CITY OF MOUNT VERNON
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INTRODUCTION

The city of Mount Vernon government, in partnership with other city governments located within Skagit County and the Skagit County government, has been an active participant in the process to develop the **City of Mount Vernon Natural Hazards Mitigation Plan**. Mount Vernon has been represented throughout the planning process by the Development Services Department (consisting of the Building Planning and Engineering Divisions), and the Fire Department.

These offices and departments have created an overall profile of Mount Vernon, based on size, population, growth trends, economic base and current/future predominant land uses. From this profile, Mount Vernon was segmented into distinct "neighborhoods" based on flood zone geography, land use, and hazard risk elements that are specific to each. The use of these neighborhood profiles has allowed for the development of area-specific risk assessments and has thereby promoted efficient mitigation planning.

The city of Mount Vernon, because of geographical, geological and topographical diversities, is subject to a wide variety of hazards. This document is intended to identify the types of hazards that pose a high degree of risk of occurrence, and the mitigation measures that are currently in place to reduce or mitigate loss to health, life, property, and the environment.

Mount Vernon has adopted Mount Vernon Municipal Code Title 15, and the 1997 edition of the Uniform Codes (Building, Fire, Mechanical and Plumbing), effective July 1998. The purpose of these codes is to provide minimum standards to safeguard life and limb, health, property and public welfare. In addition to the general standards for construction, the Building Code provides for geographically specific requirements for seismic design, high wind design and high snow load design.

Mount Vernon adopted Mount Vernon Municipal Code Title 15.36, Flood Plain Management Standards, as part of its Municipal Code. The purpose of this ordinance is to protect life and health, minimize public money expenditure, minimize the need for rescue and relief associated with flooding, and minimize prolonged business interruption and to minimize damage to public facilities and utilities.

Mount Vernon adopted Mount Vernon Municipal Code Title 15.40 Critical Areas as part of its Municipal Code. Within this ordinance are requirements and restrictions relating to steep, unstable or otherwise hazardous slopes, which could impact human safety during earthquakes, sliding and erosion. The purpose of this portion of the Critical Areas Ordinance is to safeguard citizens, property, and resources, through identification of hazardous areas, requirements for mitigation through engineered design and construction methods; and, when design and construction methods cannot reduce risks to acceptable levels, to prohibit building and construction.

Hazard type	Mitigation
FLOODING A significant portion of Mount Vernon is located within the 100-year floodplain. In addition, portions of the City are located within a designated floodway. The city has sustained minimal losses due to the flooding that occurred as a result of the 1990 and 1995 flood events. Most of the repetitive loss companies have been bought out through grants for flood mitigation.	Mount Vernon, in cooperation with appropriate local, state and Federal agencies, shall develop and implement flood hazard reduction programs, consistent with and supportive of the Department of Ecologies requirements and FEMA guidelines. The Floodplain Management Standards of the City of Mount Vernon, outlined in the Mount Vernon Municipal Code Chapter 15.36.010, are intended to: A. Protect human life and health; B. Minimize expenditures of public money and costly flood-control projects; C. Minimize the need for rescue and d relief efforts associated with flooding, and generally undertake at the expense of the general public; D. Minimize prolonged business interruption; E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, and streets and bridges located in areas of special flood hazards; F. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood-blight areas; G. Ensure that potential buyers are notified that property is in an area of special flood hazard; H. Ensure that those who occupy the areas of flood hazard assume responsibility for their actions. In order to reduce flood losses, Chapter 15.36.020 of the Mount Vernon Municipal Code includes methods and provisions for the following: E. Restricting of prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities; F. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; G. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters; H. Controlling filling, grading, dredging and other development which may increase flood damage; and

Hazard type	Mitigation
FLOODING Continued	E. Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters, or which may increase flood hazards in other areas. Under requirements of the state Growth Management Act, the Comprehensive Plan identifies, designates, and protects wetlands, aquifer recharge areas, and frequently flooded areas. This is contained in the Comprehensive Plan, Chapter 1 Background Analysis, Section C Physical Form New construction and substantial improvements are required to be elevated so that finished floor height is 1 foot above the base flood elevation, and shall be constructed with materials and utility equipment resistant to flood damage. Fully enclosed areas below the3 lowest floor that are subject to flooding are prohibited, or must be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure. In all buildings, construction materials used below the base flood elevation must be resistant to damage by floodwaters. Elevation certificates are required on all elevated buildings. Certificates are collected by office or field inspection staff and are kept in a maintained file at the Development Services Department Agricultural buildings and private garages not elevated are required to be wet floodproofed. A professional engineer or registered architect is required to verify that there is low potential for damage from velocities, debris, and scouring as well as verifying adequate opening area to allow free passage of flood water. In areas of shallow flooding where velocities exceed 5 fps and when located within 500 feet of the toe of a dike, buildings are required to be elevated on columns, piles or an engineered foundation.

Hazard type	Mitigation
FLOODING Continued	Fill, for purposes of elevation, is prohibited except where proven by a professional engineer that the fill does not reduce flood storage, increase base flood elevations, reduce flood conveyance or prohibit natural flow. Mount Vernon shall enforce protective restrictions within areas of special flood hazards (floodways), since the floodway is an extremely hazardous area. Construction in a designated floodway is prohibited except where it can be demonstrated by a professional engineer that there is no rise in the floodway. The current FEMA no-rise procedure is the standard by which this must be demonstrated.
EARTHQUAKE The City of Mount Vernon is located in seismic zone 3 as determined by the Uniform Building Code. Damage and loss due to earthquake was experienced as recently as the 2001 Nisqually earthquake.	The 1997 Uniform Building Code, including its special provisions for seismic zones 3 and 4. All new buildings not meeting the strict prescriptive requirements of the UBC are required to have their structural elements designed by a professional engineer or registered architect. Such design is required to include seismic analysis of the building in addition to wind, gravity and other forces. Building permits are issued for repair of seismically damaged buildings, normally based on a site inspection by the field inspection staff. All repair construction must meet the current building code requirements for seismic design. In areas of the City with steep or unstable slopes, or with soil prone to liquefaction, geotechnical reports, prepared by a professional engineer, are required as a part of a building permit application. Such reports must include an analysis of the effects of a seismic event

Hazard type	Mitigation
HIGH WINDS Mount Vernon is located in a borderline high wind area. The design wind speed for Mount Vernon is 80 mph. Some portions of Mount Vernon are located in exposure B (1997 UBC) areas where some protection from winds is provided by forests and hills. Other portions of the City are in exposure C areas where there is little or no protection from high wind.	The 1997 Uniform Building Code. All new buildings not meeting the strict prescriptive requirements of the building code for adequate wall bracing, are required to have their structural elements designed by a professional engineer or registered architect utilizing the wind design requirements of the building code. The Mount Vernon Building Official renders decisions on which exposure group an individual property is located in.
LANDSLIDE /AVALANCHE Portions of Mount Vernon are prone to landslide due to steep slopes, soil erosion, fractured rock faces, etc. Landslides occur with some frequency during winter storms, resulting in temporary road closures.	1997 Uniform Building Code, including provisions for the requirement of setbacks from the top and bottom of slopes, **Additional SEPA Guidelines, MVMC Chapter 15.40.150, Ordinance #2482** sets forth review and mitigation standards for development within geologically hazardous areas. Geologically Hazardous Areas include slopes of 40% or more, landslide hazards, seismic hazards and erosion hazards, and other areas which the city has reason to believe are geologically unstable