

City of University Place and Fire District 03



NATURAL HAZARD MITIGATION PLAN

2006



City of University Place/Fire District 03 NATURAL HAZARD MITIGATION PLAN



Natural Hazard Mitigation Plan



*City of
University Place
&
Pierce County
Fire District 03*

Adopted , 2006

**City of University Place/Fire District 03
Natural Hazard Mitigation Plan**

Adopted by the University Place City Council
-----, 2006

And

Adopted by the Fire District 03 Board of Commissioners
-----, 2006

Approved by FEMA
-----20056

Prepared by the
City of University Place
Hazard Mitigation Planning Team
and
Pierce County Emergency Management

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Plan Adoption Requirements

Adoption by the Local Governing Body

Requirement §201.6(c)(5) *[The local hazard mitigation plan **shall** include] documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council)...*

- Has the local governing body adopted the plan?
- Is supporting documentation such as a resolution included?

Plan Adoption

This page describes the documentation citing the Plan's formal adoption by the City of University Place Council and the Board of Commissioners of Pierce County Fire District 03.

The City of University Place Council and the Board of Fire Commissioners were responsible for adopting the University Place/Fire District 03 Plan after the Pre-Adoption Review by Washington State Emergency Management Division (EMD) and Federal Emergency Management Agency (FEMA) Region X. The Washington State EMD gave pre-adoption approval to the University Place/Fire District 03 Natural Hazard Mitigation Plan on ----- 2006. It was then forwarded to the FEMA Region X for review. This review, which was allowed 45 days by law, addressed the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201.6. FEMA gave its pre-adoption approval on ----- 2006 (See attachemet1).

The Plan was then submitted to the City of University Place Council as Resolution ----- which was adopted by the Council on -----, 2006 (See attachment2) and to the Board of Commissioners for Fire District 03 for adoption on -----, 2006 (See attachment 3).

With final acceptance by FEMA Region X on ----- 2006 (See attachment 4), the City and the Fire District gained eligibility for Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) Grant Program funds.

Appendix A lists the dates of Washington State EMD and FEMA Region X approval of the University Place/Fire District 03 Plan. In future updates of the plan Appendix A will be used to track changes and/or updates to the Plan.

Attachment 1

Attachment 2

Attachment 3

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Attachment 4.

Section 1

Plan Process Requirements

Planning Process---Requirement §201.6(b):

An open public involvement process is essential to the development of an effective plan.

Documentation of the Planning Process---Requirements §201.6(b):

In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

- (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval;
- (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process; and
- (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

Documentation of the Planning Process---Requirements §201.6(c)(1):

[The plan **shall** document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

- Does the plan provide a narrative description of the process followed to prepare the plan?
- Does the plan indicate who was involved and how they contributed to the planning process, including who led the development at the staff level and were there any external contributors such as contractors?
- Does the plan indicate how the public was involved?
- Was the public provided an opportunity to comment on the plan during the draft stage and prior to plan approval?
- Was there an opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process?
- Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?

**UNIVERSITY PLACE/FIRE DISTRICT 03
PLAN PROCESS**

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Plan Process

The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards.

-CFR TITLE 44, Chapter I, Part 201, Sec.201.6

The Process Section is a discussion of the planning process used to develop the University Place/Fire District 03 Natural Hazard Mitigation Plan, including how it was prepared, who aided in the process, and the public involvement.

The Legal Requirement

The Disaster Mitigation Act of 2000 (DMA2K), codified as 44 CFR 201.6, created the template for local disaster mitigation plans for all types of local jurisdictions. These plans must be approved by the local jurisdiction's legislative body, and then reviewed and approved by both the state and FEMA. Any jurisdiction wanting to apply for either Hazard Mitigation Grant Program (HMGP) project grants or Pre-Disaster Mitigation (PDM) grants after November 2004, will need to have an approved plan.

The Plan created jointly for the City of University Place and Fire District 03 is developed around all major components identified in 44 CFR 201.6, including:

- **Planning Process;**
- **Jurisdiction Profile;**
- **Capability Identification;**
- **Risk Assessment;**
- **Mitigation Strategy;** and
- **Plan Maintenance Procedure.**

Below is a summary of the processes involved in the development of these components.

Planning Process

In order to accomplish this goal and to ensure that the final Plan be comprehensive in scope, the Hazard Mitigation Planning Team composed of members from both jurisdictions and a member of Pierce County's Department of Emergency Management developed a process composed of three components:

1. A plan development team called the Hazard Mitigation Planning Team, was organized. Comprised of city employees from departments involved in emergency and disaster response, planning, information services, and public works, an assistant fire chief from Pierce County Fire District 03 and a representative from Pierce County Emergency Management,, the team was given the task of developing the plan.

2. Research included a review of the natural hazard research that had been done for previous plans in Pierce County. Interviews, with individuals both inside as well as outside City government were conducted to target specialized knowledge of both the City and its history, and the local natural hazards.
3. Public dissemination of the plan included introducing it at public meetings, on July 21, 2005 and again on October 20, 2005, posting it on the City's web site, and introducing a draft copy at the City Council meeting on August 1, 2005. This was done to identify common concerns and ideas regarding hazard mitigation and to discuss the goals, objectives and measures of the mitigation plan.¹ Final presentation of the plan to the council will be done after it has gone through a pre-adoption review by the State and FEMA

These elements will now be discussed in further detail.

Hazard Mitigation Planning Team

The Hazard Mitigation Planning Team (HMPT) is a committee composed of representatives from those City departments who have responsibilities during emergencies or disasters, Pierce County Fire District 03 and Pierce County Emergency Management. The HMPT is tasked with overseeing emergency mitigation, preparedness, response and recovery. The chair resides with the Communications and Technology Services Director.

While University Place has actively done hazard planning in the past, the HMPT was activated in response to the requirements for a Natural Hazard Mitigation Plan. In the fall of 2001, in response to the requirements of the Disaster Mitigation Act 2000 (DMA2K), Pierce County held two single day workshops on the natural hazards threatening the County as preliminary step to rewriting the County's Hazard Identification and Vulnerability Analysis (HIVA). Rewriting the HIVA was needed before County staff could write the County's Natural Hazard Mitigation Plan. This workshop formed the basis for an improved understanding of the natural forces that threaten the livelihood, health and lives of citizens in Pierce County. Information gained from that workshop and other research has formed the basis for not only the County's HIVA and Natural Hazard Mitigation Plan, but also for those of a number of other jurisdictions including University Place. The requirement of DMA2K to develop a plan has now led the City and Fire Department to adopt many of the hazard conclusions put forth first at the workshop and later in the Pierce County HIVA. In 2004 the decision was made to begin working on a plan for the City and since the University Place Fire District was largely congruent with the City the decision was made to produce a joint City/Fire District plan.

The Hazard Mitigation Planning Team members have an understanding of how the City and the Fire District are structured; how residents, businesses, and the environment may be affected by natural hazard events; are experienced in past and present mitigation activities; and represent those entities through which many of the mitigation measures would be implemented. The Team guided the development of the Plan, developed goals and measures, identified stakeholders, and shared local expertise to create a more comprehensive plan. They reviewed hazard determinations, critical facilities and mitigation measures, deciding in all cases what to include and what was superfluous to the final product. Table 1-1 lists the various people and the departments currently represented on the Hazard Mitigation Planning Team .

Table 1-1 Hazard Mitigation Planning Team 2005

NAME	TITLE	DEPARTMENT
Andrews, Jim	Police Chief	Police
Blaisdell, Leslie	Finance Operations Manager/Risk Manager	Community Services/Finance
Cole, Marv	Operations Chief	PCFPD 03
Garrett, Sandy	Communication and Technology Services Director	Communication and Technology Services
Kane, Allan	Assistant City Engineer/Senior Project Engineer	Community Development
Meyers, Luke	Coordinator, Alternate	Pierce County Emergency Management
Pierson, Benjamin ²	Coordinator	Pierce county Emergency Management
Schroedel, Richard	Coordinator	Pierce County Emergency Management
Seesz, Linda	Communication and Technology Services Analyst	Communication and Technology Services
Swindale, David	Planning Manager	Economic Development
Yarberry, Leonard	Assistant Community Development Director/Building Official	Community Development

Over the past year, since work on the mitigation plan began in December, 2004, the HMPT held monthly meetings, except for August during many members vacations. Meetings presented opportunities for discussion, review, and evaluation of the Plan. The meetings were chaired by Communication and Technology Director Sandy Garrett, and generally covered a number of topics. Table 1-2 documents these meetings. All meetings were held at the University Place City Hall.

Table 1-2 HMPT Meetings

January 7, 2005
February 1, 2005
March 7, 2005
April 12, 2005
May 10, 2005
June 9, 2005
July 12, 2005
September 8, 2005
September 20, 2005
October 11, 2005

Pierce County, having a contract with the City of University Place to provide emergency management support, assigned a staff member who was at that time also working on other mitigation plans, to work with the HMPT to develop the City and Fire Districts' Plan. The initial meetings were introductory in that the Disaster Mitigation Act 2000 was introduced to the committee who then began the process of determining the goals the plan would follow. It was determined early that the City and Fire District would try to parallel the Pierce County Plan in its basic form, allowing for changes that would reflect the differences between their needs and the County's. The process followed for each section of the plan is discussed below.

Hazards Workshop and Meetings

Initial hazard information was derived from the 1997 version of the University Place Hazard Identification and Vulnerability Analysis (HIVA). Realizing that the information contained in

the HIVA was a little outdated the HMPT decided to use the newer information (Best Available Science - BSA) developed by Pierce County in their Natural Hazard Mitigation Plan based on the two day workshops mentioned above in October 2001. Over forty participants from the scientific, nonprofit and local government communities attended that meeting. The County representative to HMPT was instrumental in developing that workshop and was able to incorporate information from it, other meetings with scientists and professionals on the hazards in Pierce County, and the Pierce County HIVA in the University Place/Fire District 03 Natural Hazard Mitigation Plan Risk Assessment Section.

On January 4th, 2002, Washington EMD held a meeting to introduce the Mitigation 20/20 software. The Pierce County representative to the HMPT attended this meeting. Subsequent discussions with the others in the Pierce County Department of Emergency Management led to the decision to purchase the software and use it as a foundation for getting the information organized that would be needed for the County's mitigation plan. It would be made available for use by any jurisdiction in the development of their plans. The decision was made by the HMPT to use it for the University Place/Fire District 03 Plan.

Individual Meetings with City and Fire District Staff

In addition to the planning meetings, some members of the Committee met separately on portions of the plan and the Pierce County representative also met individually with members of the team. A list of those meetings and the topics covered is shown in Table 1-3

Table 1-3 Other Meetings between and with Individual Departmental Staff

Date	Involved	Topic
December 2, 2004	PC DEM/Staff	Development Outline
June 15, 2005	PC DEM/Staff	Plan Completion
July 05, 2005	Schroedel & Garrett	Updates on critical facilities
June 01, 2006	Pierson & Garrett	Review State Comments
July 05, 2006	Pierson & Garrett	Review Mitigation Prioritization
August 10, 2006	Pierson & Garrett	Review Updates

Public Participation

Public participation is a key component to strategic planning processes. Citizen participation offers citizens the chance to voice their ideas, interests, and opinions.³ The Hazard Mitigation Planning Team provided many opportunities for public comment throughout an ongoing and open planning process. The Hazard Mitigation Planning Team published information about the Plan through the City's Website⁴ that was used to promulgate the Plan to the public.

The draft copy of University Place/Fire District 03's Natural hazard Mitigation Plan was introduced to the public first through the City's web site and then at the public meeting held on July 21, 2005. The meeting was held in order to provide further opportunity for residents, local businesses, neighboring jurisdictions, and all other interested parties to comment. Maps showing

some of the hazard problems affecting the City were posted on the wall in the Council Chambers. City, County and Fire District employees were present to talk about the plan.

Notification of this was published on both the University Place website and University Place TV. The Tribune was added to cover the citizens and interested parties not just of University Place, but also of neighboring jurisdictions. The Chair of the Hazard Mitigation Planning Team coordinated the meeting. Then on August 1st the draft copy of the plan was presented to the public at a City Council meeting. At the Council meeting it was pointed out that the HMPT was anxious to receive comments from both the Council and the public.

Integrating public participation during the development of the University Place/Fire District 03 Plan has helped to ensure an accurate depiction of the City’s risks, vulnerabilities, and mitigation priorities. See Table 1-4 for a summary of documentation of the Public Involvement.

Table 1-4 Public Involvement

Hazard Mitigation Plan Presentation For County-Wide Working Group	
September 9, 2002	Pierce County Library Administration Building
The Pierce County Representative attended this meeting. It was to review the State planning requirements for Natural Hazard Mitigation Plans. The discussion included the information on the development of the City and other jurisdictions plans.	
Hazard Mitigation Plan Presentation For County-Wide Working Group	
October 15, 2002	Pierce County Library Administration Building
Joint meeting of 30 representatives of Pierce County cities, towns, special districts and hospitals to discuss and focus the beginning or continuation of plan activity depending on each jurisdictions' progress.	
University Place Website Plan Information	
October 11, 2005	City of University Place Website
Where the City of University Place at the recommendation of the Hazard Mitigation Planning Team published a webpage about the DMA2K Natural Hazard Planning Requirement, draft copies of some chapters, hazard maps for the City, and a point of contact.	
Fire District 03 Website Plan Information	
October, 2005	Fire District 03 Website
Where Fire District 03 at the recommendation of the Hazard Mitigation Planning Team published a webpage about the DMA2K Natural Hazard Planning Requirement, draft copies of some chapters, hazard maps for the City, and a point of contact.	
Public Comment Meeting Notice	
July 6, 2005	UP website, UP TV
Where Hazard Mitigation Planning Team published a notice regarding the Public Comment Meeting on the University Place website and on University Place TV	
Public Comment Meeting	
July 21, 2005	University Place City Hall
Where the Hazard Mitigation Planning Team conducted a public forum on the plan.	
City Council Meeting Notice	
July 28, 2005	University Place Library and City of University Place website

Where the Hazard Mitigation Planning Team published a notice regarding presentation of the Plan during the City Council Meeting scheduled for August 1st.	
City Council Meeting	
August 1, 2005	City Council Chambers
Where the HMPT presented the draft copy of the Natural Hazard Mitigation Plan to the City Council and the public, requesting further comments on it.	
Public Comment Meeting Notice	
October 7 2005	Tacoma News Tribune & Daily Journal of Commerce
Where HMPT published a notice regarding the Public Comment Meeting in the Tacoma News Tribune and the Daily Journal of Commerce	
Public Comment Meeting	
October 20, 2005	University Place Community Development Conf. Room
Where the Hazard Mitigation Planning Team conducted a public forum on the plan.	
Fire Commissioner's Meeting	
TBD 2006	
Where the Fire District Commissioners adopted the City of University Place/Fire District 03 Natural Hazard Mitigation Plan.	
City Council Adoption Meeting-TBD	
TBD 2006	City Council Chambers
Where the University Place City Council adopted the City of University Place/Fire District 03 Natural Hazard Mitigation Plan.	

Profile Process

The Profile describes the Geography, Geology, Climate, History, Demographics, and, Economics, of the City. The information was collected from a number of sources including: the City of University Place website and other websites on the geologic history of Western Washington and in particular Pierce County; the City of University Place's Budget and University Place's Comprehensive Annual Financial Report; various documents and books from the Tacoma Public Library; discussions with University Place and Fire District staff; the University Place HIVA; and the US Census Bureau. The University Place/Fire District 03 profile is based in structure on other mitigation plan profiles including the Riverside Natural Hazard Mitigation Plan⁵ profile, the Pierce County⁶ profile, the Puyallup Natural Hazard Plan⁷ profile, and the Clackamas County Mitigation Plan⁸ profiles.

Capability Identification Process

DMA2K requires a “review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.” Within the context of this plan, these elements are referred to as capabilities and their “review and incorporation” as a portion of the capability identification. The capability identification provides the context or the parameters for determining what mitigation measures can be implemented. It identifies specific capabilities that not just the City or the Fire District, but also the County, State and Federal governments have that may help them in the implementation of mitigation measures. Further it identifies those actions already undertaken that mitigate natural hazards, whether they are labeled as such or not. The capability identification

therefore incorporates information from all aspects of the City and District that relate both directly and indirectly to mitigation activity.

The ability of a community to develop an effective hazard mitigation plan depends upon its capability to implement policy and programs. This capability has a number of different facets. The FEMA 386 publication describes a capability assessment and outlines the types of capabilities that should be considered. In order to match the University Place/Fire District 03 Plan with the other plans in Pierce County, including the County Plan, the plan is broken down into types of capabilities :

- Legal and Regulatory
- Administrative and Technical
- Political and Fiscal

Legal and regulatory capabilities refer to the laws, regulations, authorities, and policies that govern current and potential mitigation measures. Administrative and technical capabilities refer to a jurisdiction's staff and technical resources, as well as completed plans and studies that have considered, directly or indirectly, mitigation of natural hazards. Technical capabilities also include the existing electronic and systemic resources. Political and fiscal capabilities refers to the level of support from elected officials for pursuing mitigation and the financial resources available to achieve the identified mitigation strategies.

In determining the structure of this section, the Hazard Mitigation Planning Team viewed those employed by other jurisdictions' in their planning efforts. In the effort to parallel the University Place/Fire District 03 Plan with the Pierce County Plan many of the same types of information were used.

The City of University Place is classified as a non-charter Optional Code City. It falls under the provisions of Chapter 35A.13 RCW with a council-manager form of government. Because of this, political leadership of University Place resides with the City Council, of which the Mayor is a member, and the City Manager. The fiscal capabilities at the City level are assumed to be an inextricable element of the administrative/political capabilities. The City's portion of the Capability Assessment section then covers those three areas listed above where the City has the ability to impact mitigation projects.

For the Fire District the governing board is the Board of Commissioners elected by the people within the fire district. Its capabilities are governed by its status as a Fire Protection District in the State of Washington. Special districts that the fire service falls under are one of five basic types of local governments recognized by the Census Bureau. Special districts are organized local entities that are authorized by state law to provide a limited number of designated functions.⁹

Fire protection districts are a type of special district that has junior taxing authority. A taxing district "shall mean any political subdivision, municipal corporation, or other governmental agency authorized by law to levy or have levied for it a property tax."¹⁰ Junior Taxing Districts consist of fire, water, and school districts, among others. They have the power to levy a property

tax, issues bonds, create local improvement districts with voter approval, exercise the power of eminent domain, and have no land use control or building code authority.

The fire protection districts in Pierce County operate under the authority granted them under the Washington State Constitution.^{11,12} These districts generally provide fire protection outside of incorporated areas. University Place is somewhat unique in that the fire district is almost exactly congruent with the city's boundaries.

The section begins with an identification of capabilities at the State level that dictate what cities in Washington can and cannot pursue with regards to mitigation, as well as what assistance may be available. Much of the focus here is on the Growth Management Act. While not necessarily focusing on capabilities from the state, this section identifies those mechanisms that provide the basis for that which follows at the city and fire district-level identification.

The section then moves on to of the City and Fire District's legal and regulatory capability followed by looking at the political and fiscal capabilities. Included here is information on some Federal monies that would possibly be available, HMGP and PDM monies, when the approved plan is in place. The section then looks briefly at their administrative capability and technical capabilities. Included here is the potential support they can get from the State, Federal and County levels for the implementation of the plan.

In developing this section information was received from staff in Planning, Finance, and Development Services, as well as the Fire District, some, but not all who were regular members of the Hazard Mitigation Planning Team. Staff reviewed different portions of the section as it was developed and responded through written comments both presented personally and through email. Final review of the section was done in coordination with both the City and the Fire Districts' attorneys to make sure there were no legal errors.

All of Section 3 relies on information and studies conducted by the Municipal Research and Services Center of Washington and other resources as noted. Tables provide summary information on specific legal, regulatory, technical and administrative capabilities.

The Capability Identification is a compilation of the laws, regulations, policies, programs, measures, and resources that pertain to and are available to the City and the Fire District. It includes information on existing mitigation measures that they are currently pursuing and should continue. Further, it helps to determine potential avenues and constraints for implementing mitigation measures. In so doing, it provides a catalogue of the funding sources and departments that are referenced in each mitigation measure. Finally, it provides the template for plan maintenance in its identification of existing avenues of implementation (see "Plan Maintenance Section").

Risk Assessment Process

The Risk Assessment describes and analyzes the vulnerabilities and related risks to University Place/Fire District 03 from natural hazards. Each hazard assessment includes a description of the hazard, a hazard profile, and a vulnerability description.

Hazard Identification Description

A primary component of the Risk Assessment for the two jurisdictions is the identification of the hazards threatening their citizens. The hazard identification process used for this assessment is derived from the University Place and the Pierce County Hazard Identification and Vulnerability Analysis, the Mitigation 20/20 software package, computer mapping software, and interviews with local hazard experts and City officials.

State law requires each political subdivision to be part of an emergency management organization, and to have an emergency management plan. Chapter 118-30 Washington Administrative Code requires that emergency management plans be based on a written assessment and listing of the hazards to which the political subdivisions are vulnerable. University Place's Hazard Identification and Vulnerability Analysis (HIVA) is the document used as the basis for emergency response and operations planning. The 1997 University Place HIVA identified four natural hazards and a number of technological or social hazards. The natural hazards identified included earthquake, severe weather, floods and volcanic eruption.

In response to the requirements of DMA2000, in early October 2001, Pierce County DEM convened a series of 1-2 hour workshops over a two-day period, during which prominent regional earth scientists presented current information about known hazards, and facilitated discussion of mitigation measures. Over forty individuals from private industry and federal, state, and local government contributed their expertise at the workshops.

The workshops increased the participants' understanding of the devastating potential of some hazards, e.g., lahars, and raised the issue of providing an adequate definition for "hazards". Some natural conditions have the potential to cause loss of life or property damage, but may not become "disasters".

Updated information from the Hazards Workshop put on by Pierce County Emergency Management and from the updated Pierce County HIVA was incorporated into the planning process and superseded some of the information in the University Place HIVA.

Beginning with that workshop and following on with other discussions, the following definitions were developed for use in this plan.

