landform alterations in areas susceptible to localized flooding, outside areas defined in policies RC-2b and RC-3c, should be setback from the watercourse. Elevated and flood-proofed structures, and/or floodwater detention basins shall be provided to minimize flood damage and prevent any net increase in flood flows upstream or downstream. The City shall promote flood management practices for entire watercourses, to minimize the need for sandbagging and other temporary flood control measures that can have detrimental impacts to adjacent areas.

**PS-4e Flood Insurance.** Flood insurance is available from private insurers to compensate home and business owners for flood-related losses. Flood insurance rates are set by a site's proximity to mapped flood-prone areas. The City shall make information about flood-prone areas available to the public, to aid community residents and business owners in determining whether flood insurance should be purchased.**PS-4f Development standards in floodplains (surface drainageways and detention areas).** All plans for new construction that could potentially encroach into a floodplain must incorporate measures for flood protection and show that there will be no adverse impact to the carrying capacity of the floodway. Setbacks, easements covering Flood "Zone A", and minimal use of impervious surfaces are measures strongly encouraged. Elevation of structures, anchoring, flood-proofing, and construction of detention basins are considered secondary and less desirable measures. The City's floodplain administrator shall verify this information and require appropriate certification before any development permits are granted.**PS-4g Preventive maintenance of streams and drainageways.** Local streams carry the majority of Arcata's floodwaters and shall be maintained for flood protection as well as natural biological functions. All improvements and maintenance shall be done in accordance with the City's Drainage Master Plan.**PS-4h Development review: drainage standards and drainage fees.** All new development shall meet current City drainage standards and pay all applicable drainage fees. The City shall provide incentives to reduce the amount of impervious surface associated with new and renovated uses by reducing drainage fees.**POLICY PS-5 FIRE HAZARDS**

Objective. Minimize risk of personal injury and property damage resulting from

structural (urban) and wildland fires.

PS-5a **Management of urban fire hazards (development/design standards).** Structural fires demand immediate response from a combination of onsite and Fire Department resources in order to minimize injury and damage. Fire suppression devices such as extinguishers and sprinklers are important for initial response, reduce fire insurance premiums, and satisfy operations requirements for certain types of businesses. These devices are encouraged in new and renovated non-residential buildings and required in all residential structures.

All buildings should have adequate lighting, street numbering, and access to ensure rapid response by fire-fighting vehicles. To ensure urban fire safety, the City shall enforce the current California Building and current Fire Codes (, and the Universal Building Code when it is adopted.

PS-5b **Review of development for fire safety.** The Arcata Fire Protection District (District) reviews new development for compliance with fire safety standards. The City shall continue to incorporate review by the District to ensure that buildings and sites adhere to relevant fire and building codes, including sprinklers, vertical clearance, and turn-around space for fire fighting vehicles.

PS-5c **Water supply (fire flow).** The City's fire hydrant system provides the primary source of water for fighting urban fires. The City shall maintain fire hydrant spacing so that no residential structure is more than 500 feet from a hydrant and no commercial or industrial structure is more than 300 feet from a hydrant. Each hydrant shall have appropriate fittings and be capable of providing adequate water flows to meet the California Fire Code requirements.

The City shall maintain adequate fire flows in its water system. Open-water sources such as ponds, swimming pools, private storage tanks, and reservoirs may be used as a secondary water source by fire-fighting apparatus. These sources shall be equipped with appropriate filtering devices or strainers to prevent clogging of water pumps.

PS-5d **Management of wildland fire hazards.** Fires in the wildland urban interface (WUI) areas of the City can cause property damage and threaten nearby structures. Buildings in WUI areas shall use materials such as non-flammable perimeter vegetation and roofing material to prevent exposure to wildland fires. The City shall support the ongoing implementation of the Humboldt County Community Wildfire Protection Plan and encourage residents in WUI areas to follow its recommendations. The City supports the Fire District in maintaining its mutual aid agreement with the California Department of Forestry and Fire Prevention (CAL FIRE) to insure rapid response to wildland fires.

PS-5e **Wildland Fire Risk Reduction and Defensible Space Around Homes.** The City will draw



on available local and regional guidance and support efforts to reduce wildland fire risk. To do so, the City encourages creating defensible space around homes and other structures in wildlands and the wildland urban interface. The City shall support programs and plans that reduce wildland fire risk.