- *Hazard*: a condition, natural or technological, which has the potential to threaten human life and property.
- *Disaster*: occurs when a hazard actively impacts a community and outstrips that community's ability to cope with injury, death, property damage, or disruption to essential functions.
- *Risk*: the probability that a physical, structural or socioeconomic element will be damaged, destroyed or lost to a natural or technological hazard threatening the community.

- *Vulnerability*: the ability of any physical, structural or socioeconomic element to be damaged, destroyed or lost to a natural or technological hazard.

Since the purpose of the plan is to mitigate *disaster*, the HMPT reevaluated all potential major hazards that might affect the community and then reduced the hazard list to those with the potential to cause large scale emergency or disaster conditions . These can be separated into two categories:

- Single, infrequent events that cannot be anticipated or predicted with accuracy to time or size, and whose potential for loss of life and property is significant to the community, and;
- Repetitive events that can be predicted with a certain amount of reliability within days or hours of its impact, and cause property damage, injury or death.

After assessing hazard maps produced by Pierce County’s computer mapping software, interviews with local hazard experts, the use of Mitigation 20/20 software, and internal committee debate, the list of natural hazards with potentially disastrous consequences for the City of University Place and Fire District 03 was narrowed to these five:

- Windstorm
- Earthquakes
- Floods
- Severe Storms
- Landslides

After the identification process of the hazards was complete, the description process followed with defining each hazard and categorizing the different types of each hazard.

Hazard Profile

After identifying the five hazards through the above process, each hazard was profiled. The profile consists of defining the location and extent of the hazard with respect to the community, and an evaluation/depiction of the hazard’s past and possible future occurrences. Maps illustrate the location and extent of each hazard. The maps were produced using data from the following agencies: USGS; Pierce County Water Programs; Flood Insurance Rate Maps; WA DOE; WA DNR, NWS. The occurrence probabilities were calculated using routines established in the “Mitigation 20/20” software package and information from local hazard experts.

Vulnerability/Risk Assessment

The Hazard Mitigation Planning Team also conducted a vulnerability/risk assessment that speaks to the City and Fire District’s unique characteristics and hazard risks. This assessment builds on the identification and profiling of hazards. The process examines more specifically how the identified hazard events would damage or disrupt the community, including any consequences of a disaster caused disruption.

The vulnerability assessment process for the Hazard Mitigation Planning Team began with a profile of the community. Included in this profile is an analysis of the specific characteristics that contribute to the vulnerability of the community, its structures, people, and functionality. These characteristics were considered in determining how the community would be impacted by the various hazards, and its subsequent vulnerability and risk from those hazards.

The University Place/Fire District 03 Hazard Identification and Risk Table (Table 4-2) uses routines established in the “Mitigation 20/20” software package to rate each of these major hazards according to Impact Area, Health & Safety Impacts, Property, Environmental and Economic Damage, and the Probability that the jurisdiction will be affected by that individual hazard. This table is the culmination of the risk assessment processes.

The Hazard Mitigation Planning Team derived a “Risk Score” using a qualitative process in which they compiled their estimates of the impact on the physical and social parameters listed above. Totaling the scores for the impacted area, health & safety, property, environment and economic factors gives a "Total Vulnerability Score" for natural hazards. Multiplying the Total Vulnerability Score by the probability of occurrence produces the Risk Score.

Total Risk Score = (Total Vulnerability Score for Natural Hazards) X (Score for Probability of Occurrence)

The maximum score a hazard can receive is an eighty. The Risk Score is converted to a “Low”, “Medium” and “High” scale:

0-9	→	Very Low Risk	(VL)
10-25	→	Low Risk	(L)
26-40	→	Medium Risk	(M)
40-80	→	High Risk	(H)

In deriving these estimates of risk, the Hazard Mitigation Planning Team utilized available information for each hazard’s impact on the geographic, as well as population, infrastructure and facilities within those impacted areas. This includes inventories of valuable environmental resources and factors that are influential to the economic well being of the community.

In gathering information and deriving estimates and scores, it is often necessary to rely on the informed judgment of knowledgeable City, and in this case Fire District, officials, hazard experts, and the best available science (BAS). It must be emphasized, that in using BAS there is no attempt to portray it as the final word about any particular hazard. In many cases detailed information is not fully available or is changing rapidly as new information becomes available due to contemporary research. There has not been any intent, by the Hazard Mitigation Planning Team to conduct or fund extensive new studies to obtain hazard information solely for the purposes of the development of this plan. Rather the Hazard Mitigation Planning Team believes that the information currently available is more than sufficient to illustrate the vulnerability of the community to many hazards and risk posed by them. The Team further believes that the City and Fire District officials’ experiences within the community, as well as their capabilities to derive reasonable estimates of the potential impacts of the hazard, based on the outline provided by Mitigation 20/20, is adequate for the purposes of this initial planning effort.

Mitigation Strategy Process

The hazard mitigation strategy is a comprehensive attempt to address the long-term vulnerability to the natural hazards identified in the **Risk Assessment** section as being inherent to the City of University Place and Fire District 03. It identifies and analyzes a comprehensive range of specific mitigation measures to reduce the effects of each hazard, with particular emphasis on public owned facilities and infrastructure. Special emphasis has been put on the continuation of planning efforts especially in relation to multi-hazard mitigation actions.

The development of a mitigation strategy begins with a review of the **City of University Place's Emergency Management Mission Statement**. This helps to ensure that the mitigation goals and then the resulting mitigation measures developed for the City and Fire District are specific to the community.

Based upon these goals, community-specific mitigation measures for the City were identified through the Risk Assessment and the Capability Identification. Prioritization of the measures was achieved through a request for public comment, at both public meetings and on the web site, as well as through the HMPT meetings. The prioritization concentrated on University Place/Fire District 03's unique needs and capabilities, with an emphasis on the extent to which benefits are maximized according to an informal cost benefit review of the proposed measures and their associated costs.

University Place/Fire District 03 Mitigation Goals

The Hazard Mitigation Planning Team began with the mission statement put forth in the City of University Place's Comprehensive Emergency Management Plan (CEMP) that states:

"The government of the City of University Place, Washington, in order to preserve lives, property and essential governmental services and in cooperation with our residents, business and industry, the military and other levels of government, shall take appropriate actions to mitigate, prepare for, respond to and recover from natural and technological emergencies or disaster."¹³

The HMPT combined this mission statement with material from other documents to develop the mitigation goals. After discussion they adopted goals similar to many others. This other material considered includes:

- The Washington State Mitigation Plan Goals;
- The City of Puyallup Mitigation Plan Goals,
- Pierce County Mitigation Plan Goals,
- Information contained in the FEMA document Developing the Mitigation Plan: Identifying mitigation actions and implementation strategies, State and Local Mitigation Planning how-to guide, FEMA 386-3;
- The public understanding of risks; and
- The City's ability to fund and implement mitigation measures.

The Hazard Mitigation Planning Team developed the following natural hazard mitigation goals:

- Save lives and reduce public exposure to risk;
- Reduce or prevent damage to public and private property;
- Reduce the vulnerability of the City's economy to disaster;
- Reduce adverse environmental or natural resource impacts;
- Improve community understanding of the particular hazards that threaten the City, and the mitigation measures available to reduce vulnerability to those hazards; and
- Provide continuous review of mitigation plans.

The Mitigation Plan goals describe the overall direction that the City and its citizens can take to work toward mitigating risk from natural hazards. These goals are stepping-stones between the broad direction of the plan purpose, the mitigation objectives, and the specific recommendations outlined in the subsequent mitigation measures.

Mitigation Measures: Identification and Evaluation

To help achieve each goal, the Plan identifies mitigation measures—specific actions or projects that help mitigate risk for the community. The process of, research, meetings with City officials and public participation lead to the development of these measures. This ensures that the measures speak to the risks specific to both the City of University Place and the small portions of the Fire District outside the City's boundaries. Reviewing the capabilities available helped refine which measures can be implemented either on the short, mid, or long term. The combination of the Risk Assessment and the Capability Identification are central to the process of selecting viable mitigation measures.

FEMA has outlined six categories into which all mitigation measures can be grouped. These can be found in the box below. The mitigation measures proposed for the City when combined with those for the individual facilities touch upon every one of those categories at least once.

The outcomes of the Risk Assessment, specifically the Vulnerability Rating and the Risk Scores (see Table 4-2 University Place/Fire District 03 Hazard Identification and Risk Assessment), illustrate the hazards to which the City and the Fire District are both the most vulnerable and to which they have the highest risk. It provides the focus for the mitigation goals through identification of the City and Fire District's vulnerability to, and resulting risk from, these specific hazards. Based on these hazards, the Hazard Mitigation Planning Team identified specific mitigation measures that would bear on each hazard. These measures were broken down into those that would mitigate multiple hazards versus those that were hazard specific. They were then further defined in terms of the goals they address as well as the hazards they mitigate.

Through the use of the Mitigation 20/20 tools, meetings, and review of other local mitigation plans¹⁴, the Hazard Mitigation Planning Team selected the following eight categories to comprehensively evaluate each measure.

1. Goal(s) Addressed

What mitigation goals does the measure address? (This pertains to the community's goals expressed above.)

2. Cost of Measure

How much will the measure cost to implement? (Usually mentioned as rough estimates.)

3. Funding Source and Situation

What is the potential funding source? Choose the statement(s) below that most accurately defines the funding situation for the proposal:

- Funding could be obtained through local budget.
- Funding could be obtained through state or federal grants.
- Funding could be accomplished with local budgets or grants.
- No potential funding sources can be readily identified.

(Some of these were modified later for individual facilities due to concerns voiced by members of the HMPT.)

4. Lead Department(s)

Which department(s) will be leading the implementation of the measure? (In some cases it is actually an outside agency that will be the lead.)

5. Timeline

How long will it take to implement? Measures include ongoing, short-term, and long-term activities. Each measure includes an estimate of the timeline for implementation. If an actual timeframe is expected please include it or one of the following:

FEMA Mitigation Action Categories
<p>1. <i>Prevention:</i> Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses.</p> <p>2. <i>Property Protection:</i> Actions that involve the modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area.</p> <p>3. <i>Public Education and Awareness:</i> Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.</p> <p>4. <i>Natural Resource Protection:</i> Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems..</p> <p>5. <i>Emergency Services:</i> Actions that protect people and property during and immediately after a disaster or hazard event..</p> <p>6. <i>Structural Projects:</i> Actions that involve the construction of structures to reduce the impact of a hazard..¹⁵</p>

- Ongoing measures are activities that University Place or Fire District 03 are already implementing.
- Short-term measures are activities which the City or Fire District is capable of implementing with existing resources and authorities within one to two years.
- Long-term measures may require new or additional resources or authorities, and may take between one and five years to implement.

HMPT members later went back and modified some initial responses to reflect actual time frames that they estimate it would take to implement the programs.

6. Benefit

Does it benefit all of community and/or is it Facility Specific?

7. Life Expectancy of Measure

How long will the measure last?

8. Community Reaction

Choose the statement(s) that most accurately describes how the community would react to the implementation of the proposal:

- The proposal is likely to be endorsed by the entire community.
- The proposal would benefit those affected, with no adverse reaction from others.
- The proposal would be somewhat controversial.
- The proposal would be strongly opposed by most.
- The proposal would be strongly opposed by nearly all.

Upon receiving the initial forms containing the mitigation measures the HMPT reevaluated some of the answers to be more concise in their estimates. For example in the category "Time Line" most of the responses were changed from the generic possibilities like "short term" and "long term" to actual estimated years when the project might be undertaken. These estimates were then inserted into the final plan.

Once they were proposed, mitigation measures were evaluated by the Hazard Mitigation Planning Team. The evaluation process involved meetings in which the HMPT discussed the measures with specific attention being paid to the viability, politically and otherwise, of each measure to be implemented, the extent to which it addressed the hazards impacting the City and the District, and its cost-effectiveness. At this point a number of proposed measures were dropped for various reasons and a final list was settled upon. Many of the final measures addressed multiple hazards directly or would have a carry over affect from the hazard for which they were proposed that could impact the risk from other hazards.

Mitigation Measures: Prioritization

The measures having been identified, defined, and evaluated, the rest of the process involves prioritization. The process relies upon the planning area's identified risks and vulnerabilities, the planning team's local expertise, public participation, and the chief elected official's authorities

and duties. Over the course of several meetings, the HMPT presented, outlined, categorically defined, and ranked each mitigation measure for both the City and the Fire District.

In order to provide consistency, the evaluation process, including the eight categories, was used as the basis for the prioritization of measures. The process allows for emphasis on the extent to which each measure is cost-effective. While it may be important to emphasize a positive cost/benefit review in the prioritizing of mitigation measures, it is also important to emphasize the influence of local political factors, community needs and values, historic properties, and habitat and environmental issues upon the selection of specific mitigation measures. Therefore, the prioritization process addresses the jurisdiction's unique needs, expressed here in terms of the measure's ability to be implemented and the extent to which it would mitigate one or more relevant hazards. The eight categories address these issues.

A measure's ability to be implemented is illustrated in Categories 2 (Cost of Measure), 3 (Funding Source and Situation), 4 (Lead Jurisdiction(s)), and 5 (Timeline). The extent to which a measure would mitigate one or multiple hazards is addressed in Category 1 (Goals Addressed) which further helps to encapsulate Pierce County's unique vulnerabilities and needs. The issue of the number of hazards addressed is also inherent in Category 6 (Benefit). For cost-benefit review, categories 2, 3, and 5 directly address cost. Categories 6 and 7 (Life Expectancy of Measure) directly address benefit. Category 8 (Community Reaction) indirectly considers both potential costs and potential benefits of the measure in terms of public opinion.

After presentation and discussion, the Planning Team ranked the potential mitigation measures based on goals addressed, with special attention paid to the measure's cost-benefit review, its ability to be implemented, and the extent to which it would mitigate one or multiple relevant hazards. The Planning Team combined these rankings into one prioritized list, which the Team then presented to the public for comment.

The mitigation measures are organized for each jurisdiction by implementation mechanism and prioritized within each subset. A detailed description of each mitigation measure follows the summary tables.

Each measure's priority is presented in the following format:

“Implementation Mechanism-Ranking”

For example, the Slope Stabilization measure for the City of University Place is prioritized as follows:

“Priority: HMPT-7”

Thus it is the seventh ranked measure within the Hazard Mitigation Planning Team implementation mechanism for the City of University Place. The hazards this measure addresses are noted both in the table and in the more detailed description that follows.

Plan Maintenance Process

The development of the University Place/Fire District 03 Natural Hazard Mitigation Plan may be considered the first step in breaking the disaster cycle and its affects on the community covered by the City and the Fire District. The first step in the maintenance of the Plan is its review by the State and Federal reviewers, followed by its adoption by the City and the Fire District. This “Pre Adoption Review” allowed by Washington State EMD and FEMA Region X will give them a preliminary approval. By doing so the City and the Fire District will know they are approving a plan which will already pass at the State and Federal level. Once this initial approval is complete the University Place City Council and the Fire Commissioners will then formally adopt the Plan.

The section details the formal process that will guarantee the Plan remains an active and relevant document. It includes: a process schedule of monitoring, evaluating, and updating within a five-year cycle; an explanation of how the City and the Fire District intend to incorporate the mitigation strategies outlined in the Plan into existing agency mechanisms, and; how it will integrate public participation in the plan maintenance procedures.

The Plan will be implemented through the annual budget process and varying grant application processes. Due to the nature of their size, many of the projects foreseen will need outside funding to initiate. These will be implemented only if that outside funding becomes available. Key to getting the mitigation plan incorporated into the budget cycle is the requirement that City department heads will incorporate the goals and measures into the annual budget process within 6 months of formal adoption of the plan. The Fire District, working on an annual budget, will incorporate the goals and measures into their annual budget within six months of adoption of the plan.

Mitigation projects that have already been acted on by the City and the Fire District will continue to be supported. The Hazard Mitigation Planning Team decided to develop the plan maintenance procedures around an annual review schedule. This schedule will commence June 2006.

Furthermore, the Hazard Mitigation Planning Team will be responsible for reviews and updates to the Plan. During each review, the Hazard Mitigation Planning Team will review each goal, objective, and measure to determine their relevance to changing situations in the City and the Fire District, as well as changes in State or Federal policy, and to ensure that they are addressing current and expected conditions. Working with the Pierce County Department of Emergency Management, the HMPT will also review the risk assessment and capability assessment sections to determine if the information should be updated or modified based on new information. Implementation of various mitigation measures will be reviewed, and status reports of each measure will include which implementation processes worked well, any difficulties encountered, how coordination efforts are proceeding, and which goals, objectives, and measures should be revised.

Additional reviews will be required following disaster events and will not substitute for the scheduled biennial review. Within ninety days following a significant disaster or an emergency event impacting the community, the Hazard Mitigation Planning Team will provide an assessment that captures any “success stories” and/or “lessons learned” for the purpose of

continuing development of the Plan. The assessment will detail direct and indirect damages to critical facilities and the community as well as response and recovery costs. It will then determine if any new mitigation initiatives should be incorporated into the Plan to avoid similar losses due to future similar events.

Following the assessment, the City will have three months to update and make changes to the Plan before submitting it to the Washington State EMD and FEMA Region X.

Endnotes

-
- ¹ Modified Clackamas County Hazard Mitigation Plan template.
- ² Following the initial State review of the Plan (approx 7/06), PC DEM reassigned the coordination of the planning effort to Mr. Pierson.
- ³ Clackamas
- ⁴ <http://www.ci.university-place.wa.us>
- ⁵ Riverside Fire Department Hazard Mitigation Plan, 2004
- ⁶ Pierce County Natural Hazard Mitigation Plan, 2004 (Draft Copy)
- ⁷ City of Puyallup Natural Hazard Mitigation Plan, 2005
- ⁸ Clackamas County Hazard Mitigation Plan.
- ⁹ See 1997 Census of Government Organization, Appendix B - Definitions
- ¹⁰ **RCW 84.52.050**
- ¹¹ **RCW Title 52, 1939**
- ¹² <http://www.mrsc.org/subjects/governance/spd/SPDNo.pdf>
- ¹³ University Place Comprehensive Emergency Management Plan – Basic Plan, March 2001, page 1.
- ¹⁴ The mitigation plans for Clackamas County, OR, Salem, OR, the Town of Wendell, NC, and Riverside Fire Protection District #14, WA, provided examples and models for the development of the eight Riverside mitigation measure criteria. The Pierce County and Puyallup and now the University Place mitigation measures criteria are a hybrid of these, where sometimes only part of another jurisdiction’s template criteria was used, and where other times the entire criteria was used.
- ¹⁵ Developing the Mitigation Plan: Identifying mitigation actions and implementation strategies, State and Local Mitigation Planning how-to guide, FEMA 386-3, Version 1.0, April 2003, page 2-1.

**CITY OF UNIVERSITY PLACE/FIRE DISTRICT 03
PROFILE**

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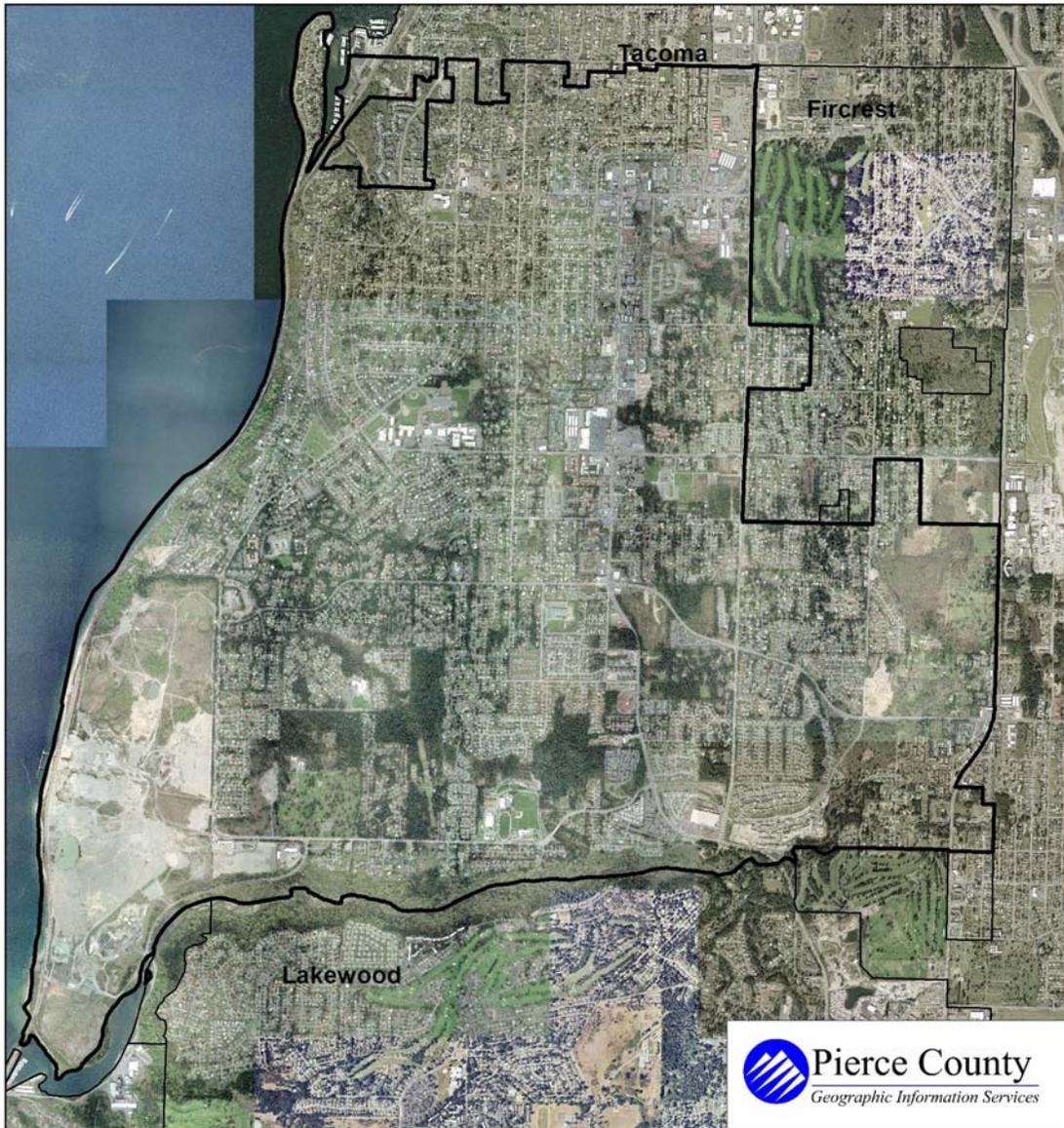
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City of University Place

Ortho Base Map



Geography

Located just to the southwest of Tacoma, University Place is Pierce County's fourth largest city (behind Tacoma, Lakewood and Puyallup). The City was developed on land lying just south of the Tacoma Narrows between the Cities of Lakewood, Fircrest, and Tacoma and the very northwest corner of the Town of Steilacoom.

Located along the shoreline of south Puget Sound, at latitude 47.235N and longitude 122.549W, the City encompasses approximately 8.4 square miles and covers two distinct geographic areas. The City's most prominent geographic feature is the approximately 5 miles of shoreline and hillside rising up from it running from NE to SW along the west side of the City. The rest of the City lies on the plateau formed by the deposition of material left by the glacial advances which covered Western Washington up until approximately 10,000 years ago.

The main business portions of the City lie along a few main arterials. Running north and south through the City, Bridgeport Way forms the core of the business section and includes the town center. Towards the north end of Bridgeport, 27th Street West forms an east/west corridor from its intersection with Fircrest to Grandview on the west. Elevation in University Place can range from sea level to above 420 feet above sea level (see University Place Base Map).

No major state highways connect the City to surrounding jurisdictions. Rather a series of arterials connect the City to Fircrest, Tacoma, Lakewood and Steilacoom.

University Place contains 99.29 acres of parkland distributed in seventeen parks. These range in size and development. The smallest is a small section of undeveloped land just north of the west end of the Day Island Bridge containing 0.15 acres. At the other extreme is Cirque/Bridgeport Park which contains 22.5 acres. In addition to this, Pierce County owns 950 acres of land listed as the Chamber Creek Properties. This land located along the southwest portion of the City contains the County's wastewater treatment plant and the remains of an old gravel pit. Much of the land not containing the treatment plant is slated to be developed as a golf course. In addition there will be playfields and other park facilities on the property. While not owned by University Place the County is working with the City, through interlocal agreements on plans for the area.

Fire District 03 covers the area of University Place and approximately 0.3 square miles of additional Pierce County land to the southeast of the City. This additional portion lies in an area primarily containing residential development.

Geology

The geology of University Place and Fire District 03 is characterized by sediments laid down during Quaternary periods of glacial advance and retreat.

The Fraser glaciation was the last major glacial period and lasted about 10,000 years. During this period the advance of Cordilleran ice sheet from British Columbia into the Puget Sound area reached its maximum extent around 15,000 years ago. The ice sheet split into the Juan de Fuca and Puget ice lobes as it encountered the Olympic Mountains. The Puget ice lobe moved south through what is now Pierce County, covering the area that is now University Place and extending south into Thurston County. During this time the ice sheet had numerous smaller advances and retreats. One of these was the Vashon Advance. Although short-lived the Vashon Advance had a major effect on the eventual topography of University Place. Overlaying older deposits Vashon drift and Vashon till make up the surficial geology of University Place and the rest of Fire District 03. When major climatic changes occurred about 10,000 years ago, the Fraser glaciation ended, leaving University Place much as we know it today.

Vashon till makes up the majority of the City and District underlying the central and northern portions, coming almost as far south as New Tacoma Cemetery on the west and nearly as far south as Chambers Creek Road to the east of the cemetery. This material, is characterized by a mixture of gray, unsorted, unstratified, highly compacted mixture of clay, silt, sand, gravel, and boulders deposited directly by glacier ice.¹

Vashon Drift make up the southern portions of the City with an arm extending northward along the course of Leach Creek. This material contains undifferentiated chiefly recessional and proglacial stratified outwash sand and gravel.

Approximately 13,600 years ago the ice sheet had receded into a single lobe located in the northern Puget lowlands. During this glacial retreat, glacial damming formed large temporary lakes. The Vashon Drift material shows evidence for this in containing lacustrine deposits, silt, and clay.

Climate

The City and Fire District experience a typical maritime climate of mild, wet winters and relatively cool, dry summers. Definite seasons are evident, with the rainy season generally from October through April. Precipitation is usually in the form of rain with occasional snow during the winter.

Climate data collected for 73 years from the Tacoma weather station and tabulated by the Western Regional Climate Center shows an average annual precipitation rate is approximately 38 inches, with average temperatures ranging between a minimum of 35 degrees in December and a maximum of 77degrees in August (**See Table 4**).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Ave. Max Temp. (F)	48.2	50.7	55.3	60.6	66.2	71.9	76.4	77.1	71.4	61.3	52.3	46.4	61.5
Ave. Min Temp. (F)	36.6	36.8	39.6	42.9	47.7	52.4	55.6	55.6	51.2	45/6	40.1	35.4	45.0
Ave. Total Precipitation (in)	5.76	3.92	4.12	3.02	1.98	1.59	0.74	0.88	1.16	3.70	6.67	5.53	39.06
Ave. Total Snowfall (in)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2

The average number of days where the temperature actually drops below freezing is 35 and the average number of days where the temperature climbs above 90° (F) is 1.2 per year³.

With the cooler temperatures in November through March, snow or ice can occasionally be found in University Place although there may be none close to Puget Sound along Sunset Beach or Day Island. Generally, with the temperate maritime climate, any problems, transportation or otherwise, with ice or snow are of a short duration, lasting from a few hours to a couple of days.

History

The first recorded people in the area were Native Americans living throughout the coastal areas of Pierce County. The Squaxin, Puyallup and Nisqually Tribes, all close relatives of other Coast Salish tribes within Puget Sound, were located within the general vicinity surrounding the area which is now University Place. They lived in settlements along both the southern portions of Puget Sound and the rivers entering it.

The first known contact between the natives in the region and Westerners was in 1792 when Captain George Vancouver spent time in Pierce County exploring and surveying the southern portions of Puget Sound. Over the next 40 years there was little contact between the two groups. Eventually, with first the movement of the Hudson's Bay Company into the region, and later the expansion of American interests, there was an escalation in contact between the two cultures. The first European to traverse the region was 21 year old Dr. William Fraser Tolmie who passed through in 1833 in the company of an Indian guide and several other natives.

In 1841 Lt. Charles Wilkes spent 3 months exploring the Puget Sound area giving names to many of the features he found around the Sound. On his map of that time he names Day, Fox, McNeil, and Anderson Islands. He also named the Narrows, Point Fosdick and Toliva Shoal which sits off the coast of University Place. His map of the area shows the area encompassing University Place as being within the influence of the Nisqually nation. However, many of the areas along the coast were used by more than one tribe. Early records reveal that Day Island was initially used by natives from both Steilacoom and Wollochet Bay as a temporary camp for fishing and duck hunting.⁴

By the 1850s a few settlers had begun to move into the area. Many if not most of these were discharged workers from the Hudson's Bay Company at Fort Nisqually who had married native women.

Fort Nisqually, the first European settlement on Puget Sound was named after the Nisqually Tribe in whose territory it was built. It was established by Archibald McDonald of the Hudson's Bay Company (HBC) of London in the spring of 1833 initially as a store house and later as a trading post. The original site was on the beach and plains above the Nisqually River delta a few miles to the south of University Place in the present town of DuPont, Washington. It provided a focal point for settlers moving into the areas which later became Pierce and Thurston Counties and later yet University Place. Later after the transfer to the United States of land in Washington State, Fort Steilacoom was started on the grounds of what is now Western State Hospital, just south of University Place.

During this period there began to be a greater influx of settlers from the United States. The first of these trekked overland, crossing Naches Pass in the Cascades in the fall of 1853. The impetus for this movement was the Oregon Land Law that had been passed by Congress in 1850. It allowed a single man to claim 320 acres or a married man 640 acres.

In 1855 war with the natives broke out. More than eighty settlers from throughout Pierce County fled to the safety of Fort Steilacoom. With the end of the war in 1856, settlement began to expand throughout the County. Later in the 19th century, in the area to the north of Fort Steilacoom, the early industry revolved around logging and slightly later a fruit and berry agriculture developed. Eventually as a wealth began to flow into Pierce County summer cottages began to dot the landscape overlooking the Sound.

One of the early business ventures at this time was the Sunset Beach Hotel. Access to the hotel was either down a carriage road from the plateau above or by steamer that pulled into the dock bringing passengers from Tacoma or Olympia. Built in 1890, legend has it that the hotel was the scene of some rather wild times, including the hanging of a cheater at cards on a local tree. The hotel eventually burned down in 1904 and was never rebuilt. In 1911 slightly to the north of Day Island at Titlow beach the Hotel Hesperides was built. Today a portion of it still stands as the Titlow Lodge. The next major enterprise to move through the area was the railroad which built a line along the coast and through the Pt. Defiance tunnel. However there were no stops along the route from Olympia until it reached Tacoma.

The small portion of University Place called Day Island was originally deeded to Anthony Roberts Williamson as part of his homestead which ran along the coast to the south of where the Day Island Bridge is currently situated.

University Place, located just west and southwest of Tacoma on Puget Sound, was named for the projected campus of Puget Sound University which was to be built there near the turn of the century. The Methodist Church had acquired 420 acres of land near present day Lemons Beach and Parkway Loop, 60 for the planned campus and the rest for lots, the sale of which they planned to use to fund the construction of the University. The area was platted by the University Land Company on September 23, 1895. However, the financial panic of 1893 had devalued the land and it was eventually forfeited for non-payment of taxes and sold in 1901.

In November 1994 proponents interested in lowering taxes, improving public services, making capital improvements to the community and establishing local control over development, succeeded in passing a ballot measure which established 7.86 square miles of unincorporated Pierce County into the City of University Place. Over the next nine months all the requirements toward meeting the deadlines associated with legally establishing a new city and providing municipal services were met. Council members were elected, an interim city manager selected, and start-up staff hired. This led to its incorporation as a city on August 31, 1995. The next year it annexed into the Fire District.

Fire District 03 was originally organized as the University Place Volunteer Fire Department on March 4, 1941. Shortly thereafter its first chief was hired, Chief Leslie McGaw. The fire

department was formed into Pierce County Fire Protection District #3 on August 26, 1944. This was the result of a citizens' vote in order to be able to collect a regular levy through taxes.

During its early days the fire station was located in a converted tomato shed. This building lasted until it was replaced by a newer station in 1952. This building has now been converted to the city's Community Center.

Continued expansion of the population served, has continue to add pressure to the need for expanded services.

So beginning in 1957 a new station was built at 7909 40th Street West that had two bays added to it in 1966. In 1979 the basic life support medical aid that was available was upgraded with the addition of paramedics to the force.

The continued expansion of the force required upgraded stations and so in 1981 major remodeling was completed. This process has continued with a totally new headquarters station being built in 2001 as part of the larger City Campus located just north of Homestead Park.

Significant Events Since Incorporation of University Place

1996

- City contracts with Pierce County for police services. Response times reduced dramatically.
- City annexes into Fire District 03.
- City obtains first grants for rebuilding Bridgeport eventually reducing traffic accidents by 60%.

1997

- Grandview Drive construction starts, first roundabout installed.
- Senior Center becomes city property
- City buys Homestead Park and Cirque Bridgeport Park

1999

- Fircrest Acres annexation.

2000

- I-695 passes, reducing city general fund by approximately 25 %.

2001

- Fire District builds new Public Safety Building for police and fire near City Hall in partnership with City.
- City sells bond for improvements on Cirque Bridgeport park land.

2002

- City drafts first town center plan, setting standards for commercial development in the city's primary business district

2003

- City buys 11 acres in Town Center area to spur economic development.
- Cirque Drive rebuilt from Bridgeport to Alameda.

2004

- Town Center developer selected, planning for new commercial center begins in earnest

2005

- The Bridgeport Way/Leach Creek culvert replaced with fish-friendly culvert
- New road extensions and openings allow police and fire to reduce response times to south and north ends of city.

By 1966, the year Chief McGaw retired, the force had been built up to four paid firefighters and thirty volunteer firefighters. This gradual expansion has continued until today there are thirty-five paid firefighters and officers and twenty-five volunteer firefighters and officers.

Demographic

As of July 1, 2004 University Place's population was 30,800. The largest growth recently has been the result of residential development. This expansion will continue for the near future. However there is a limited ability for the city to expand its population base. University Place's Urban Growth Area, extends only to the City boundaries. Since it is bordered almost totally by

Tacoma, Fircrest, Lakewood and Steilacoom there is essentially no ability to expand geographically.

Census data (See Table 1) shows the median age for the population is 36.5 years. This is slightly older than the average for either Pierce County (34.1 yrs) or the state as a whole (35.3 yrs). Comparisons between the City and the rest of the County show that racially the City is slightly more ethnically diverse than either the County or the State. The Native American population over the past 150 years has dwindled to less than 1%. Of the other minorities showing up in the census data African American and Asian predominate and those claiming multiracial heritage are showing up at a higher percentage than either Pierce County or the State (See Table 2).

Economy

Historically the economic mainstay of University Place has been comprised of a mixture of small business. There are no large industrial areas. The closest thing to large industry was the gravel mining operation run by Glacier Northwest that went on along the southwestern coast of the community. The land it was on was leased to it by the County and it finally closed its doors in the summer of 2003.

Early lumbering initially cleared much of the land and while homesteading went on and eventually many homes were built, it was not until incorporation that there be began to be more of an emphasis on business development. This process has accelerated and the last ten years saw rapid growth in the City's commercial sector. The result is that gradually urbanization has increased, especially along Bridgeport Way. Today, on one hand, University Place serves as a bedroom community,

Subject	Number	Percent of Total
Total Population of University Place	29,933	100.0
Sex & Age		
Male	14,264	47.7
Female	15,669	52.3
Under 18	7,776	26.0
18 and over	22,157	74.0
Male	10,279	34.3
Female	11,878	39.7
21 and over	20,921	69.9
65 and over	3,365	11.2
Male	1,420	4.7
Female	1,945	6.5
Median Age (years)	36.5	-----
Race		
One race	28,351	94.7
White	22,711	75.9
Black or African American	2,617	8.7
American Indian & Alaskan Native	217	0.7
Asian	2,236	7.5
Native Hawaiian & Other Pacific Islander	167	0.6
Other	403	1.3
Two or more races	1,582	5.3
Hispanic or Latino (of any race)	1,150	3.8
School Enrollment (3 yrs & over inc. college)		
Educational Attainment (25 yrs & over)		Percent of 25+ y/o
Total population 25 yrs and over	19,466	100.0
Less than 9 th grade	411	2.1
9 th to 12 th grade – no diploma	975	5.0
High School graduate & GED	4,112	21.1
Some college – no degree	5,514	28.3
Associate degree	1,863	9.6
Bachelors degree	4,196	21.6
Graduate or professional degree	2,395	12.3
Marital Status (pop. 15 yrs & over)		
Total population 15 yrs and over	23,786	100.0
Never married	5,877	24.7
Now married – not separated	13,330	56.0
Now married – separated	359	1.5
Widowed	1,179	5.0
Female	942	4.0
Divorced	3,041	12.8
Female	1,886	7.9
Economic Status (1999)		Percent
Median household income	50,287	-----
Per capita income	25,544	-----
Median earnings full time workers-male	42,452	-----
Median earnings full time workers-female	30,045	-----
Housing – median value	177,000	-----
Median mortgage payment	1,407	-----
Poverty Status		
Families below poverty level	500	6.0
Individuals	2,176	7.3

economically linked to Tacoma and the Puget Sound region in general. On the other, it is an area of increasing residential and commercial growth.

Today small businesses, a few major retail outlets and the school district employ the majority of those who work in University Place. The only employer to actually have over 200 employees on a regular basis is the school district (See **Table 3.**) Taxable retail sales were \$185.44 million in 2003. The business economy is distributed with retail trade forming 48.8%, contracting 14.2%, services 12.3%, transportation and utilities 7.8%, wholesale trade 3.8%, finance, insurance, and real estate 3.4%, manufacturing 1.5%, government 1.2%, and other 1.5%⁶.

Race	% in University Place	% in Pierce County	% in Washington State
White	75.9	78.4	81.8
African American	8.7	7.0	3.2
Native American & Alaskan	0.7	1.4	1.6
Asian	7.5	5.1	5.5
Hawaiian & Pacific Islander	0.6	0.8	0.4
Other	1.3	2.2	3.9
Multiracial	5.3	5.1	3.6
Hispanic of all races	3.8	5.5	7.5

University Place School District	630 employees
Fred Meyer	200 employees
University Place Care Center	157 employees
Charles Wright Academy	146 employees

There is no airport inside University Place. The closest, Tacoma Narrows Airport, lies across the Tacoma Narrows on the Kitsap Peninsula. In addition, it is eight miles from the Port of Tacoma. Neither of the railroads, Burlington Northern or Union Pacific, make stops in University Place. While tracks run along the coast on the western boundary of the City, they transport containers and general freight through the City without stopping.

Passenger train service is the same, traveling along the edge of the City and stopping in Tacoma to the east. While the coast makes up a large portion of the University Place boundary, there are no port facilities or ferry terminals and only one small marina by Day Island. All goods must then be brought in by truck from distribution centers located elsewhere.

Economically the citizens of University Place tend to do better than the rest of both Pierce County and the State (See **Table 4 Income: 2000 Census Comparison of University Place with Pierce County and Washington State**).

	University Place 1999	Pierce County 1999	Washington State 1999
Median Household Income	\$50,287	\$45,204	\$45,776
Median Family Income	\$60,401	\$52,098	\$53,760
Median Per Capita Income	\$25,544	\$20,948	\$22,973

These statistics help considerably in reducing the number of people below the poverty line. University Place's very low percentage of 7.3% compares very favorably with both the rest of Pierce County at 10.5% and Washington State with 10.6 %.

The 2000 census shows the median value of housing to be \$177,000. This was before the current boom in the housing market. With the decrease in home mortgage interest rates and the continuing

rapid construction of new homes the average price is continuing to escalate. The 2003 assessed value for the City is \$2.02 billion. The economic core of the City lies along Bridgeport Way and development will continue to expand in that area. A new City Hall and recently added Fire Station act to anchor the area as a developing core.

Land Use

University Place currently has 17 parcels of land comprising just under 100 acres, designated as parks. These can be seen in **Table 5 Park Lands**. The City is currently (2005) in the process of negotiating the purchase of a number of other properties in the upper reaches of Leach Creek. These purchases would have a multiple impact on the City. First they are attempting to create a wooded trail system winding along Leach Creek. Secondly much of this area has had flood problems over the years. Acquiring the property and making it into park land would decrease the probability of damage from future flooding.

Over the past 10 years, since incorporation, the City has annexed approximately 80 acres through seven separate acquisitions. University Place is now built out at urban density. Any growth the City expects to have from this point forward will be through infill development.

The City's Comprehensive Plan was adopted on July 6, 1998 with implementing regulations being adopted February 26, 2001. The City has 10 land use designations combined with 10 implementing zones (See Table 6).