POLICY PS-6 HAZARDOUS MATERIALS

Objective. Minimize the personal injury, property damage, and public health risks associated with the production, use, storage, disposal, and transporting of toxic substances or hazardous materials.

- PS-6a **Reduction of hazardous waste (source reduction).** There are increasing numbers of environmentally safe materials and substances available that offer alternatives to hazardous materials. Improved water-based paints that replace oil and lead based paints, cellulose insulation materials that replace asbestos, and biodegradable antifreezes that replace glycol based coolants, are all examples of safer materials and substances currently in use. The City shall request information from County, State, and Federal agencies, as well as manufacturers and suppliers, regarding environmentally safe products and shall have a list of those products available to the public.
- PS-6b **Contaminated sites.** There are sites in and around the City where wood product milling and production, vehicle and equipment storage and repair, agricultural production, and other uses may have resulted in site contamination. Materials such as lead based paints may also contribute to contamination. Many of these sites are inactive and may be appropriate for alternative uses. Environmental Site Assessments shall be required prior to development review and approval of potentially contaminated sites, and cleanup is required prior to reuse. The City shall record and map sites with known contamination.
- PS-6c **Use of potentially harmful materials on public lands and rights-of-way.** The City of Arcata does not use toxic sprays or substances on vegetation in public lands or rights-of-way, and has been persuasive in stopping State agencies, such as Cal-Trans, from using toxic sprays along State rights-of-way within the City limits. The City shall continue this practice and prohibit other public agencies from using toxic sprays or substances within the City limits (see Resource Conservation and Management Element Policy RC-1i).
- PS-6d **Siting of facilities handling hazardous waste.** Businesses and agencies that use, store, or produce hazardous materials shall train employees and other users in safe handling and storage procedures, and shall post current Occupational Safety and Health Act (OSHA) and Humboldt County hazardous materials requirements. Businesses shall also comply with Federal “community right-to-know” regulations. The City shall consider proximity to sensitive receptors, such as schools, hospitals and other health care facilities, day care centers, and other immobile populations, when reviewing new facilities and businesses involved in these activities.

PS-6e **Household and other small-quantity generators.** Households and small businesses accumulate solvents and cleaners, petroleum products, pesticides, and other toxic substances that are potentially hazardous if spilled, released into the atmosphere, or ingested. The City shall maintain a list of toxic substances which should be avoided and publicize collection dates and locations where these substances can be disposed of properly. The City shall coordinate with the County Hazardous Materials Department (Humboldt County) and the State Department of Toxic Substances Control (California Environmental Protection Agency) to ensure that collection sites are accessible to community residents.

The City shall also encourage property owners and real estate agents to remove hazardous materials, or disclose their presence, to purchasers as part of property transfers. Property purchasers should have the option of accepting certain materials, such as paint, or requesting removal and cleanup prior to the property transfer.

PS-6f **Hazardous waste management (recycling, treatment, disposal).** All commercial and industrial businesses and other operations that use, store, or produce hazardous materials, shall contract with a licensed hauler for pickup and disposal of waste materials, except for individual disposal complying with County, State and Federal requirements. All hazardous materials shall be stored in safe containers and locations, and use of these materials shall be in compliance with County, State and Federal standards.

PS-6g **Hazardous materials education program.** The City shall work with the Humboldt County Health Department and the California Department of Toxic Substances to develop and promote educational materials explaining hazardous materials' impact on people, plants, and animals, and provide information on alternatives to hazardous materials. The City shall also keep a compendium of Material Safety Data Sheets (MSDSs) for all potentially hazardous materials that are used by all departments in the City. This information—including the MSDSs— shall be made available to the public.

POLICY PS-7 CRIME PREVENTION AND RESPONSE

Objective. Promote law enforcement agency and community group efforts to reduce crime and assure timely and effective responses to calls for service.

PS-7a **Development/building and site design standards for crime prevention.** The City shall integrate CPTED (Crime Prevention Through Environmental Design) and related strategies into building and site design to prevent or minimize criminal acts, reduce victimization, and build a sense of community safety. These include a combination of onsite features such as alarm systems, secured entryways, lighting, and visible access. Crime prevention measures, such as providing alarm systems, security lighting, street

numbers, and visibility for police surveillance, should be incorporated into, and around, new and renovated buildings. Gated communities hinder police and fire suppression access and shall be prohibited, consistent with Community Design Element policy.