Property	Acres
Adrianna Hess Wetland Park	2
Chambers Crest Wildlife Habitat	7.5
Cirque/ Bridgeport Park	22.5
Curtis/Colgate Park	11
Conservation Park	1.5
Curran Apple Orchard	7.3
Homestead Park	5.5
Kobayashi Preserve	5.5
Leach Creek Corridor Park	13
Pemberton Creek Open Space	5.0
Riconosciuto Property (Undeveloped)	5.0
Senior Center	0.5
Sunset Park	2.25
Undeveloped Park (SE Day Island)	0.15
Undeveloped Park (unconnected portions) along 27 th	2
Unnamed Park (Teal Creek Development)	5.0
Woodside Park Nature Park	3.59
Total of 17 parcels	99.29

Land Use Designations	Implementing Zones
<p><u>Single Family Residential (R1)</u> Provides for primarily single-family neighborhoods. Enhances and protects the character of single-family neighborhoods by disallowing inappropriate uses, limiting traffic impacts, requiring design standards, preserving and protecting the environment and providing recreational facilities. Allows densities ranging from 4 to 6 dwelling units per acre.</p>	<p><u>Residential 1 R1</u> Provides for primarily single-family neighborhoods. Enhances and protects the character of single-family neighborhoods by disallowing inappropriate uses, limiting traffic impacts, requiring design standards, preserving and protecting the environment and providing recreational facilities. Allows densities ranging from 4 to 6 dwelling units per acre.</p>

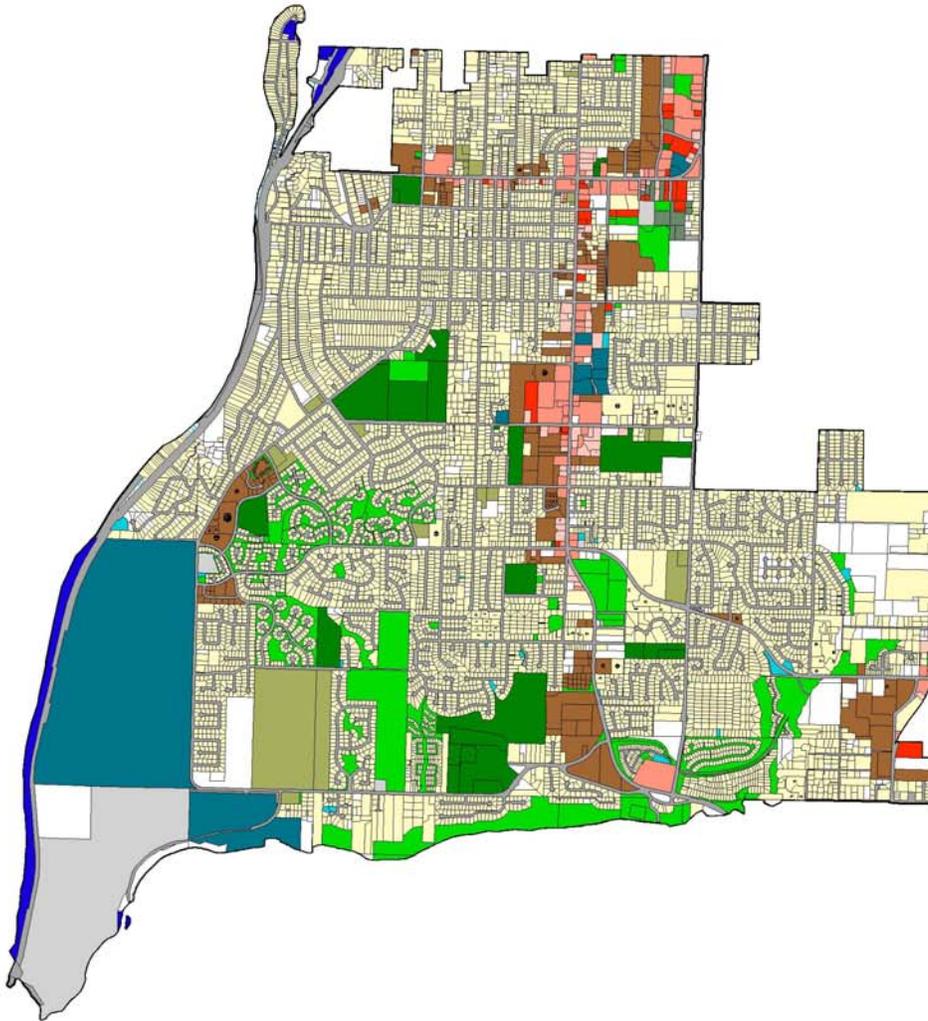
<p><u>Two Family Residential (R2)</u> Provides for a mix of housing types and densities while maintaining healthy residential neighborhoods. Enhances and protects the character of neighborhoods by disallowing inappropriate uses, limiting traffic impacts, requiring design standards, preserving and protecting the environment and providing recreational facilities. Allows densities ranging from 6 to 8 dwelling units per acre.</p>	<p><u>Residential 1 R2</u> Provides for a mix of housing types and densities while maintaining healthy residential neighborhoods. Enhances and protects the character of neighborhoods by disallowing inappropriate uses, limiting traffic impacts, requiring design standards, preserving and protecting the environment and providing recreational facilities. Allows densities ranging from 6 to 8 dwelling units per acre.</p>
<p><u>Multi-Family (MF)</u> Provides for higher density residential development along major arterials and transit routes, close to shopping, public facilities and services. Allows densities ranging from 10 to 12 dwelling units per acre.</p>	<p><u>Multi-Family Residential MF</u> Provides for higher density residential development along major arterials and transit routes, close to shopping, public facilities and services. Allows densities ranging from 10 to 12 dwelling units per acre.</p>
<p><u>Mixed Use–Office (MU-O)</u> Serves as a transition zone providing separation between more intense commercial activities and residential areas and between the Neighborhood Commercial and Town Center land use designations. Uses include community and cultural services, administrative government services, minor utility facilities, multi-family and single family housing. Allows densities ranging from 10 to 12 dwelling units per acre.</p>	<p><u>Mixed Use–Office MU-O</u> Serves as a transition zone providing separation between more intense commercial activities and residential areas and between the Neighborhood Commercial and Town Center land use designations. Uses include community and cultural services, administrative government services, minor utility facilities, multi-family and single family housing. Allows densities ranging from 10 to 12 dwelling units per acre.</p>
<p><u>Mixed Use (MU)</u> Provides areas for compatible residential and commercial uses along major arterial streets. Serves as a transition between the more intense Town Center zone and Single Family Residential zone. Encourages a mix of retail, personal services, offices and residential use within developments. Allows densities ranging from 10 to 12 dwelling units per acre.</p>	<p><u>Mixed Use MU</u> Provides areas for compatible residential and commercial uses along major arterial streets. Serves as a transition between the more intense Town Center zone and Single Family Residential zone. Encourages a mix of retail, personal services, offices and residential use within developments. Allows densities ranging from 10 to 12 dwelling units per acre.</p>

<p><u>Neighborhood Commercial (NC)</u> Provides for small compact centers with a mix of neighborhood scale retail shopping, services, banks, professional offices, public parks, community and cultural services, government and safety services that serve the daily needs of local residents and businesses. Single-family dwellings are permitted.</p>	<p><u>Neighborhood Commercial NC</u> Provides for small compact centers with a mix of neighborhood scale retail shopping, services, banks, professional offices, public parks, community and cultural services, government and safety services that serve the daily needs of local residents and businesses. Single-family dwellings are permitted.</p>
<p><u>Town Center (TC)</u> Serves as a focal point for the city and provides a sense of community and civic pride. Encourages pedestrian oriented development and discourages drive through establishments. Provides area for a mix of public facilities and services, retail stores personal services, professional offices, restaurants, entertainment and other mixed uses. Allows densities ranging from 10 to 12 dwelling units per acre.</p>	<p><u>Town Center TC</u> Serves as a focal point for the city and provides a sense of community and civic pride. Encourages pedestrian oriented development and discourages drive through establishments. Provides area for a mix of public facilities and services, retail stores personal services, professional offices, restaurants, entertainment and other mixed uses. Allows densities ranging from 10 to 12 dwelling units per acre.</p>
<p><u>Commercial (C)</u> Allows concentrated commercial development in locations which best serve the community and protect existing residential areas. This designation is primarily auto-oriented with customers drawn from more than just adjacent neighborhoods, but encourages pedestrian friendly development.</p>	<p><u>Commercial C</u> Allows concentrated commercial development in locations which best serve the community and protect existing residential areas. This designation is primarily auto-oriented with customers drawn from more than just adjacent neighborhoods, but encourages pedestrian friendly development.</p>
<p><u>Light Industrial-Business Park (IB)</u> Encourages clean light industrial and business park uses in appropriate location. Provides the opportunity for local employment by attracting a variety of businesses.</p>	<p><u>Light Industrial-Business Park IB</u> Encourages clean light industrial and business park uses in appropriate location. Provides the opportunity for local employment by attracting a variety of businesses.</p>
<p><u>Public Facility (PF)</u> Includes property currently owned or operated by a public entity including fire stations, public schools and parks.</p>	<p><u>Public Facility PF</u> Includes property currently owned or operated by a public entity including fire stations, public schools and parks.</p>

Map 2, University Place Land Use, gives an over view of the land use in the City. At this time visually it can be seen that there is little undeveloped space left within the City boundaries. The largest parcel is area in the southwest corner of the City, owned by Pierce County and that is mostly slated to become a golf course and other park space. As can be seen in Table 7 only 1539 acres are left of buildable land. And of that only 37 are available for commercial development and 614 for residential development. The rest is currently slated to remain as open space or other miscellaneous use.

Map 2, University Place Land Use⁷

Figure 1-1
Land Use Inventory



Legend

- | | |
|-----------------------------|--------------------------------|
| Vacant Land | Parks, Recreation & Open Space |
| Low Density Residential | Religious |
| High Density Residential | Civic / Public |
| Office | Utilities |
| Retail | Catch Basins |
| Commercial | Water Related |
| Manufacturing & Warehousing | Shorelines |
| Schools | Roads & Railroad Right of Way |



University Place
Economic Development

The development of University Place as a City has allowed them to focus resources in certain areas where they had not been in the past. The development of a core area along Bridgeport Way associated with commercial enterprise and the development of a town center with public facilities are two of the changes the City has pursued these last 10 years and will continue to pursue for the foreseeable future.

The development of the Leach Creek area will be an integrated approach looking at the surrounding densities and types of use as well as the steepness of the slopes along the creek, and its associated wetlands. This area contains the greatest potential for non-tidal flooding in the City and this will need to be taken into consideration as well. The City’s comprehensive plan addresses the Leach Creek area specifically. The overriding goal for Leach Creek is “Establish a plan for future integrated development of the Leach Creek area...Ensure public facilities and services including sewers and public roads adequately serve the area. Determine uses and densities, which are appropriate considering surrounding densities, land uses, steep slopes, Leach Creek, and wetland areas.”. One of the policies coming from this is to consider the steep slopes and the associated wetlands. This would include clustering and using low impact development techniques to mitigate the problems.

Type of Use	Acres	%²
Residential		
R1	3,675	75
R2	393	8
Multi-family	265	5
Residential Total	4,333	88
Commercial		
MU-O	30	.6
MU	66	1.4
C	25	.5
NC	52	1.0
Commercial Total	173	3.5
Other Land Use Categories		
TC	90	1.7
IB	62	1.3
PF	217	4.5
Other Land Use Total	369	7.5
Total All Uses	4,875	100
Vacant Land		
Residential	614	24
Commercial	37	1.5
Industrial	0	0
Open space/Other	888	35
Buildable Total	1,539	60.5
Unbuildable Critical Areas (slopes>40% & wetlands, etc.)		
UnbuildableTotal	982	39.5
Column Total	2,521	100

Profile Resource Directory

www.census.gov

www.cityofuniversityplace.com

www.access.wa.gov/

Profile Endnotes

¹ Geologic Map of the south half of the Tacoma Quadrangle, Washington, compiled by Timothy J. Walsh, Washington Division of Geology and Earth Resources, Open File Report 87-3, 1987, p.4.

² Western Region Climate Center for Tacoma 1, Washington (458278) station <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?watacl>

³ Ibid.

⁴ Telephone conversation with Marcia Willoughby Tucker, historian and author of Day Island: a Glimpse of the Past.

⁵ US Census Bureau, Census Data, University Place city, Washington Census 2000 Demographic Profile Highlights, Summary File 1 and Summary File 3,

http://factfinder.census.gov/servlet/SAFFacts?_event=Search&geo_id=16000US5373465&_geoContext=01000US%7C04000US53%7C16000US5373465&_street=&_county=Pierce+County&_cityTown=Pierce+County&_state=04000US53&_zip=&_lang=en&_sse=on&ActiveGeoDiv=geoSelect&_useEV=

⁶ Comprehensive Annual Financial Report for the year ended December 31, 2003, City of University Place, Washington, p 5.

⁷ University Place Development Services

⁸ 2005 information from David Swindale, Planning Manager, University Place Development Services

⁹ City of University Place Comprehensive Plan, p 1-13, 12/06/04.

Section 3

Capability Identification Requirements

Planning Process---Requirement §201.6(b):

An open public involvement process is essential to the development of an effective plan.

Documentation of the Planning Process---Requirements §201.6(b):

In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

(3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

- Does the planning process describe the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information?

Assessing Vulnerability: Analyzing Development Trends---Requirement §201.6(c)(2) (ii)(C):

[The plan **should** describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.

- Does the plan describe land uses and development trends?

SECTION 3

**UNIVERSITY PLACE/FIRE DISTRICT 03
CAPABILITY ASSESSMENT**

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UNIVERSITY PLACE/FIRE DISTRICT 03 CAPABILITY ASSESSMENT 2

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INTRODUCTION

The capability assessment is a part of the planning process that illustrates the state of affairs in both the City of University Place and Fire District 03. The assessment, as defined by **FEMA 386.3¹**, has two components. First it provides an inventory of a community's mission, programs and policies related to mitigating the hazards threatening the community. Secondly it is an analysis of the community's current capacity to carry out those programs and policies. It attempts to identify and evaluate existing policies, regulations, programs, and practices that positively or negatively affect the community's vulnerability to hazards.

The assessment helps determine the following:

- Types of mitigation measures that may be prohibited by law;
- Limitations that may exist on undertaking actions; and
- The range of local and/or state administrative, programmatic, regulatory, financial, and technical resources available to assist in implementing the mitigation strategy.

The capability assessment identifies and assesses existing measures that are in place that allow for and/or assist in the implementation of new mitigation measures to reduce losses and identify assets. In so doing, non-existent capabilities, or deficiencies, that are necessary for the implementation of mitigation goals are identified. These are categorized as mitigation measures and are thus located in the mitigation strategies section.

The ability of the City and the Fire District to develop an effective hazard mitigation plan depends upon their legal, administrative, political, fiscal, technical and staffing capabilities to implement plans, policies, programs, and actions to mitigate losses from natural hazards.

The City of University Place is organized as a non-charter Code City with a Council/Manager form of government, under the laws of the State of Washington² and holds the same powers as any held by cities or towns.

Fire District 03 is governed by five commissioners at large from within the District borders, and operates under the Constitution and Laws of the State of Washington.

BACKGROUND INFORMATION

Cities

The Census Bureau recognizes five basic types of local governments, one being municipalities. Municipal governments are organized local governments authorized in state constitutions and statutes and established to provide general government for a defined area.

The City of University Place, Washington, adopted the classification of a noncharter Optional Code City. It is to be governed by the provisions of Chapter 35A.21 RCW under the council-manager plan of government. It is endowed with all of the applicable rights, powers, privileges, duties, and obligations of a noncharter Code City.³

The City of University Place is a senior taxing district. "Senior **taxing** district" means the state (for support of common schools), a county, a county road district, a city, or a town. A taxing district "shall mean any political subdivision, municipal corporation, or other governmental agency authorized by law to levy or have levied for it a property tax".⁴

University Place has the power to levy property taxes, issues bonds, create local improvement districts with voter approval, and exercise the power of eminent domain,

Fire Protection Districts

Of the five basic types of local governments mentioned above, one is defined as special districts. These are organized local entities authorized by state law to provide only a limited number of designated functions, but have sufficient administrative and fiscal autonomy to qualify as separated governments. They are categorized by a variety of titles, including districts, authorities, boards, commissions, etc., as specified in the enabling state legislation.⁵ While originally thought of as being associated with the unincorporated areas of counties they now may overlap incorporated areas and may incorporate an entire city or town within their boundaries.

As a fire protection district, Fire District 03 has been granted its authority under the Washington State Constitution.⁶ Fire Districts in Washington are established through an election process and are governed by an elected board of commissioners, five in the case of Fire District 03. The District has, as a fire district, junior taxing authority. Junior taxing authorities have the authorization to levy property taxes, issue bonds, create local improvement districts with voter approval, and exercise the power of eminent domain. They have no land use control.

The following sections outline the City and the Fire District's capabilities in terms of Legal and Regulatory Capability, Political Capability and Fiscal Capability, Administrative Capability, and Technical Capability.

STATE ADMINISTERED LEGAL AND REGULATORY CAPABILITY

In Washington State the Washington State Constitution, the Washington Administrative Code (WAC), and the Revised Codes of Washington assign to cities many legal and regulatory authorities.

The Washington State Constitution is the plan for the operation of Washington State government. It describes the three branches of government: executive, legislative, and judicial. It also defines what rights are guaranteed to the people. The State Constitution is the highest law of the State, although it must also work in compliance with the U.S. Constitution.⁷

The RCW is the compilation of all state statutes now in force. It is a collection of Session Laws (enacted by the Legislature, and signed by the Governor), or enacted via the initiative process, arranged by topic, with amendments added and repealed laws removed. It does not include temporary laws such as appropriation acts.⁸

The WAC contains regulations of executive branch agencies issued by authority of statutes. Like legislation and the Constitution, regulations are a source of primary law in Washington State. The WAC codifies the regulations and arranges them by subject or agency.⁹

These powers enable the cities to adopt and implement policies and ordinances that may be used to mitigate the potential harmful effects of natural hazards. Below is a selection of some of the legal authority and regulatory powers that Washington State has granted to cities. Only those authorities and powers that are immediately relevant to natural hazard mitigation are discussed. Of these the Growth Management Act (GMA) of 1990 is the primary driving force for regulation of land use to mitigate natural hazards in the state.

Growth Management Act

Purpose

The Washington State Growth Management Act (GMA) was passed in 1991 in response to rapid population growth and unmanaged development in the 1980s. The GMA sets forth several planning goals such as to curb sprawl, encourage economic development, and protect natural resources. It requires county and city governments to work together to develop comprehensive plans, complimentary development regulations, and urban growth area boundaries. The GMA utilizes several different growth management tools and regulations. Primarily, the GMA requires cities and counties to jointly develop comprehensive plans that designate urban growth areas (UGAs) for the county and to identify environmentally critical and resource areas for protection.

The GMA lists fourteen goals that should be met by communities through their comprehensive plans:

- 1) encourage development in urban areas;
- 2) reduce sprawl;
- 3) encourage efficient multi-modal transportation systems;
- 4) encourage the availability of affordable housing;
- 5) encourage economic development throughout the state;
- 6) protect private property rights;
- 7) process permits in a timely, fair, and predictable manner;
- 8) maintain and enhance natural-resource based industries;

- 9) encourage the retention of open space and recreational areas;
- 10) protect the environment;
- 11) encourage citizen participation and coordination;
- 12) ensure concurrency for public facilities and services;
- 13) encourage historical and archeological preservation; and
- 14) protect shorelines.¹⁰

Framework

The GMA provides a framework for regional coordination between the cities and counties. Local comprehensive plans must include the following elements (WAC 365.195.300):

- land use,
- housing,
- capital facilities,
- utilities,
- transportation,
- each plan shall contain a process for identifying and siting essential public facilities.
- and for counties, a rural element.

The comprehensive plans guide development and accommodate the population growth forecast for the next 20 years. Development regulations, including zoning, subdivision, and other controls, must be consistent with the comprehensive plans.¹¹ Finally, all jurisdictions fully planning under the GMA must periodically evaluate and update their comprehensive plans, development regulations, and UGA boundaries.

Not all cities within the State must plan for future growth. The GMA only requires those having the fastest growth rates actually develop plans for future growth. University Place is one of the cities required to produce a comprehensive plan.

One of the key tenets of the GMA is that cities must propose the location of their urban growth areas (UGAs), and that counties officially designate the UGAs based on the cities recommendations. These areas are to accommodate 20 years of growth, based on forecasts provided by the Washington State Office of Financial Management (OFM). Urban growth area designations are to be reviewed every 10 years. No annexations are allowed beyond designated growth areas.¹²

University Place's boundaries abut only a few square blocks of unincorporated Pierce County. Because the City is surrounded by Tacoma, Fircrest, Lakewood and Steilacoom there is little area to be defined as a UGA. Within the City boundaries there is little undeveloped land left. Therefore the City has decided that the main thrust of land use planning will be redirected to focus on revitalization and redevelopment.¹³

In complying with tenets of the Growth Management Act the City of University Place established goals and policies as part of the Comprehensive Plan development process. These goals and policies provided general direction for more specific policies enumerated in the University Place Comprehensive Plan. City regulations provide the specific requirements to

fulfill the objectives of the Comprehensive Plan. Some of the policies relevant to natural hazard mitigation are:

- Create a well-balanced, well-organized combination of land uses, which includes residential, commercial, industrial, recreational, public use, and open space. Make the protection and preservation of residential neighborhoods a priority.
- Require buffers between different types of land uses.
- Reserve portions of the remaining undeveloped land for public use.
- Identify and preserve wildlife habitat, historical, unique geological and archeological resources as open space and natural areas.
- Provide a zoning mechanism that provides flexibility to manage public property in a manner that serves the greatest public benefit.
- Establish a plan for future integrated development of the Leach Creek area. Determine uses and densities, which are appropriate considering surrounding densities, land uses, steep slopes, Leach Creek, and wetland areas.¹⁴.

CITY OF UNIVERSITY PLACE

Legal and Regulatory Capability

Regulation

The City of University Place has regulatory authority within its geographic boundaries. This includes such areas as flood control, development regulations, and land use planning.

Acquisition

Cities have authority under the **Washington State Constitution** to purchase property for city related purposes. Within the geographic boundaries of University Place, primary acquisition regulatory authority resides with the City. Depending on the situation other recognized entities such as Washington State, Pierce County, and Special Purpose Districts like Fire District 03 may have similar authority as granted by statute.

The power of acquisition can be a useful tool for pursuing mitigation goals. The two major flood problems facing the City are the flood hazards from the creeks, in particular Leach Creek with some potential in other creeks such as Peach and Chambers Creeks, and secondarily limited surface water flooding. University Place is developing a program to purchase flood hazard prone property within the Leach Creek area that will be added to the City's parks and open spaces. The City has identified areas where flooding has happened in the past. For its acquisition program the City gets further information from the Federal Insurance & Mitigation Administration (FIMA) which manages the National Flood Insurance Program.

Eminent Domain

Eminent domain is the right of a government to appropriate private property for public use or to remove a blight, with just compensation to the owner. Washington cities are granted this right under the Washington State Constitution by the enabling statutes Title 8 and Title 35A of the Revised Code of Washington (RCW). Under these statutes, the following RCWs govern this right:

- **RCW 8.12.030 (Eminent domain)** allows every city and town in Washington to condemn land and property, public or private, within the city for public use; when deemed necessary for city purposes, to acquire such land, real estate, premises or other property. In addition for certain uses, such as "for public parks, drives and boulevards, hospitals, pesthouses, drains and sewers, garbage crematories... and for aqueducts, reservoirs, pumping stations and other structures for conveying into and through such city a supply of fresh water, and for the purpose of protecting such supply of fresh water from pollution".
- **RCW 35.80A.010** Every county, city, and town may acquire by condemnation, in accordance with the notice requirements and other procedures for condemnation provided in Title 8 RCW, any property, dwelling, building, or structure which constitutes a blight on the surrounding neighborhood.

Though this right could be a potential procedure to remove hazard prone property, there can be, depending on the circumstances, a great deal public opposition to condemnation and therefore it has limited feasibility in University Place.

Political and Fiscal Capability

Political

The City of University Place has a council/manager form of government, as proscribed from Chapter 35.21 RCW.¹⁵ The 7-member City Council is directly elected by the citizens and serves for staggered four-year terms. The City Council establishes policy by enacting ordinances and resolutions determined to reflect the needs of the community. The Mayor and a Mayor Pro Tem are elected by the Council from among its members for 2-year terms and presides at City Council meetings. The Council appoints the City Manager, adopts the City budget, approves appropriations and contracts in the City's name, levies taxes, and enacts franchises. Several commissions, made up of citizen volunteers, advise the City Council on matters of concern to them¹⁶.

The Council is the Legislative branch of University Place government and is responsible for:

- Adopting City laws and amending them as necessary;
- Determining City policy;

- Adopting the City budget;
- Approving major contracts, purchases and agreements; and
- Approves nominations made of citizens to City advisory board, committees and commissions.