PS-7b **Community-based policing.** Community-based policing has proven effective in reducing crime by involving citizens in crime prevention. The City Police Department provides training to business and neighborhood groups in how to discourage crime and best respond when crime occurs. The City shall continue to provide citizen training, maintain relationships with community groups, and encourage Community Emergency Response Teams (CERTs) to reduce crime and augment the essential services of the Police Department. Foot and bike patrols shall be promoted to maximize interaction between citizens and police, to foster friendship, understanding, and mutual help.

PS-7c **Cooperative Law Enforcement.** There are three law enforcement agencies based in Arcata: The Arcata Police Department, the Cal Poly Humboldt Police Department, and the California Highway Patrol. These agencies work together, responding to incidents throughout the City. The City shall continue to cooperate with other law enforcement agencies to maximize public safety within its boundaries. The City Police Department shall be the primary response agency within City limits since it is the only agency directly accountable to the government and citizens of Arcata.

PS-7d **Independent review.** The Arcata Police Department has an established review procedure for investigating complaints against law enforcement personnel. Complaints may also be referred to the Humboldt County Grand Jury.

PS-7e **Education and crime prevention funding.** The City recognizes that funds spent on education and crime prevention are more effective in reducing crime than funds spent on apprehending, prosecuting, and incarcerating criminals. The City shall pursue a long-term strategy of funding education and crime prevention programs.

PS-7f **Principled Policing.** The Arcata Police Department shall conform to State and Federal law, California Peace Officer Standards and Training (POST) standards, Department policies, and 21st Century Policing best practices to combat racial profiling and bias in policing and to promote de-escalation and principled policing.



POLICY PS-8 CLIMATE ADAPTATION AND RESILIENCY

Objective. The City will continue to support and monitor research about the nature of all hazards in Arcata, including research on prediction and warning systems, community vulnerability and consequences assessments, and improvements to building performance and resilience. The City will continue to pursue efforts that minimize Arcata's contribution to

climate change by reducing greenhouse gas emissions and protecting people, the built environment, and the natural environment from the impacts of climate change.

PS-8a **Land Use and Urban Development.** Compact urban development has co-beneficial climatic effects, including reducing greenhouse gases, preserving habitats, producing healthy vibrant communities, and facilitating opportunities for environmental justice. The City shall support land use activities that promote compact, climate-friendly design, such as infill development, densification, and regenerative building design. City projects and private developments shall be designed to consider multi-benefit solutions that mitigate hazard risk and support the City's climate goals.

Urban design and development will be informed by the latest climate science to determine how to best protect and modify existing public and private infrastructure and assets and how to design new infrastructure and assets. Urban design and development should also take environmental justice considerations into account, working to eliminate disparities and burdens related to all hazards and the climate crisis for all people in Arcata.

PS-8b **Greenhouse Gas Reduction.** City actions shall reduce local contributions towards climate change by mitigating greenhouse gases and increasing carbon sequestration. The City shall update relevant plans and policies periodically to meet State and local climate goals.

1. Encourage reduction in greenhouse gas emissions, by providing alternatives to use of gas-powered vehicles. Such alternatives include public transit, alternatively fueled vehicles, bicycle and pedestrian routes, and bicycle- and pedestrian-friendly development design.
2. Encourage and facilitate investments in renewable energy and green technology.
3. Prioritize nature-based solutions that restore ecosystem function and maximize ecological benefits to plants, animals, and people.

PS-8c **Regional Collaboration.** The City shall continue to participate in regional multi-agency efforts to coordinate climate mitigation and adaptation and ensure Arcata becomes more resilient to the threats of climate change.

PS-8d **Sea Level Rise.** Incorporate consideration of sea level rise and other associated climate impacts into public and private infrastructure and asset design and land use planning. The City shall continue to work with local, regional, state, and federal partners and utilize best available science to maximize the safety, environmental performance and climate adaptability of all new development.

PS-8e **Food security and resilience.** The North Coast has abundant resource lands, agricultural lands, and fishing grounds. The City shall develop partnerships, networks, and systems to promote resilience and redundancy in our local food cultivation, production, distribution, and storage sectors.

PS-8f **Wildfire Response and Preparedness.** Climate change has the potential to affect multiple elements of the wildfire system: fire behavior, ignitions, fire management, and vegetation fuels. California's Fourth Climate Change Assessment - North Coast Regional Report states that "*(f)uture wildfire projections suggest a longer fire season, an increase in wildfire frequency, and an expansion of the area susceptible to fire.*" The City shall continue to work with local, regional and state partners to adapt and improve the City's fire response and preparedness protocols to respond to areas that will become more susceptible to fire over time within the City limits and Planning Area.