The City's political leadership has been supportive of issues related to the environment and the health and safety of the public. That is shown by the City's vision statement that begins by saying: "Twenty years after incorporation, University Place is a safe attractive city that provides a supportive environment for all citizens to work, play, get an education, and raise families...The physical and mental well being and health of all individuals is valued."¹⁷ This is followed in a discussion on strategies to implement the vision statement with a statement concerning public safety: Pursue a comprehensive public safety approach to ensure that University Place remains a safe community in perception and reality; that is proactive and preventive; involves Police, Fire, Emergency Preparedness, School, Health, and other agencies along with active community involvement.¹⁸

University Place's goals fit very well with the needs of natural hazard mitigation. Many mitigation projects could fit within the statement above relating to public safety.

University Place offers, and operates roads, parks, storm water management, development services, and other traditional municipal services, all under the policy control of the City Council and oversight by its appointed City Manager. Police services are contracted with the Pierce County Sheriff's Department and the City resides totally within the boundaries of Fire District 03, which it annexed into when it incorporated.

The City Manager is appointed by the City Council to serve as the chief administrative officer for the City. The City Manager, responsive to the direction of the City Council, oversees three departments and the Economic Development Office, carrying out the City's daily business. These are shown on Figure 3.1, University Place Organization Chart. The City Manager's responsibilities include:

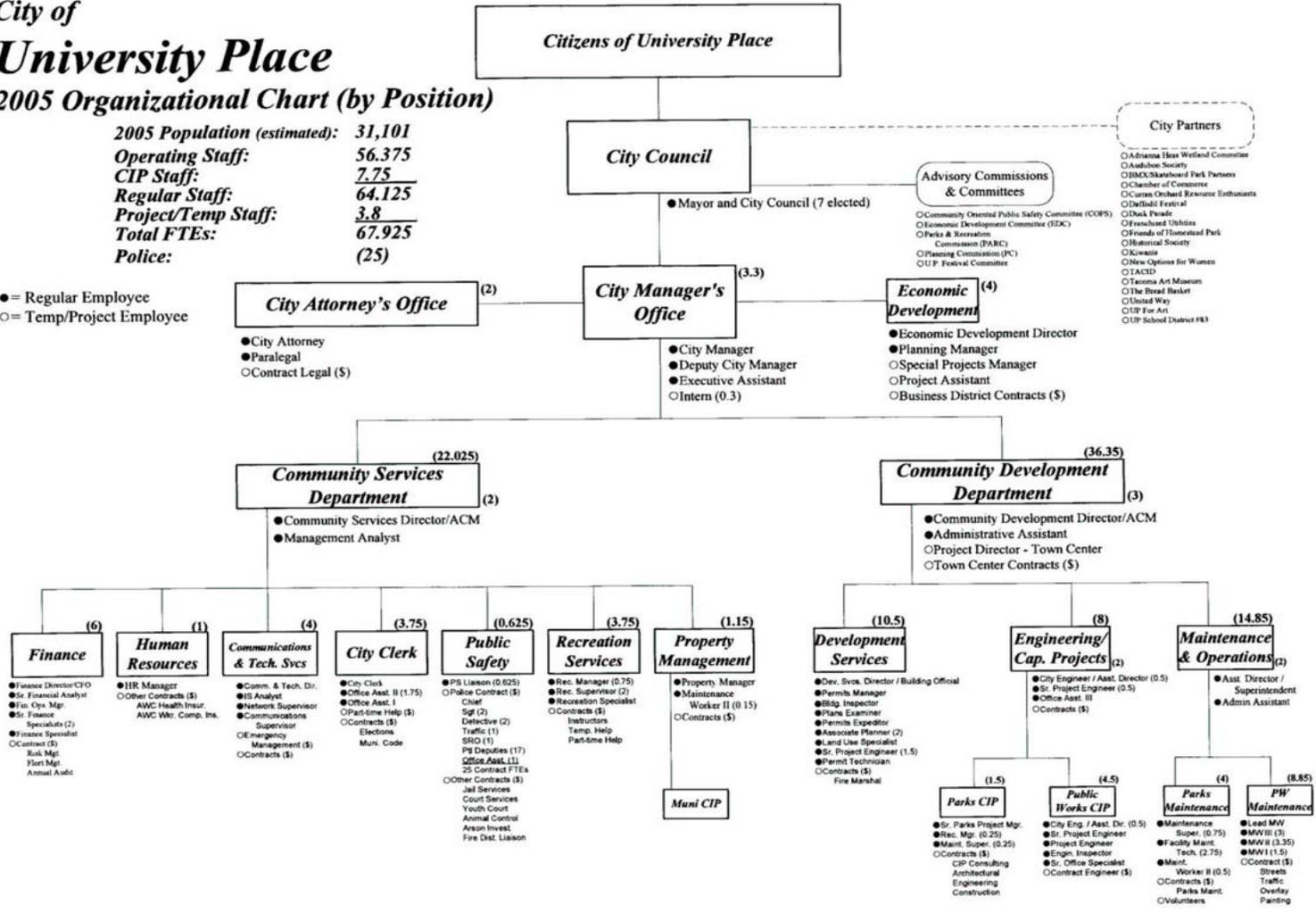
- Implementing Council policies;
- Management and administration of City operations and capital projects;
- Administrative support to the City Council;
- Recommending and informing the Council on legislative, financial, and capital improvement policy, and any other matters relating to the City.
- Intergovernmental relations;
- Coordinate contracts for those City services that are contracted out to other authorities or jurisdictions;
- Promoting community awareness, neighborhood involvement and citizen participation in volunteer programs.
- Through the Economic Development Office:
 - Implement the Economic Development Strategic Action Plan;
 - Encourages business development and promote commercial redevelopment;

Figure 3.1, University Place Organization Chart

City of University Place
2005 Organizational Chart (by Position)

2005 Population (estimated): 31,101
 Operating Staff: 56.375
 CIP Staff: 7.75
 Regular Staff: 64.125
 Project/Temp Staff: 3.8
 Total FTEs: 67.925
 Police: (25)

● = Regular Employee
 ○ = Temp/Project Employee



Revised 4/05/05

The City's departments have recently undergone a reorganization. Currently they and their main responsibilities¹⁹ are:

- Community Development:
 - Ensures that the design, construction and use of private and public property/right-of-way meets the goals expressed in the Comprehensive Plan;
 - Ensures compliance with current SEPA, building, zoning, subdivision, public works critical areas, shoreline and telecommunications codes;
 - Provides development services;
 - Provides maintenance, and operations of public spaces and roads;
 - Reviews and prioritizes capital improvement projects;
 - Applies for and administers grants;
 - Implements the Comprehensive Plan to ensure consistency with the Growth Management Act;
 - Maintains a bridge inspection program.
- City Attorney:
 - Provides legal advice to the City Council and City staff; and other City officials;
 - Reviews ordinances, resolution, contracts and other legal documents;
 - Advises Council and staff at public meetings;
 - Assists in the review of long range planning and land use development proposals;
 - Ensures that city actions are legally defensible, comply with current law, and minimize exposure to adverse judgments;
 - Represents the City in legal actions;
 - Supports the economic development program.
- Community Services:
 - Ensures that safety, security, justice, and recreation have high quality programs;
 - Ensures that there is effective community information and involvement;
 - Operates the City's information technology infrastructure;
 - Ensures that proper records are kept of City operations;
 - Provides financial services to the City of:
 - Accounting;
 - Grants administration;
 - Accounts payable;
 - Payroll;
 - Purchasing;
 - Banking services; and
 - Investments.
 - Coordinates the preparation of the annual budget, Comprehensive Annual Financial Report, and other associated financial reports;
 - Manages and issues the City's long term debt for continued capital improvements;
 - Prepares and maintains financial analysis to ensure the continued fiscal health of the City.

The City contracts for a number of services including emergency management and police and it is also located within Pierce County Fire District 03 which affords fire and EMS protection.

- Police:
 - Provides law enforcement;
 - Provides traffic and parking enforcement;
 - Coordinates crime prevention activities;
 - Provides criminal investigation.
- Emergency Management
 - Provides training and exercises for citizens and staff on emergency issues;
 - Provides Duty Officer, Emergency Operations Center, and Public Information coverage for UP emergencies;
 - Reviews City's Comprehensive Emergency Management and Emergency Operational Plans.
- Fire:
 - Perform Fire fighting & Rescue;
 - Support to FEMA's Urban Search and Rescue Team;
 - Respond to Emergency Medical incidents;
 - Present Public Education programs on Safety issues to the public;
 - Respond to Hazardous Material incidents;
 - Perform fire prevention inspections;
 - Review building plans for compliance with fire codes; and
 - Beginning in 2006 the District will also perform fire and arson investigations.

As can be seen from the wide range of responsibilities contained in the above descriptions, the potential for mitigation work within the current structure is great and some measures are already being done. University Place has been actively involved in mitigating the effects of natural hazards. The City's Comprehensive Plan includes policies to reduce flood, landslide, erosion, and seismic hazards. In 2002, the City adopted a Critical Areas Ordinance (CAO)²⁰ that serves to address and minimize the potential impacts from those hazards. University Place supports public education and awareness through public education programs, both developed internally and those sponsored by Pierce County and Fire District 03. The City also has a program to mitigate some of the flood hazard within the City through such actions as buyouts of some properties in the Leach Creek area that can then be turned into park and recreation properties.

Taxation

Cities within Washington using the Optional Municipal Code are granted their taxing authority under the Washington State Constitution by the enabling statutes Titles 35A.82 and 35A.84 of the Revised RCW. Under these statutes, the following RCWs govern city taxing ability:

- **RCW 35.22.280** (2) To provide for levying and collecting taxes on real and personal property for its corporate uses and purposes, and to provide for the payment of the debts and expenses of the corporation;
- **RCW 84.52.056** allows excess levies for capital purposes. "Any municipal corporation otherwise authorized by law to issue general obligation bonds for capital purposes may, at an election duly held after giving notice thereof as required by law, authorize the issuance of general obligation bonds for capital purposes only";

- **RCW 84.52.069** allows municipalities to levy up to 50 cents per thousand dollars of assessed valuation for emergency medical care or emergency medical services. The levy can be enacted each year for six consecutive years, each year for ten consecutive years, or permanently.

University Place is located within the boundaries of Pierce County and therefore must adhere to the County tax system. The Pierce County Assessor-Treasurer's office determines the property tax base for University Place and ensures that levies are not more than allowed by law. The tax system uses the assessed value and the total tax base for the City, which may include other taxing districts, to calculate the amount of property taxes owed for each parcel. The property tax is collected by the County to support the administration of the City. Excess levies or local levies are approved by voters at the polls, and can include bond issues, maintenance and operation, and capital improvements.

University Place's 2005 property taxes include:

- University Place's currently funded by regular tax levies allowed by **RCW 52.16.130**, **RCW 52.16.140** and **RCW 52.16.160** which produce \$1.56 in taxes per thousand dollars of assessed valuation on taxable property.
- University Place currently has no excess levies or bonds currently issued:

The total City of University Place property tax levy is \$1.56 per \$1,000 of assessed value with a yield of \$3,379,737 for 2005.

The other major revenue going into the General Fund include Sales tax which collected \$1,630,466 in 2004 and is expected to be close to \$1,861,967 for 2005 and the Utility Tax which brought in \$1,888,671 in 2004 and is expected to be close to \$1,900,000 for 2005.

Two funds that might be usable for mitigation projects are;

- 1st ¼% Real Estate Excise Tax (REET) is expected to have \$350,000 available in 2005 with an increase to \$352,500 available in 2006. It is to be used for construction projects such as street improvements, new street construction, park land acquisition, park improvements as well as water, wastewater and stormwater improvements.
- 2nd ¼% Real Estate Excise Tax (REET) is expected to have \$350,000 dollars available in 2005 with an increase to around \$352,500 in 2006. It is used for similar projects as the 1st ¼% REET, except it is not eligible for the purchase of park land.

In addition the City charges for many of its services. These include building permits, recreation fees, general administration fees, engineering fees, planning fees, franchise fees, and business license fees. Together these brought in \$5,267,730²¹ in 2004 and are expected to be slightly over \$5,500,000 for 2005.²²

The above mentioned taxing capabilities and other revenue sources are a possible fiscal resource for City of University Place. There are, however, some limitations to these fiscal resources.

In Washington State, levy rates are limited by either the **\$5.90 Levy Limit** or the **1% Constitutional Limit**.

- **RCW 84.52.043**, or the **\$ 5.90 Levy Limit**, states that the aggregate regular levy rates of senior taxing districts (this includes cities) may not exceed \$5.90 per thousand dollars assessed valuation. The levy by any city cannot exceed \$3.37 per thousand dollars of assessed value. Some property tax levies not subject to this limit include state levies, levies for public utility districts, excess property tax levies, special levies for local school districts, levies for acquiring conservation futures, emergency medical service levies, low income housing levies, and some metropolitan park district levies.
- **RCW 84.52.050** or the **1% Constitutional Limit** prohibits the aggregate of all tax levies on real and personal property from exceeding one percent (\$10 per \$1,000) of the true and fair market value of property. This limit does not apply to excess levies, levies by port districts, and levies by public utility districts.

The tax rate applied to a given property is the sum of the levy rates imposed by all the taxing districts within which the property lies. The total tax rate to any given property by overlapping taxing districts is controlled by the previously mentioned \$5.90 limit and the 1 percent constitutional limit. Should either of these limits be exceeded, the levies involved would be reduced according to a statutory formula.

- **RCW 84.52.010(2)** states which levies are lowered and how much in prorating. The order depends upon whether the \$5.90 limit or the 1 percent limit has been exceeded. If the \$5.90 limit has been exceeded, levies are reduced or eliminated in the order, until the total tax rate is at \$5.90. Note that within each grouping, the levy rates of the City are reduced on a pro rata basis.

RCW 84.36.381 and **RCW 84.38.010** through **RCW 84.38.030** allow both senior citizen and disability exemptions for low income citizens.

- **RCW 84.36.381** states the legislature has established a senior citizen or disability exemption based upon a person's age and yearly income. The state constitution provides that the state legislature has the power to grant to retired persons relief from the property tax on the real property on which they live. This exemption may be restricted, as the legislature deems proper.
- **RCW 84.38.010** through **84.38.030** allows for a senior citizen or disability deferral of property taxes states if a property owner is at least 60 years old and retired from regular gainful employment, that owner may qualify to defer payment of special assessments and/or real property taxes up to 80 percent of the amount of equity in the property. Eligibility is based on income.

Bonding

University Place as a Category 1 city has the authority for issuing bonds. There are two types of bonds the City can use in order to raise capital, councilmatic and general obligation bonds.

Traditionally these have been used to fund needs in public safety, libraries and parks and recreation needs.

- Councilmatic Bonds are bonds the sale of which is generated by City Council action. They are limited to 1.5% of the total assessed property value of the jurisdiction. They are available for a wide range of projects deemed necessary by the City Council.
- General Obligation Bonds are bonds which have to go to the public for approval. They can be proposed for a wide range of projects and are divided into three different categories based on the type of project advanced:
 - General Purpose Bonds, limited to 1.0% of total assessed value;
 - Parks and Open Space Bonds, limited to 2.5% of total assessed value; and
 - Utility Purposes Bonds are also limited to 2.5% of total assessed value.

Table 3.1 shows the debt capacity for the City of University Place. As can be seen, out of the total available bonding capacity for the City of \$140,871,259 24% or \$34,178,693 is available for a variety of purposes.

Table 3.1 Debt Capacity

CITY OF UNIVERSITY PLACE COMPUTATION OF LIMITATION OF INDEBTEDNESS December 31, 2004					
<u>GENERAL DEBT CAPACITY</u>					
<u>Description</u>	<u>(Limited) Councilmanic</u>	<u>(Unlimited) Excess Levy</u>	<u>Excess Levy Open Space and Park</u>	<u>Excess Levy Utility Purposes</u>	<u>Total Debt Capacity</u>
Statutory debt limit:					
(AV=\$2,133,851,322)(A)					
1.50% AV @ 100%	\$ 32,007,770	\$ (32,007,770)			
2.50% AV @ 100%		53,346,283	53,346,283	53,346,283	\$ 160,038,849
Add:					
Cash on hand for debt redemption (B)	-	-	-	-	-
Less:					
Bonds outstanding	(8,660,000)	-	-	-	(8,660,000)
Bonds Anticipation Note outstanding	(10,500,000)	-	-	-	(10,500,000)
Lease purchase obligations outstanding	(7,590)	-	-	-	(7,590)
REMAINING DEBT CAPACITY	\$ 12,840,180	\$ 21,338,513	\$ 53,346,283	\$ 53,346,283	\$ 140,871,259
TOTAL REMAINING "GENERAL" CAPACITY (C)	<u>\$ 34,178,693</u>				
(A) This figure represents the City's total taxable assessed valuation (AV) for 2004 which was used to determine the 2005 regular property tax levy as certified.					
(B) Reflects estimated balance available in the Debt Service Fund as of December 31, 2004.					
(C) Combined total for Councilmanic, Financing Lease, and Excess Levy capacities.					

Local Improvement District's (LIDs)

Local Improvement Districts are created to rectify a particular problem or interest in a very specific geographic location. They have a long history of use at the community level. They have

the distinction of needing approval by the citizens directly affected by the LID for one to be formed. This is done through an appeals process. Citizens can show proof that the LID will not benefit them enough for it to be formed. LIDs are not allowed to be formed without a market value test. The cost of the assessment cannot exceed the projected increase in property values. This is based on the individual property, not on the aggregate whole. This means that a complex system could be set up to assess those properties which will have a higher benefit than others at a higher rate if applicable. If citizens do not attend hearings on an LID to express their concern and show proof that it would not have a net benefit to them the LID may become a matter of fact.

Spending

In Washington, **RCW 84.52.020** states that any city with a population of less than 300,000 shall "certify to the county legislative authority, for the purposes of levying district taxes, budgets or estimates of their amounts to be raised by taxation on the assessed valuation of their property in the city".

In Washington State the County will act as a financial agent or bank, to collect taxes and assessments authorized and levied, and to credit disburse revenues to the City.

The City Council in coordination with the City Manager determines how University Place's budget will be developed and how expenditures will be spent. The Pierce County Treasurer acts as a financial agent or bank for the City and certifies that the City's budget request is in line with the funds produced by their taxing area.

Current Fiscal State

The tax revenues are currently meeting expenditure needs, but several issues are and will be affecting University Place's fiscal capability in the future. First, the City of University Place, due to its location between other cities and towns, has no ability to expand its tax base outside of the current city limits through annexation.

The City will continue exploring other sources of mitigation monies such as grants, tax levies, bonds, the formation of LIDs, future HMGP grants, and Pre-Disaster Mitigation (PDM) Grant Program Grants. A detailed summary of the HMPG and PDM program follows:

- **Hazard Mitigation Grant Program (HMGP)**

Authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the HMGP is funded by the Federal Emergency Management Agency (FEMA) and administered by Washington State EMD to provide grants to local governments (to include Indian Tribal governments) to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. HMGP funds can be used for such projects as acquisition or relocation of structures from hazard-prone areas, retrofitting, development of local

mitigation standards and comprehensive mitigation plans, structural hazard control and the purchase of equipment to improve preparedness and response.

The program may provide a State with between 7.5 and 15 percent of the total disaster grants awarded by FEMA for a given disaster. The amount of funding available for the HMGP under a particular disaster declaration is limited and historically the requests for HMGP funds have exceeded the available funding by a ratio of 10 to 1. FEMA can fund up to 75% of the eligible costs of each project. The State or local governments must provide a 25% match, which can be fashioned from a combination of cash and in-kind sources. In Washington State, the state legislature provides 50% of the non-federal share.

- **Pre-Disaster Mitigation Grant Program (PDM)**

Authorized by §203 of the Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 USC, as amended by §102 of the Disaster Mitigation Act of 2000 (DMA), the PDM provides technical and financial assistance to States and local governments (including Indian tribal governments) to assist in the implementation of pre-disaster hazard mitigation measures that are cost-effective and are designed to reduce injuries, loss of life, and damage and destruction of property, including damage to critical services and facilities under the jurisdiction of the States or local governments.

Funding for the program is provided through the National Pre-Disaster Mitigation Fund by FEMA to assist States and local governments (to include Indian Tribal governments) in implementing cost-effective hazard mitigation activities that complement a comprehensive mitigation program and reduce injuries, loss of life, and damage and destruction of property. All applicants must be participating in the National Flood Insurance Program (NFIP) if they have been identified through the NFIP as having a Special Flood Hazard Area (a Flood Hazard Boundary Map (FHBM) or Flood Insurance Rate Map (FIRM) has been issued). In addition, the community must not be suspended or on probation from the NFIP. FEMA will fund up to 75 percent of the cost of activities approved for funding. At least 25 percent of the total eligible costs must be provided from a non-Federal source, which can be fashioned from a combination of cash and in-kind sources.

*Note---If either HMGP or PDM funding is involved in a hazard mitigation project, the City of University Place will conduct a cost/benefit analysis based on guidelines provided by U.S. Department of Homeland Security (FEMA) and Washington Emergency Management Division on how to determine cost-effectiveness of mitigation projects and how to calculate the benefit-cost ratio. The purpose of the benefit-cost analysis is to determine if the benefits of the project exceed the federal costs of the project. Both the HMGP and PDM require a benefit-cost ratio of at least 1.0 for a project to be considered for funding.

City administrators in the various departments identify personnel to staff the Hazard Mitigation Planning Team and therefore to assist in the development, implementation, and oversight of the University Place/Fire District 03 Plan. In addition, staff have the responsibility of developing the City's Comprehensive Plan. The Hazard Mitigation Planning Team (HMPT) recommends many of the hazard mitigation programs developed for the City. In all the total administrative capability depends largely on the staff running their daily operations.

Technical Capability

Effective hazard mitigation measures depend largely on a community's technical capability and staffing.

As a non-charter first class city, University Place has an extensive number of resources. With its Economic Development Office, Community Development Department, and Community Services Department the City has a wide range of expertise to assist in the mitigation process. The City's technical sophistication includes the following:

- Hazard Mitigation Planning Team - Representing all University Place Departments and including representatives from Fire District 03 and Pierce County Emergency Management, the HMPT is tasked with the overseeing the development of the Natural Hazard Mitigation Plan.
- A GIS system tied into the County's GIS System – This allows for mapping of hazards, critical facilities, the City infrastructure and looking at the interplay of factors on the City.
- A Community Development Department – Contains professional and technical employees who understand the hazards threatening the City and how mitigation projects would alleviate some of them. This also includes the Public Works Division with the expertise and equipment not only to advise the City on mitigation measures, develop contracts with providers to mitigate some of the hazards, but also to physically do some of the mitigation work themselves.
- A Parks and Recreation Division – Staff are in charge of maintaining the City's buildings and parks. Staff have knowledge of the individual buildings, their strengths and weaknesses. They are knowledgeable in some earthquake mitigation procedures.
- Public Education and Awareness Materials on Natural Hazards, much of this gained from the State, County and Fire District.

The technical sophistication is complemented to a certain degree by the wealth of technical resources at Federal, State and local levels mentioned below and summarized in Table 3.4, the University Place District 03 Capability Assessment Matrix.

Federal and State

Agencies such as the Federal Emergency Management Agency (FEMA) and the Washington State Emergency Management Division (EMD) have made available numerous implementation manuals and other resource documents. These manuals provide information on mitigation techniques for various hazards including floods, earthquakes, severe storms, volcanoes, and landslides. One important set of manuals is the FEMA 386 Mitigation Planning "How-To" Series.

Internet resources are also a valuable technical asset. Hazard-specific sites are available at both the federal and state levels. These are outlined in this plan at the end of each Hazard Sub-Section within the Risk Assessment.

There are also key personnel at both the State and Federal level that can assist the City and the Fire District. Examples on the federal level include members of FEMA, USGS, EPA, and US Army Corps of Engineers. Examples at the State level include but are not limited to the Washington State EMD, Washington State Department of Ecology, and the Washington State Department of Natural Resources.

For a complete list of Federal, State, local, and private resources specifically relevant to natural hazard mitigation, see the **Washington State Hazard Mitigation Strategy, January, 2000**²³.

Pierce County

Pierce County has an extensive resource of existing personnel and technical resources that can assist the City and the Fire District with mitigation planning and implementation of specific mitigation actions. Of the many departments in Pierce County government, the following have been identified as potential resources: Department of Emergency Management (DEM), Planning and Land Services (PALS), Public Works Water Program (PWWP), Public Works Transportation Program (PWTP), the Executive's Office, Geographic Information Services Division (GIS), Economic Development Division, Public Works Program Development, Community Services Community Development, Public Works Maintenance, County Assessor-Treasurer, and the Fire Prevention Bureau. For a more detailed list of some departments and personnel with an immediate knowledge of the County's and/or the City and Fire District's hazard mitigation efforts, see list below.

Department of Emergency Management (DEM)

DEM has staff of about 40 including emergency managers and staff and gets a large percentage of its budget from grants. DEM is responsible for providing the following functions to the City of University Place:

- Coordinate development of the Natural Hazard Mitigation Plan;
- education or expertise to assess the community's vulnerability to hazards;

- Prepare and coordinate plans for Emergency Management with the County in the event of a disaster;
- Develop mutual aid agreements to be executed by the County Executive for the purposes of regional Emergency Management;
- Manage and coordinate the County inter-departmental radio communications system and the Tactical Area Communications bus in support of the City and Fire District.
- Manage, coordinate and maintain system data base for County-wide (including municipalities) computerized telephone emergency access Enhanced 9-1-1 system.

Some valuable tools and resources DEM can provide are listed below:

- County HIVA
- County View (GIS Desktop Database)
- NOAA Weather Radios
- Pierce County Comprehensive Emergency Management Plan
- Pierce County Mitigation Forum
- Pierce Responder System

Public Works Water Programs (PWWP)

The mission of the PWWP division is to provide comprehensive storm drainage systems which minimize economic loss and enhance water quality; to maintain the flood control capacity in the University Place, and to coordinate and facilitate planning and construction of the community's drinking water supply consistent with Pierce County's Coordinated Water System and Comprehensive Plans.

Some valuable tools and resources PWWP can provide are listed below:

- Flood Event Information currently being incorporated into a University Place/Fire District 03 data base
- Floodplain management administration
- CIP Construction Projects
- Watershed Planning for Non-point Pollution Control
- Comprehensive Basin Planning
- Water Quality and NPDES
- Coordinated Water Supply Plan and Water Utility Plan (with private purveyors and the City of Tacoma)
- Flood Hazard Areas and Regulations
- Water Programs Flood Bulletin
- Flood Hazard Warning System
- ESA: Salmon and the Endangered Species Act (in response to regulatory requirements)
- CRS: Community Rating System

Public Works Transportation Program PWTP

The duties and tasks of the PWTP are separated into six different subject areas: transportation planning, interagency coordination, program development, transportation engineering and project development, road information, and corridor studies. The PWTP is responsible for Transportation Improvement Program (TIP), 2003-2008. The TIP informs other jurisdictions of Pierce County's current planning direction for transportation needs.

Geographic Information Services Division

Pierce County operates a geographic information system that provides essential information and technology for hazard response and mitigation under a GIS desktop database called CountyView. The GIS system provides detailed data on property ownership, location, and land use type. GIS allows this information to be displayed visually to assist in hazard mitigation planning. The City is tied directly into this data base enabling it to access updated GIS hazard information from the County as it becomes available.

The GIS desktop database provides fast access to, and processing of, detailed data that can be used by DEM to assist in deployment of resources before, during, and after a natural disaster. The system also permits data and visual analysis of the impacts of past events, thereby assisting in planning for mitigation of future natural disasters.

Table 3.4 City of University Place Capability Matrix

		POTENTIAL CAPABILITY		
Legal and Regulatory		Administrative and Technical		Political and Fiscal
GMA Comprehensive Plan Capital Facility Plan Zoning Ordinance Subdivision Ordinance Critical Areas Ordinance Building Code Real Estate Disclosure Comprehensive Emergency Management Acquisition Authority Eminent Domain DMA 2000 National Flood Insurance Program		64 Regular Status City Employees PC DEM PC PALS PC Water Program PC Transportation Program Pierce County Assessor-Treasurer Pierce County Desktop GIS (CountyView)	FEMA 386 How To Manuals WA State HIVA Pierce County HIVA University Place HIVA PC Mitigation 20/20 Pierce Responder PC NET Neighborhoods Planning Regulations University Place Building Codes Department of Ecology (flood mgmt) WA DEM	Taxing Authority Supportive City Government Hazard Mitigation Grant Program Pre-Disaster Mitigation Grant Program Community Development Block Grants Emergency Management Program Grant
HAZARD	Policies and Plans		Measures	
Multi	University Place Comprehensive Emergency Management Plan (CEMP) Mutual Aid Agreements		With the Fire District Develop a Natural Hazard Mitigation Plan NOAA Weather Radios Campaign Support PC NET Program	
Windstorm			Public Education and Awareness	
Flood	Comprehensive Plan – Flood Prone Area Management Critical Areas Ordinance – Flood Damage Protection		Repetitive Loss Property Acquisition Public Education and Awareness	
Earthquake	Comprehensive Plan – Seismic Hazard Planning		Public Education and Awareness Studies of City Buildings	
Severe Storms			Public Education and Awareness	
Landslide	Comprehensive Plan – Sensitive Areas Critical Areas Ordinance – Geologic Hazards		Public Education and Awareness	

FIRE DISTRICT 03

Legal and Regulatory Capability

Because fire protection districts do not have land use authority, and have a limited range of capabilities related to legal and regulatory capabilities, this section will focus primarily on Fire District 03's limited regulatory and acquisition authority.

The District is a "Municipal Corporation", and is governed by five elected commissioners, which operate under the Constitution and Laws of the State of Washington. The Commissioners are elected "at large" for six-year terms, with staggered two-year elections.

The Board of Commissioners appoints a "Fire Chief" who is responsible for the operation of the District. See Figure 3.2 Fire District 03 Organization Chart.

Because under State Law the fire districts do not have land use authority, their options and capabilities are very limited. For mitigation projects that require land use control they have to work with jurisdictions that do have that authority. For Fire District 03 this means that for land use issues they need to work closely with the City of University Place and with Pierce County for the very small portion of the District located in unincorporated Pierce County. Fire districts have authority to purchase property for district main purposes. Since Fire District 03 has a newly built public safety building in which the fire station resides it would be difficult to justify and further purchase with district funds.

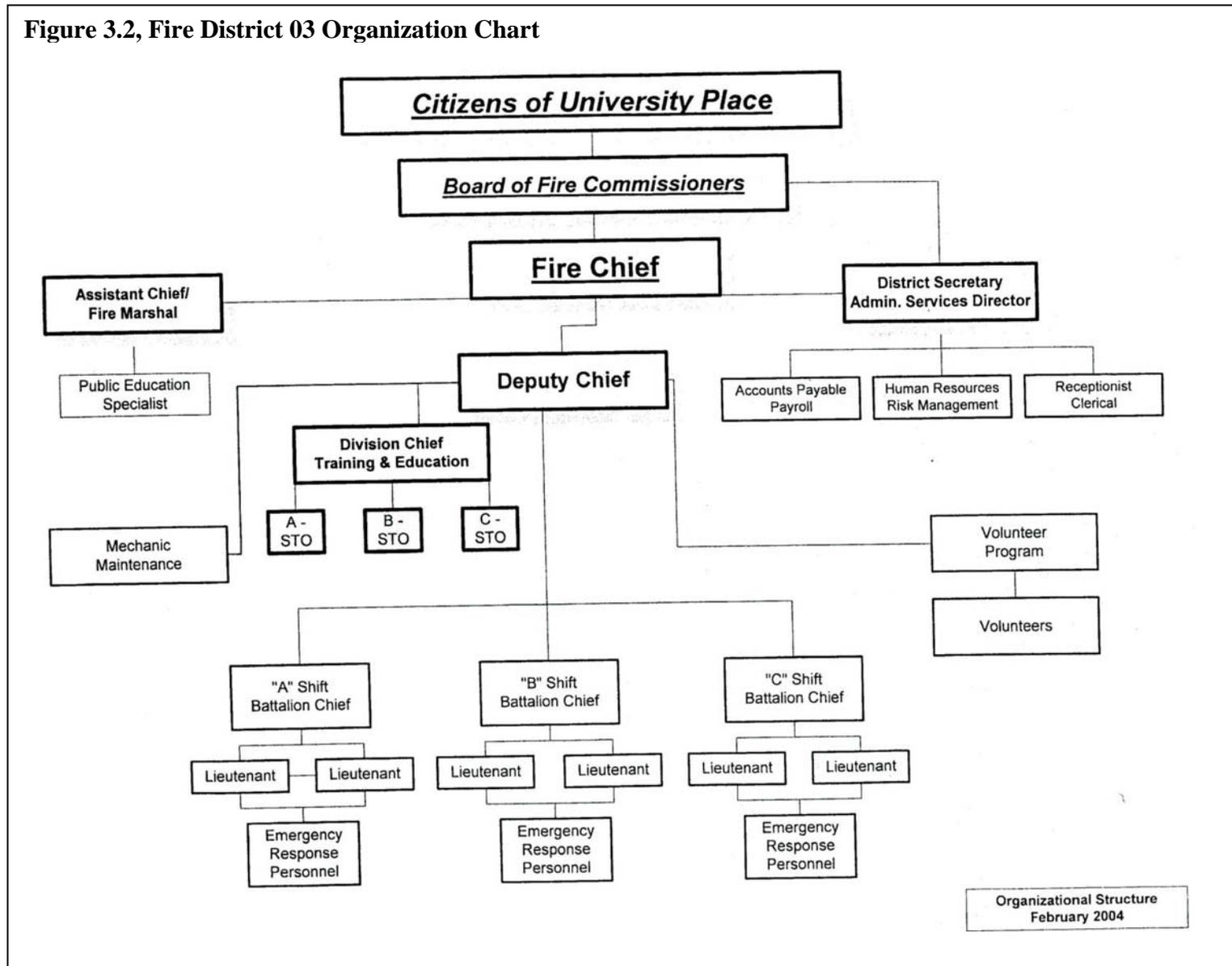
The wildland/urban interface fire hazard is not a major natural hazard, due to the lack of areas with freestanding timber or undergrowth (see Wildland Fire in the Risk Assessment Section on natural hazards) that affects the City and Fire District. However, during potential fire hazard situations the Fire District can enforce a burn ban to help prevent fires from developing during long periods of dry weather, normally occurring from July through October.²⁴

Eminent Domain

Eminent domain is the right of a government to appropriate private property for public use, with adequate compensation to the owner. Washington fire protection districts and counties are granted this right under the **Washington State Constitution** by the enabling statutes **Title 52 and Title 8** of the **Revised Code of Washington (RCW)**. Under these statutes, the following RCWs govern this right:

- **RCW 52.12.041(Eminent domain)** allows for the taking and damaging of property or property rights by a fire protection district to carry out the purposes of its organization are declared to be for a public use. A district organized under this title may exercise the power of eminent domain to acquire property or property rights either inside or outside the district, for the use of the district. A district exercising the power of eminent domain shall proceed in the name of the district in the manner provided by law for the appropriation of real property or of real property rights by private corporations.

Figure 3.2, Fire District 03 Organization Chart



- **RCW 8.08.010** allows every county in Washington to condemn land and property within the county for public use; whenever the board of county commissioners deems it necessary for county purposes to acquire such land, real estate, premises or other property, and is unable to agree with the owner or owners thereof for its purchase.

Though this right could be a potential avenue to remove hazard prone property, there would be a great deal public opposition to invoking it and therefore it has limited feasibility and is rarely used.

Political and Fiscal Capability

Political

The fire commissioners and the senior staff of the Fire District are supportive towards issues related to the environment, health, safety and public education regarding University Place hazards. This is shown by their willingness to work with the City of University Place in the development of this plan and to project continued development of mitigation projects for the foreseeable future.

Taxation

Washington fire protection districts are granted their taxing authority under **the Washington State Constitution** by the enabling statutes **Title 52 and Title 84 of the Revised RCW**. Under these statutes, the following **RCWs** govern fire protection district taxing ability:

- **RCW 52.16.130** and **RCW 52.16.140** each allow fire protection districts to levy up to 50 cents per thousand dollars of assessed valuation to carry out fire protection district services;
- **RCW 52.16.160** allows fire protection districts to levy up to 50 cents per thousand dollars of assessed valuation for districts that have at least one full-time paid employee. This remains permanent after a one-time voter approval;
- **RCW 52.16.061** allows fire protection districts to issue general obligation bonds for any general district purpose, including expenses of maintenance, operation and administration, and the acquisition of firefighting facilities, not lasting longer than twenty years from the issuing date of the bonds;
- **RCW 52.16.080** allows fire protection districts to issue bonds for capital purposes not to exceed an amount equal to three-fourths of one percent of the value of the taxable property within the district. The maximum term of such bonds may not exceed twenty years;
- **RCW 84.52.069** allows fire protection districts to levy up to 50 cents per thousand dollars of assessed valuation for emergency medical care or emergency medical services. The levy can be enacted each year for six consecutive years, each year for ten consecutive years, or permanently;
- **RCW 84.52.130** allows fire protection districts to issue excess levies. This levy of taxes authorizes two-year through four-year levies for maintenance and operation support of a

fire district, or authorizes two-year through six-year levies to support the construction, modernization, or remodeling of fire district facilities, in the year in which the first levy is made.

These taxing capabilities may provide fiscal resources for the mitigation plans proposed by the fire district. These potential resources are however limited by the legal limits on their taxing ability.

Table 3-5, Fire District Levies highlights the levies Fire District 03 currently has that bring in money to the District. They are however limited by the same \$5.90 (**RCW 84.52.043**) and 1% Constitutional limits (**RCW 84.52.050**) discussed above. (See page 3-15 for a synopsis of these.)

Table 3-5 Fire District Levies

Levy	Ratio Allowed	2004/2005 Ratio	2006 Ratio	Amount collected in 2004
Regular Levy	\$1.50/\$1,000	1.364/\$1000	\$1.50/\$1,000	\$2,759,618
EMS Levy	\$0.50/\$1,000	0.454/\$1000	\$0.50/\$1,000	\$918,974
Special Levy (Ops & Maintenance) Expires in 2007		0.82/\$1000	0.82/\$1000	\$1,631.680

Should the levy limits be exceeded, prorationing will take place with the levy of at least one junior taxing district being reduced. The tax rate applied to a given property is the sum of the levy rates imposed by all the taxing districts within which the property lies. The total tax rate to any given property by overlapping taxing districts is controlled by the previously mentioned \$5.90 limit and the 1 percent constitutional limit. Should either of these limits be exceeded, the levies involved would be reduced according to a statutory formula. This is controlled by **RCW 84.52.010(2)**. The formula depends on whether the \$5.90 limit or the 1 percent limit has been exceeded. If the \$5.90 limit has been exceeded, levies are reduced or eliminated in the order, until the total tax rate is at \$5.90 (see Table 3-6). Note that within each grouping, the levy rates of the districts are reduced on a pro rata basis.

Table 3-6 Prorationing for \$5.90 Limit

1.	Parks & Recreation Districts -	RCW 36.68.525 (up to \$0.60);
	Parks & Recreation Service Areas -	RCW 36.69.145 (up to \$0.60);
	Cultural Arts, Stadiums & Convention Districts -	RCW 67.38.130 (up to \$0.25).
2.	Flood Control Zone Districts -	RCW 86.15.160 (up to \$0.50).
3.	Hospital Districts -	RCW 70.44.060 (up to \$0.25);
	All other districts not otherwise mentioned.	
4.	Fire Districts -	RCW 52.16.140 (up to \$0.50);
	Fire Districts -	RCW 52.16.160 (up to \$0.50).
5.	Fire Districts -	RCW 52.16.130 (remaining \$0.50);
	Library Districts -	RCW 27.12.150 (up to \$0.50);

Hospital Districts -	RCW 70.44.060 (up to \$0.50);
Metropolitan Parks Districts -	(up to \$0.50).

If levies are reduced to conform to the \$5.90 limit, and the total tax levy still exceeds 1 percent of fair market value, then reductions in other levies which fall outside of the \$5.90 limit are made in the following order up to the amounts in parentheses (see Table 3-7).

Table 3-7 Prorationing for the \$5.90 Limit 2nd Reductions

1.	Metropolitan Parks Districts -	RCW 35.61.210 and RCW 84.52.120 (up to \$0.25).
2.	Conservation Futures -	RCW 84.34.230 (up to \$0.0625);
	Affordable Housing -	RCW 84.52.105 (up to \$0.50);
	Emergency Medical Services	(up to \$0.20).
3.	Emergency Medical Services	(up to \$0.30).

Furthermore, **RCW 84.36.381** and **RCW 84.38.010** through **RCW 84.38.030** allow both senior citizen and disability exemptions and deferral for low income citizens that limits Fire District 03's fiscal resources. (See page 3-15 for coverage of this.)

Spending

In Washington, **RCW 52.16.0 10** states that the County will act as a financial agent or bank for fire protection districts to receive and distribute district revenues, to collect taxes and assessments authorized and levied, and to credit district revenues to the proper fund.

The fire commissioners, in coordination with the fire chief, determine how Fire District 03's budget will be developed and how expenditures will be spent. The Pierce County Treasurer acts as a financial agent or bank for the District and certifies that their budget request is in line with the funds produced by their taxing area.

Current Fiscal State

In 2005 the citizens approved a lid lift for both the regular and the EMS levies, bringing the District's collection rate to \$1.50 and .50 cents respectively beginning in 2006. (See Table 3-5.) Citizens approved the four-year special levy in 2003. It will expire 2007. The District's current debt obligation is approximately \$520,000 annually and an operating budget of 6 ml.

Continued support by the citizens of the District has allowed it to continue to provide a high level of service to the District and do while maintaining a good financial base. The District's fiscal state is expected to continue to be excellent for the foreseeable future.

Administrative Capability

The Fire Commissioners, in conjunction with the Fire Chief, administer decisions to effectively manage the District's development, implementation, and oversight. While this serves as an

oversight body, The District's total administrative capability depends largely on their daily operations. Therefore, Fire District 03's administrative capability rests in its employees, both paid and volunteer.

Technical Capability

The District has 42 full-time employees, which include: Fire Chief, Deputy Chief, Assistant Chief/Fire Marshall, Administrative Services Director/District Secretary to the Board, one administrative support, one Human Resources staff member, one Prevention Specialist, three Battalion Chiefs, six Lieutenants, fourteen Fire Fighters and eleven /Paramedics. Also, the District is served by approximately 25 Volunteer Fire Fighters, who respond to the station for emergency calls and function in a support capacity, as needed.²⁵

The District operates out of one relatively new station, somewhat centrally located just off Bridgeport Way. They are working toward the renovation of the old station, scheduled to reopen in 2006, to provide a second station for the community.

Fire District 03 has a limited technical ability to implement mitigation programs throughout the District. The primary emphasis in the past has been on public education programs related to fire and safety issues. This has included emergency preparedness, CPR, and first aid training for the public as well as sponsoring preparedness fairs staffed by members of the larger community as well as those from the District.

Their technical sophistication includes:

- A fire response GIS system;
- A fire district web site;
- NOAA weather radios for notification of impending events that might adversely affect the district; and,
- Public Education and Awareness materials on natural hazards.