PS-8g **Traditional ecological knowledge.** The City of Arcata acknowledges the value of Indigenous sciences and knowledge and the need for Indigenous perspectives in responding to the climate change crisis. The City shall work to support Indigenous-led climate adaptation approaches and shall work collaboratively with tribes and tribal governments for mitigation, adaptation, and resilience to climate change. This policy applies to all previous policies in this section.

6.3 IMPLEMENTATION MEASURES

#	IMPLEMENTATION MEASURE	RESPONSIBLE PARTY	TIME FRAME
PS-1	<p>Community Emergency Response Teams (CERT) Promote the continuation of the Arcata CERT. The City Police Department shall have a designated CERT coordinator available to assist with CERT organization and training, and to supply training materials.</p>	Police Department	Ongoing
PS-2	<p>Emergency preparedness and response programs Maintain and distribute current information about seismic risks and emergency preparedness (such as <u>Living on Shaky Ground – How to Survive Earthquakes & Tsunamis on the North Coast</u> distributed by the Humboldt Earthquake Education Center, Cal Poly Humboldt). Maintain Standardized Emergency Management System training for senior City staff, including Incident Command System, multi/inter-agency coordination, mutual aid, and operational area concepts.</p>	City Manager's Office/Arcata Fire & Police Departments	Ongoing
PS-3	<p>Evacuation Planning Implement the evacuation planning actions identified in the Emergency Operations Plan and Hazard Mitigation Plan Action ARC19. Evaluate potential alternative routes for residential areas with limited evacuation options. Where there are no feasible alternative routes, identify and implement realistic actions that can provide protection to evacuees from likely hazards.</p>	City Manager's Office/Environmental Services/Police Department & Arcata Fire	Year 2
PS-4	<p>Floodplain mapping and management program Update floodplain mapping throughout the planning area, including continued participation with National Flood Insurance Program.</p>	Federal Emergency Management Agency	Ongoing
PS-5	<p>Evaluate renewing a cooperative agreement with CALFIRE Review the City's financial responsibility and wildland fire resources to respond to incidents within the Arcata Community Forest and the Jacoby Creek Forest. Evaluate if the City should consider renewing a cooperative agreement with CAL FIRE to provide direct wildland fire protection services to these areas.</p>	City Manager's Office, Arcata Fire Protection District	Year 1
PS-6	<p>Wildland Urban Interface Risk Reduction Program The City shall prepare a wildland fire risk reduction program for the City that includes a plan for funding/financing an effective community outreach program to assist private landowners in clearing hazardous vegetation around homes to establish and maintain defensible space or to support building retrofits to reduce their vulnerability to wildfire.</p>	City Manager's Office, Arcata Fire Protection District	Year 5
PS-8	<p>Safer materials and substances list Maintain a list of safer materials and environmentally friendly substances to replace toxic substances and hazardous materials.</p>	Environmental Services Dept.	Ongoing

#	IMPLEMENTATION MEASURE	RESPONSIBLE PARTY	TIME FRAME
PS-9	Education program for reduction of hazardous waste (resource reduction) The City shall compile information from County, State and Federal agencies, as well as from manufacturers and suppliers, regarding environmentally safe products and shall make that information available to the public. The City will maintain, make accessible, and promote the availability of all Material Safety Data Sheets for hazardous material utilized by the City.	Environmental Services Dept.	Ongoing
PS-10	Brownfield sites Record and map sites having known contaminants, contingent upon funds availability.	Community Development Dept.	Year 2
PS-11	Hazard information and protection Continue to maintain and update the City's GIS base maps for hazards, and make available for public and staff access.	Environmental Services Dept./Community Development	Ongoing
PS-12	Humboldt Operational Area Hazard Mitigation Plan Implement the City of Arcata Annex Mitigation Action Plan in the Hazard Mitigation Plan and periodically update the Hazard Mitigation Plan to reflect changing vulnerabilities, new data, available resources, partnership opportunities, and state and federal requirements and amend the Public Health and Safety Element to integrate the updated Hazard Mitigation Plan.	City Manager's Office/Arcata Fire & Police Departments	Ongoing