Table 3.5 Fire District 03 Capability Matrix

		POTENTIAL CAPABILITY		
Legal and Regulatory		Administrative and Technical		Political and Fiscal
Capital Facility Plan Enforce Burn Bans DMA 2000 Fire Codes Planning Regulations Fire Marshal's Office		42 Regular Status Fire District Employees PC DEM WA Firefighter Association WA State Association of Fire Chiefs WA State Fire Commissioners Association	FEMA 386 How To Manuals WA HIVA City of University Place HIVA Pierce County HIVA PC Mitigation 20/20 Pierce Responder PC NET Neighborhoods PC Fire Service Emergency Resource Plan WA DEM	Supportive Fire commissioners Taxing Authority
HAZARD	Policies and Plans		Measures	
<u>Multi</u>	Mutual Aid Agreements Pierce County Fire Service Emergency Resource Plan Fire District Policies and Procedures Manual Pierce County Fire Chiefs Policies and Procedures Manual UP/FD 03 Natural Hazard Mitigation Plan		Develop with the City a Natural Hazard Mitigation Plan Provide First Aid and CPR Training Conduct Public Safety Fairs Support PC NET Program	
<u>Windstorm</u>			Public Education and Awareness	
<u>Earthquake</u>			Public Education and Awareness Studies of City Buildings	
<u>Flood</u>			Public Education and Awareness	
<u>Severe Storms</u>			Public Education and Awareness	
<u>Landslide</u>			Public Education and Awareness	

CAPABILITY ASSESSMENT ENDNOTES

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- ¹ FEMA 386-3, Developing the Mitigation Plan: identifying mitigation actions and implementation strategies, version 1.0, April 2003, p. 2-6
- ² **RCW Title 35.21.500 through 35.21.570**
- ³ City of University Place Municipal Code 1.01.010
- ⁴ **WAC 458-19-005 (2) (t)**
- ⁵ See 1997 Census of Government Organization, Appendix B - Definitions
- ⁶ **RCW Title 52, 1939**
- ⁷ (<http://www.leg.wa.gov/rcw/index.cfm#>).
- ⁸ Ibid
- ⁹ Ibid
- ¹⁰ <http://uts.cc.utexas.edu/~bobprp/statesprawl/Cases/gma%20case%20study%204-22-03.doc>, p 8.
- ¹¹ (<http://www.mrsc.org/Subjects/Planning/compplan.aspx>).
- ¹² **RCW 36.70A.110**
- ¹³ City of University Place Comprehensive Plan, Adopted, July 6, 1998, updated December 6, 2004, pp 1-2.
- ¹⁴ City of University Place Comprehensive Plan, Adopted, July 6, 1998, updated December 6, 2004, pp. 1-3 to 1-13.
- ¹⁵ University Place Municipal Code, Title 1.01.010.
- ¹⁶ City of University Place web page <http://www.ci.university-place.wa.us/CityCouncil/CityCouncil.asp>.
- ¹⁷ Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 2003, City of University Place, p. 9.
- ¹⁸ Comprehensive Annual Financial Report for the Fiscal Year Ended December 31, 2003, City of University Place, p. 11.
- ¹⁹ Information here was garnered from both the City of University Place's web page www.ci.university-place.wa.us/ and the City of University Place's Adopted Biennial Budget for the fiscal year January 1, 2005 through December 31, 2006.
- ²⁰ City of University Place Ordinance # 343, June 2002
- ²¹ Actual expenditures from 2004 were from UP Finance Division, phone conversation with Leslie Blaisdell.
- ²² City of University Place 2005-2006 Adopted Biennial Budget, p. 16
- ²³ Preface and Acknowledgements, p. 4
- ²⁴ WAC 296-305
- ²⁵ Fire District 03, webpage, <http://www.piercefire.org/up/history.htm>

Section 4

Risk Assessment Requirements

Identifying Hazards

Requirement §201.6(c)(2)(i): *[The risk assessment shall include a] description of the type ... of all natural hazards that can affect the jurisdiction...*

- Does the plan include a **description** of the types of **all hazards** that affect the jurisdiction?
- Does the plan describe the sources used to identify the hazards?
- Does the plan indicate any data limitations?
- Does the plan provide an explanation for eliminating any hazards from consideration?

Profiling Hazard Events

Requirement §201.6(c)(2)(i): *[The risk assessment shall include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.*

- Does the risk assessment identify the **location** of each hazard being addressed in the plan?
- Does the risk assessment identify the **extent** of each hazard being addressed in the plan?
- Does the plan provide **information** on the **previous occurrences** of each natural hazard?
- Does the risk assessment identify for each hazard, a scale of likelihood of occurrence and the impact?
- Is the location of the natural hazard specifically defined?
- Is the quality of information on the extent above average
- Does the plan document the sources of the information on local, extent, and previous occurrences?

Assessing Vulnerability: Identifying Assets

Requirement §201.6(c)(2) (ii)(A): *[The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. The plan should describe vulnerability in terms of:§ The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas...*

- Does the plan include an overall summary description of the jurisdiction **vulnerability** to the hazards?
- Does the plan address the **impacts** of the hazards on the community?
- Does the plan provide information on the types and numbers of vulnerable buildings, infrastructures, and critical facilities?
- Does the plan address the vulnerability to future buildings, infrastructure, and critical facilities based on current planned development or anticipated areas of growth within the community?
- Does the plan identify the jurisdictions' repetitive loss areas/structures?

Assessing Vulnerability: Estimating Potential Losses

Requirement §201.6(c)(2) (ii)(B): *[The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate...*

- Does the plan identify vulnerability assets as required in Part 201.6 (c)(ii)(A)?

Assessing Vulnerability: Analyzing Development Trends

Requirement §201.6(c)(2) (ii)(c): *[The plan should describe vulnerability in terms of providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.*

- Does the plan describe the vulnerability to hazards as required in 201.6(c)(ii)(a)?
- Does the plan indicate the methodology used to prepare the estimate?

Section 4

**CITY OF UNIVERSITY PLACE/FIRE DISTRICT 03
RISK ASSESSMENT**

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Hazard Sub-Sections

The Risk Assessment portrays the risks and vulnerabilities, and is divided by natural hazard type. Due to the fact that the City and Fire District 03 are nearly congruent in their coverage and there is no discernable difference in the hazards that affect them, all references within this section to the vulnerability, risk, or effect upon the City are also to be taken as inclusive of the entire Fire District including the few small tracts of land it covers outside the City boundaries. In order of decreasing risk for University Place and Fire District 03, the University Place/Fire District Natural Hazard Mitigation Plan addresses the following hazards: **Windstorm Hazard** (Sub-Section 4.1), **Earthquake Hazard** (Sub-Section 4.2), **Flood Hazard** (Sub-Section 4.3), **Severe Storms Hazard** (Sub-Section 4.4), and **Landslide Hazard** (Sub-Section 4.5). **Volcanic Hazard, Tsunami Hazard, Drought Hazard**, and **Wildland/Urban Interface (WUI) Fire Hazard** are not treated in a separate section. Rather due to the limited influence they will have on these jurisdictions they are covered in this preliminary portion.

A community's vulnerability is the susceptibility of a community to a potential hazard if that hazard actually manifests itself.

The risk to a community combines the likelihood or probability that a hazard will affect a community with the consequences, or vulnerability of the community, from exposure to the hazard.

The mitigation planning team utilized Mitigation 20/20 software to formally analyze the individual hazards based on a number of factors. These included a vulnerability assessment (see table 4-2) that evaluated:

- % of the City impacted by the hazard;
- Effects on health and safety;
- Property damage;
- Environmental damage; and
- Economic affects.

This created a vulnerability rating for each hazard. The team then used the probability of occurrence rating for the individual hazard as a multiplier to arrive at a total risk score for each hazard. This created a wide range of risks depending on the hazard. The team decided that the hazards with lower scores, meaning a lower risk to the community, could be eliminated from the mitigation plan. The decision was made to focus energy on the hazards with a risk score over eight. This left five hazards to be evaluated for the plan. This in no way diminishes the importance of preparing for other hazards, only that the potential threat from them is not seen to be as serious as from the five hazards selected.

The **Volcanic Hazard** was evaluated (Table 4-2, Risk Score 8, and Map 4-1) and while the potential for ashfall directly affecting University Place is acknowledged the potential for major ashfall is fairly remote. The United States Geological Survey states that “Eruptions of Mount Rainier usually produce much less volcanic ash than do eruptions at Mount St. Helens”.¹ For any volcanic ash which is ejected from Rainier the prevailing wind patterns for most of the year should carry it well away from University Place, into Eastern Washington.

The real threat from Mt. Rainier is the possibility of a lahar, or volcanic mudflow, to inundate the major valleys in Pierce County. However, none of those valleys draining Mt. Rainier's glaciers flows through University Place. Therefore the expectation of a major direct physical impact on University Place is very limited.

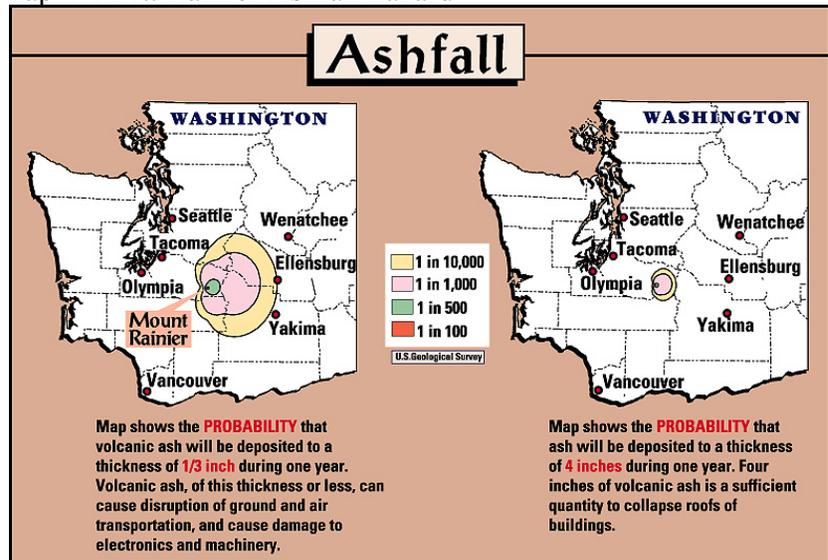
The **Tsunami hazard** was evaluated (Table 4-2, Risk Score: 8) and determined to have a minimal direct impact

and low probability of occurrence. A tsunami, sometimes called a tidal wave, consists of a series of high-energy waves that radiate outward like pond ripples from the area in which the generating event occurred, inundating the low-lying areas near the shore. Earthquakes and landslides (along steep slopes, underwater, and river delta failure) are the most likely sources in Puget Sound.³ WA EMD identifies Pierce County coastal regions as places potentially impacted by tsunamis.⁴ Steep bluffs throughout the Sound and the location of faults form the basis for this conclusion. However, due to land use decisions and development patterns, very little of the built environment in University Place would be impacted by a tsunami. As shown on Map 4-2, the majority of low-lying coastal areas in University Place are undeveloped open space (Chambers Creek Properties) and owned by Pierce County. Only a small portion of Day Island to the north would be impacted by a tsunami. Due to the infrequent rates of occurrence for tsunamis in the area and the development patterns of the coastal areas in University Place, the overall risk to a tsunami is minimal.

The potential for **Drought** to create emergency or disaster conditions in University Place was evaluated (Table 4-2, Risk Score: 8) and having received a score of eight was dropped from the list. Drought by definition is a period of abnormally dry weather that persists long enough to produce a serious hydrologic imbalance. Its severity depends upon the degree of moisture deficiency, the duration, and size of the affected area. University Place like much of the rest of Western Washington has been affected by droughts in the past. The most recent drought conditions of any seriousness were in 1996-7 and 2001. The lack of rainfall during the winter of 2005 created a drought condition that was alleviated by the spring rains. However, conditions in the past while uncomfortable in requiring voluntary water rationing, were not bad enough to require deeper measures. University Place is not an agricultural based community, and as such does not rely on the maintenance of a particular pattern of rainfall for its economic well being. It is not expected that within the foreseeable future drought conditions will become bad enough to warrant other measures.

The **Wildland/Urban Interface (WUI) Fire Hazard** was evaluated (Table 4-2, Risk Score: 7) and was not recognized as a hazard to the City of University Place for the following reasons: The

Map 4-1 Mt. Rainier Ashfall hazard²



City is out of the County Wildland/ Urban interface map identified by Pierce County. The City also has limited freestanding timber, as shown by Map 4-1, or undergrowth areas. Current development within University Place has reduced the amount of timbered land considerably over the past few decades and those small areas which still have a forest canopy are separated by large areas bereft of such a canopy. Non-forested land is residential or business and has little or no wooded area. While there are occasional small areas of trees, the balance of the City contains mostly light fuels with adequate defensible space between structures and vegetation. The University Place Fire Department (Fire District 03) has adequate resources to fight any Wildland incident that occurs within its boundaries. If necessary it can expand those resources with automatic and local mutual aid agreements. This is backed up by the South Puget Sound Fire Defense Region and eventually with the Washington State Mobilization Plan as the ultimate backup for any incident that may overwhelm local resources.

The rest of section four focuses on the hazards identified as potential threats to the City. The risk score range from 12 to 36. Each hazard is defined through an identification description, a profile, and finally, using this information combined with the Mitigation 20/20 risk assessment, the plan then describes University Place's vulnerability to each hazard. The mitigation strategies the City and the Fire District will pursue are discussed in the Mitigation Strategy Section (Section 5). The specific vulnerabilities of each of their critical facilities are discussed in the Critical Facilities section (Section 6).

The following tables and charts summarize the risk assessment processes:

- **Table 4-1 University Place/Fire District 03 Hazard Matrix**
- **Table 4-2 University Place/ Fire District 03 Hazard Identification and Risk Assessment**
- **Chart 4-1 University Place/ Fire District 03 Hazard Ratings**

Map 4-2 University Place Base Map Showing Forest Canopy

City of University Place

Ortho Base Map

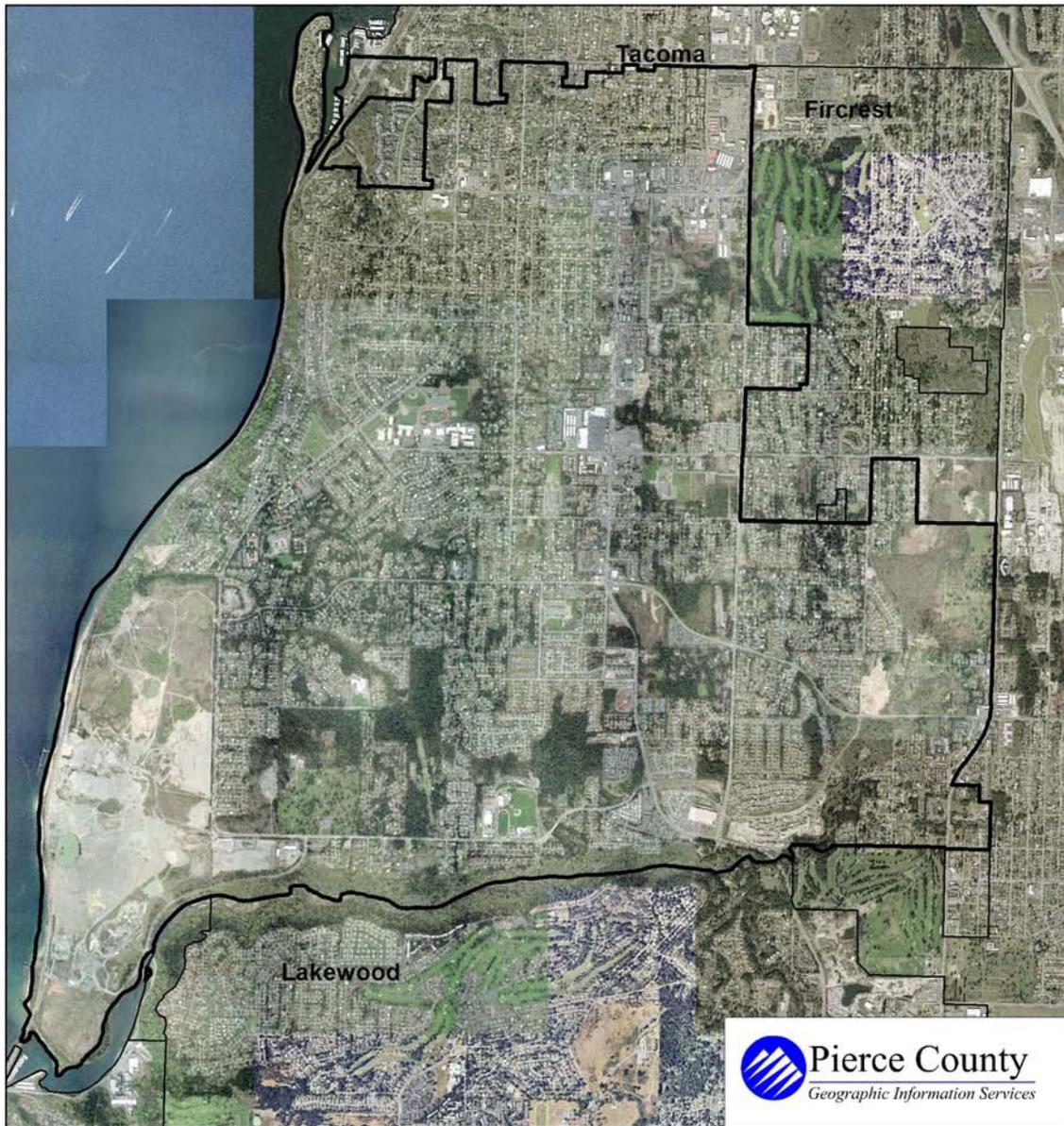


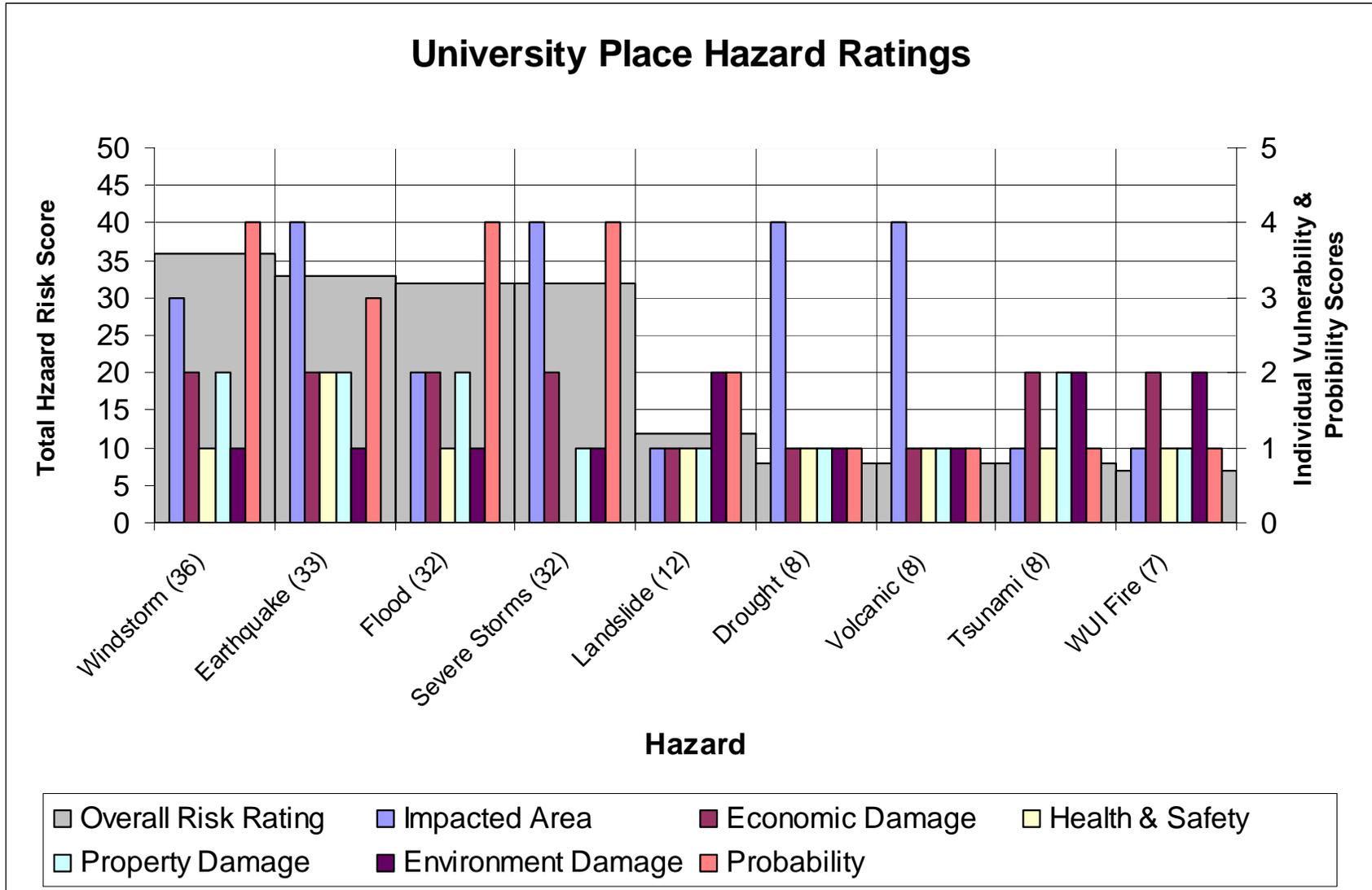
Table 4-1 University Place/Fire District 03 Hazard Matrix: History, Risk and Vulnerability

Hazard	Hazard Ratings	History: Declaration #—Date/Info	Probability/ Occurrence	Maps & Diagrams of Hazards
<u>Wind Storm</u>	Medium Risk (36)	DR-981-WA--1/1993	<i>MG20/20</i> —25 years or less occurrence	Pierce County South Wind Event- <i>Section 4.1 Page</i> University Place Windstorm- <i>Section 4.1 Page</i>
	Medium Vuln. (9)	DR-137-WA--10/1962		
<u>Earthquake</u>	Medium Risk (33)	N/A--6/10/2001 Satsop (Magnitude 5.0)	<i>MG20/20</i> --100 years or less occurrence <i>Best Available Science</i> --About every 32 years for intraplate earthquakes	Earthquakes Types- <i>Section 4.2</i> Major Faults- <i>Section 4.2</i> County Seismic Areas- <i>Section 4.2</i> Major Earthquakes- <i>Section 4.2</i> Peak Ground Acceleration – <i>Section 4.2</i>
	Medium Vuln. (10)	DR-1361-WA—2/28/2001 Nisqually (6.8) N/A--7/2/1999 Satsop (5.8) N/A--4/29/1965 Maury Island, South Puget Sound (6.5) N/A--4/13/1949 Nisqually Delta (7.1) N/A--2/14/1946 Maury Island (6.3)		
<u>Flood</u>	Medium Risk (32)	Minor effects to University Place for most of these. DR-1499-WA—10/2003 DR-1159-WA--12/96-2/1997 DR-1100-WA--1-2/1996 DR-1079-WA--11-12/1995 DR-896-WA--12/1990 DR-883-WA--11/1990 DR-852-WA--1/1990 DR-784-WA--11/1986 DR-545-WA--12/1977 DR-492-WA--12/1975 DR-328-WA--2/1972 DR-185-WA--12/1964 DR-137-WA--10/1962	<i>MG20/20</i> —25 years or less occurrence	Pierce County Flood Areas- <i>Section 4.5</i> University Place Flood Areas- <i>Section 4.5</i>
	Medium Vuln. (8)			
<u>Winter Storms</u>	Medium Risk (32)	DR-1499-WA—10/2003	<i>MG20/20</i> —25 years or less occurrence	
	Medium Vuln. (8)	DR-1159-WA--12/96-2/1997 DR-1152-WA--11/19/1996		
<u>Landslide</u>	Low Risk (12)	WA State examples – not University Place	<i>MG20/20</i> --Unknown but anticipate an occurrence	Landslide Areas- <i>Section 4.6</i> University Place Landslide Areas- <i>Section 4.6</i>
	Medium Vuln. (6)	DR-1159-WA--12/96-2/1997 DR-852-WA--1/1990 DR-545-WA--12/1977		
<u>Tsunami</u>	Low Risk (8)	NA	<i>MG20/20</i> -- Unknown but rare occurrence	
	Medium Vuln. (8)			
<u>Drought</u>	Low Risk (8)	Droughts that have affected University Place are: 1934-1937 1976-1977 2001	<i>MG20/20</i> --Unknown but rare occurrence	
	Medium Vuln. (8)			
<u>Volcanic</u>	Low Risk (8)	DR-623-WA--5/1980 St. Helens Eruption	<i>MG20/20</i> --Unknown but rare occurrence	Volcanic Hazards Diagram- <i>Section 4.2</i> County Volcanic Areas- <i>Section 4.2</i> University Place Volcanic Areas- <i>Section 4.2</i>
	Medium Vuln. (8)			
<u>Wildland / Urban Interface Fires</u>	Low Risk (7)	Outside of minor brush fires none known.	<i>MG20/20</i> --Unknown but rare occurrence	Map 4-1-shows forested areas to be negligible.
	Medium Vuln. (7)			

Table 4-2 University Place/Fire District 03 Hazard Identification and Risk Assessment (From Mitigation 20/20)*

Hazard	Impacted Area	Health & Safety	Property	Environment	Economic	Vulnerability Rating	Probability of Occurrence	Risk Score	
Windstorm	3	1	2	1	2	9	4	36	
Earthquake	4	2	2	1	2	11	3	33	
Flooding	2	1	2	1	2	8	4	32	
Winter Storms	4	0	1	1	2	8	4	32	
Landslide	1	1	1	2	1	6	2	12	
Volcanic	4	1	1	1	1	8	1	8	
Tsunami	1	2	1	2	2	8	1	8	
Drought	4	1	1	1	1	8	1	8	
Wildland/Urban Interface Fires	1	1	1	2	2	7	1	7	
Date of Assessment	1/07/2005					Total Vulnerability Rating		Total Risk Rating	168
<p>*Risk Scores: 0 to 9 - Very Low, 10 to 25 - Low, 25 to 40 - Medium, 40 and above - High. Vulnerability Ratings were done with Mitigation 20/20 eliminating the Probability of Occurrence column and calculating the numbers. Vulnerability Scores: 0 to 5 – Low, 6 to 10 – Medium, 11 and above – High.</p>									
<p>Impacted Area</p> <p>0 No developed area impacted 1 Less than 25% of developed areas impacted 2 Less than 50% of developed area impacted 3 Less than 75% of developed area impacted 4 Over 75% of developed area impacted</p>		<p>Health & Safety</p> <p>0 No Health and Safety impact 1 Few injuries/illnesses 2 Few fatalities but many injuries/illnesses 3 Numerous fatalities</p>			<p>Property</p> <p>0 No property damage 1 Few properties destroyed - few properties damaged 2 Few destroyed - many damaged 2 Few damaged - many destroyed 3 Many properties destroyed and damaged</p>				
<p>Environment</p> <p>0 Little or no environmental damage 1 Resources damaged with short term recovery practical 2 Resources damaged with long term recovery feasible 3 Resources destroyed beyond recovery</p>		<p>Economic</p> <p>0 No economic impact 1 Low direct and/or low indirect costs 2 High direct & low indirect costs 2 Low direct & high indirect costs 3 High direct & high indirect costs</p>			<p>Probability of Occurrence</p> <p>1 Unknown but rare occurrence 2 Unknown but anticipate an occurrence 3 100 years or less occurrence 4 25 years or less occurrence 5 Once a year or more occurrence</p>				

Chart 4-1 University Place/Fire District 03 Hazard Ratings*



Endnotes

¹ Living with a Volcano in your Backyard – Volcanic Hazards at Mt. Rainier, Walder, J.S. and Driedger, C.L., USGS Open-File Report 95-421, 1995.

² USGS

³ Gonzalez, Frank I., et al. “Puget Sound Tsunami Sources: 2002 Workshop Report.” NOAA/Pacific Marine environmental Laboratory, Contribution No. 2526, 2003. p. 9-14.

⁴ Modified from Washington State Natural Hazard Mitigation Plan (DRAFT), Tsunami Section. Washington State Emergency Management Division. September 5, 2002.

Section 5

Mitigation Strategy Requirements

Mitigation Strategy---Requirement §201.6(c)(3):

The plan shall include a strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

Local Hazard Mitigation Goals---Requirement §201.6(c)(3)(i):

[The hazard mitigation strategy **shall** include a] description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

- Does the plan include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards?

Identification and Analysis of Mitigation Measures---Requirement §201.6(c)(3) (ii):

[The mitigation strategy **shall** include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

- Does the plan identify a **comprehensive range** of specific mitigation actions and projects for each hazard?
- Do the identified range of mitigation actions and projects address reducing the effects of hazards on **new** buildings and infrastructure?
- Do the identified range of mitigation actions and projects address reducing the effects of hazards on **existing** buildings and infrastructure?

Implementation of Mitigation Measures---Requirement: §201.6(c)(3) (iii):

[The mitigation strategy section **shall** include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization **shall** include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

- Does the mitigation strategy include how the actions are **prioritized**?
- Does the mitigation strategy address how the actions will be **implemented and administered**?
- Does the prioritization process include an emphasis on the use of **cost-benefit review**?

**UNIVERSITY PLACE/FIRE DISTRICT 03
MITIGATION STRATEGY**

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Mitigation Strategy Development

The hazard mitigation strategy includes a description of mitigation goals to reduce or avoid long-term vulnerabilities to the hazards identified in the Risk Assessment. The mitigation strategy includes sections that identify and analyze a comprehensive range of specific mitigation measures that reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. Facility specific mitigation measures are located in Section 6, the Critical Facility Section.

Mitigation strategy development begins with a review of the categories of mitigation goals, as outlined by FEMA. Using this template, and adjusting it to fit University Place's situation, the Hazard Mitigation Planning Team developed goals specific to University Place. Through incorporation of the analysis and conclusions found in the Risk Assessment and the Capability Identification, the team identified specific mitigation measures and prioritized them through a process of public participation and cost/benefit review tailored to University Place's unique needs and capabilities. Central to this entire process is continued public involvement.

The University Place Plan goals are listed as follows:

- 1. Save lives and reduce public exposure to risk.**
- 2. Reduce or prevent damage to public and private property.**
- 3. Reduce the vulnerability of the City's and District's economy to disaster.**
- 4. Reduce adverse environmental or natural resource impacts.**
- 5. Improve community understanding of the particular hazards that threaten the City and the District, and the mitigation measures available to reduce vulnerability to those hazards.**
- 6. Provide continuous review of mitigation plans.**

To help achieve each goal, the University Place Plan identifies mitigation measures—specific actions or projects that help mitigate risk for the City. The planning process of data-collection, research, and public participation leads to the development of these measures. This process ensures that the measures speak to the risks specific to University Place and that these measures can be implemented. The Risk Assessment is central to the process of selecting mitigation measures from University Place's goals.

The outcomes of the Risk Assessment, specifically the **Risk Scores** and **Composite Vulnerability Scores**, illustrate the hazards to which University Place has the most vulnerability. The Risk Assessment provides focus for University Place's goals through identification of University Place's vulnerability to specific hazards. Based on these hazards, the Hazard Mitigation Planning Team identified specific mitigation measures.

Once the measures were identified, they were further defined in terms of the goals they addressed as well as which hazards they were to mitigate. Evaluation of the measures followed their identification and definition. Using the Capability Assessment, the Hazard Mitigation Planning Team evaluated the list of measures with regards to each measure's ability to be implemented.

Through meetings, use of the Mitigation 20/20 tools, and review of other local mitigation plans¹, the Hazard Mitigation Planning Team selected the following eight categories to comprehensively evaluate each measure:

1. Goal(s) Addressed

What mitigation goals does the measure address?

2. Cost of Measure

How much will the measure cost to implement?

3. Funding Source and Situation

What is the potential funding source? Choose the statement(s) below that most accurately defines the funding situation for the proposal:

- Funding could be obtained through local budget.
- Funding could be obtained through state or federal grants.
- Funding could be accomplished with local budgets or grants.
- No potential funding sources can be readily identified.

4. Lead Department(s) or Agency(ies)

Which department(s) or agency(ies) will be leading the implementation of the measure?

5. Timeline

How long will it take to implement? Measures include ongoing, short-term, and long-term activities. Each measure includes an estimate of the timeline for implementation. Where possible a timeframe is included. When not, one of the following was used instead:

- Ongoing measures are activities, that the City or Fire District are already implementing.
- Short-term measures are activities, that the City or Fire District are capable of implementing with existing resources and authorities within one to two years.
- Long-term measures may require new or additional resources or authorities, and may take between two and five years or longer to implement.

6. Benefit

Does it benefit all of the community and/or is it facility specific?

7. Life Expectancy of Measure

How long will the measure last?

8. Community Reaction

Choose the statement(s) that most accurately describes how the community would react to the implementation of the proposal:

- The proposal is likely to be endorsed by the entire community.
- The proposal would benefit those affected, with no adverse reaction from others.
- The proposal would be somewhat controversial.
- The proposal would be strongly opposed by most.
- The proposal would be strongly opposed by nearly all.

Due to the limited information available at this time on the potential costs and time lines to implement many of these measures, some of the responses are still to be determined.

For Multi-Hazard measures, the specific hazards addressed are noted as follows:

EQ: Earthquake
W: Windstorm
SS: Severe Storm
FL: Flood
L: Landslide
All: All natural hazards

The measures having been identified, defined, and evaluated, the rest of the process involves prioritization. The process relies upon University Place's identified risks and vulnerabilities, the Hazard Mitigation Planning Team's expertise, and public participation. During this process the Hazard Mitigation Planning Team, outlined, categorically defined, and ranked each mitigation measure with special attention paid to what is known about the measure's cost-benefit ratio, the goals addressed, its ability to be implemented, and the extent to which it would mitigate one or multiple relevant hazards. A number of proposed measures were discarded and others changed, based on the expected response by the public and City Council.

On 7/21/05 and 10/20/05 at the Mitigation Strategy Public Comment Meetings, and at the City Council meeting on 8/01/05 the Hazard Mitigation Planning Team presented the mitigation plan with their draft potential prioritizations to the attendees. The request was made for citizens to respond either in person, by phone, email or fax.

The measures are prioritized within each implementation category. In order to provide consistency, the evaluation process, including the eight categories, was used as the basis for the prioritization of measures. The process allows for emphasis on the extent to which each measure is cost-effective. While it may be important to emphasize a positive cost/benefit review in the prioritizing of mitigation measures, it is also important to emphasize the influence of local political factors, community needs and values, historic properties, and habitat and environmental issues upon the selection of specific mitigation measures. Therefore, the prioritization process addresses the City's unique needs, expressed here in terms of the measure's ability to be implemented and the extent to which it would mitigate one or more relevant hazards. The eight categories address these issues.

The extent to which a measure would mitigate one or multiple hazards is addressed in Category 1 (Goals Addressed), which further helps to encapsulate the community's unique vulnerabilities and needs. Although not specified, the issue of the number of hazards addressed may also be a factor in Category 6 (Benefit).

Our ability to implement a measure is illustrated in Categories 2 (Cost of Measure), 3 (Funding Source and Situation), 4 (Lead Jurisdiction(s)), and 5 (Timeline). For cost-benefit review, categories 2, 3, and 5 directly address cost. Categories 6 and 7 (Life Expectancy of Measure) directly address benefit. Category 8 (Community Reaction) indirectly considers both potential costs and potential benefits of the measure in terms of public opinion.

Following the public meetings any necessary changes were incorporated and the mitigation measures achieved their final prioritization. In so doing, the Hazard Mitigation Planning Team, aided by the public, has developed a long-term, cost-effective, environmentally sound, and sustainable mitigation strategy.

The following mitigation measures are organized by implementation mechanism for each jurisdiction: Startup, Hazard Mitigation Forum (HMF), Hazard Mitigation Planning Team (HMPT), Local City or Fire, and Public Education (PE). Table 5.1 and 5.2 are summaries the mitigation strategies for the City and the Fire District, respectively. Following the table is a detailed strategy of each mitigation measure

The mitigation measures are organized for each jurisdiction by hazard vulnerability, with multi-hazard measures presented first, and further subdivided by implementation mechanism. The measures are prioritized within each implementation mechanism subset. A detailed description of each mitigation measure follows the table.

Each measure's priority is presented in the following format:

“Implementation Mechanism-Ranking”

For example, the Slope Stabilization measure for the City of University Place is prioritized as follows:

“Priority: HMPT-7”

Thus it is the seventh ranked measure within the Hazard Mitigation Planning Team implementation mechanism. The hazards this measure addresses are noted both in the table and in the more detailed description that follows.

Table 5- 1 City of University Place Mitigation Measures²

Implementation Mechanism	Hazards					Mitigation Measure	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals						
	Windstorm	Earthquake	Flood	Severe Storms	Landslide				1-Life Safety/ Public Exposure to Risk	2-Reduce Public & Private Property Damage	3-Reduce Vulnerability of City's Economy	4-Reduce Impacts to Environment or Natural Resources	5-Public Education	6-Continuous Review of Mitigation Plans	
Startup															
1.	✓	✓	✓	✓	✓	Plan Maintenance	HMPT	Ongoing	✓	✓	✓	✓	✓	✓	✓
HMF															
1.	✓	✓	✓	✓	✓	Pierce County Hazard Mitigation Forum	City, Fire District	Ongoing	✓	✓	✓	✓	✓	✓	✓
HMPT															
1.		✓				Seismic Evaluation: Public Facilities	UP Community Development; Fire District	5	✓	✓					✓
2.		✓				Non-Structural Retrofitting for Remodel Projects	UP Community Development	5	✓	✓					
3.	✓	✓		✓		Underground Utilities	UP Community Development; Local Utility Providers	Ongoing	✓	✓	✓				
4.		✓				Pierce County Non-Structural Retrofit Program	UP Community Services; Fire District PC DEM; Red Cross	Ongoing	✓	✓				✓	
5.	✓			✓		Tree Maintenance Program	UP Community Development; Puget Sound Energy	Ongoing	✓	✓					
6.	✓	✓	✓	✓	✓	Critical Facilities: Auxiliary Power	UP Community Services	3	✓	✓					
7.		✓	✓		✓	Slope Stabilization	UP Community Development	5	✓	✓		✓			

Implementation Mechanism	Hazards					Mitigation Measure	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
	Windstorm	Earthquake	Flood	Severe Storms	Landslide				1-Life Safety/ Public Exposure to Risk	2-Reduce Public & Private Property Damage	3-Reduce Vulnerability of City's Economy	4-Reduce Impacts to Environment or Natural Resources	5-Public Education	6-Continuous Review of Mitigation Plans
8.	✓	✓	✓	✓	✓	Emergency Vehicle Access	UP Community Development; Fire District; UP PD	6	✓	✓	✓	✓		
9.	✓	✓	✓	✓	✓	Shelter Development: Equipment	UP Community Services. Red Cross	Ongoing	✓					
10.			✓	✓		Day Island Warning System and Evacuation Route	UP Community Services; UP Development Services; Red Cross; Fire District	2	✓	✓			✓	
11.	✓	✓	✓	✓	✓	Emergency Resource Maintenance	UP Community Development; Fire District	Ongoing	✓	✓	✓	✓		
12.	✓	✓	✓	✓	✓	Shelter Development: Training	UP Community Services; Red Cross; Fire District	Ongoing	✓					
13.		✓				Seismic Evaluation: Shelter Sites	UP Community Development; Fire District	5	✓	✓				
Local City								Ongoing						
1.	✓	✓	✓	✓	✓	Regulations: Building Code	UP Community Development	Ongoing	✓	✓	✓	✓		✓
2.		✓			✓	Regulations: Geologically Hazardous Areas	UP Community Development	Ongoing	✓	✓	✓	✓		✓
3.			✓			Regulations: Flood Damage Reduction	UP Community Development	Ongoing	✓	✓	✓	✓		✓
4.			✓			Regulations: Surface Water Reduction Control Standards	UP Community Development	Ongoing	✓	✓	✓	✓		

Implementation Mechanism	Hazards					Mitigation Measure	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
	Windstorm	Earthquake	Flood	Severe Storms	Landslide				1-Life Safety/ Public Exposure to Risk	2-Reduce Public & Private Property Damage	3-Reduce Vulnerability of City's Economy	4-Reduce Impacts to Environment or Natural Resources	5-Public Education	6-Continuous Review of Mitigation Plans
5.	✓	✓	✓	✓	✓	Regulations: Natural Resource Protection	UP Community Development	Ongoing	✓	✓		✓		
6.	✓	✓	✓	✓	✓	Hazard disclosure Statement	UP Community Development	Ongoing	✓	✓	✓		✓	
7.	✓	✓				City Hall Replacement	UP Community Development	5 (Underway)	✓	✓				
8.			✓			Surface Water Reduction: Low Impact Developments	UP Community Development	5	✓	✓		✓		✓
Public Education														
1.	✓	✓	✓	✓	✓	PC NET	PC DEM	Ongoing	✓	✓		✓	✓	
2.	✓	✓	✓	✓	✓	Public Education: All Hazards	City, Fire District; PC DEM	Ongoing	✓	✓	✓	✓	✓	
3.	✓	✓	✓	✓	✓	Public Education: Post-Disaster	City, Fire District; PC DEM	Ongoing	✓	✓	✓		✓	✓
4.	✓	✓	✓	✓	✓	Public Education: Hazard Insurance	City, Fire District, Insurance Cos., PC DEM	Ongoing	✓	✓	✓		✓	
5.	✓	✓	✓	✓	✓	Pre-Disaster Business Mitigation Loan Program	UP Chamber, SBA, PC DEM, PC Econ Dev.	Ongoing	✓	✓	✓		✓	
6.		✓				Earthquake Home Retrofit Program	UP Community Developments, City of Seattle	Ongoing	✓	✓			✓	

Table 5- 2 Fire District #3 (University Place) Mitigation Measures³

Implementation Mechanism	Hazards					Mitigation Measure	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals						
	Windstorm	Earthquake	Flood	Severe Storms	Landslide				1-Life Safety/ Public Exposure to Risk	2-Reduce Public & Private Property Damage	3-Reduce Vulnerability of City's Economy	4-Reduce Impacts to Environment or Natural Resources	5-Public Education	6-Continuous Review of Mitigation Plans	
Startup															
1.	✓	✓	✓	✓	✓	Plan Maintenance	HMPT	Ongoing	✓	✓	✓	✓	✓	✓	✓
HMF															
1.	✓	✓	✓	✓	✓	Pierce County Hazard Mitigation Forum	City, Fire District	Ongoing	✓	✓	✓	✓	✓	✓	✓
HMPT															
1.	✓	✓	✓	✓	✓	Emergency Vehicle Access	UP Community Development; Fire District; UP PD	6	✓	✓	✓	✓			
2.		✓				Seismic Evaluation: District Facilities and Shelters	UP Community Development; Fire District	5	✓	✓					
3.	✓	✓	✓	✓	✓	Emergency Resource Maintenance	UP Community Development; Fire District	Ongoing	✓	✓	✓	✓			
4.		✓				Seismic Evaluation: Water/Hydrant System	Tacoma Public Utilities; Local Water Purveyors; Fire District	5	✓	✓	✓				
5.	✓	✓	✓	✓	✓	Hazardous Materials Identification	Fire District; LEPC	Ongoing	✓	✓		✓			
6.	✓	✓	✓	✓	✓	Shelter Development: Equipment and Training	UP Community Services. Red Cross	Ongoing	✓						
7.	✓	✓	✓	✓	✓	Essential Facilities: Auxiliary Power	UP Community Services; Fire District	3	✓	✓					
8.	✓	✓	✓	✓	✓	Assessment: Critical Facilities Access Limitation	Fire District	Short-Term	✓	✓					

Implementation Mechanism	Hazards					Mitigation Measure	Lead Jurisdiction(s) / Department(s)	Timeline (years)	Plan Goals					
	Windstorm	Earthquake	Flood	Severe Storms	Landslide				1-Life Safety/ Public Exposure to Risk	2-Reduce Public & Private Property Damage	3-Reduce Vulnerability of City's Economy	4-Reduce Impacts to Environment or Natural Resources	5-Public Education	6-Continuous Review of Mitigation Plans
9.		✓				Pierce County Non-Structural Retrofit Program	UP Community Services; Fire District; PC DEM; Red Cross	Ongoing	✓	✓			✓	
10.			✓	✓		Day Island Warning System and Evacuation Route	UP Community Services; UP Development Services; Red Cross; Fire District	2	✓	✓			✓	
11.	✓	✓		✓		Underground Utilities	UP Community Development; Local Utility Providers	Ongoing	✓	✓	✓			
Local Fire														
1.		✓				Seismic Retrofit: Station 32	Fire District	5	✓	✓	✓			
2.		✓				Non-Structural Retrofitting for Remodel Projects	UP Community Development; Fire District	5	✓	✓				
3.	✓	✓	✓	✓	✓	Vulnerable Populations Assessment	Fire District; PC DEM	Ongoing	✓					
Public Education														
2.	✓	✓	✓	✓	✓	PC NET	PC DEM		✓	✓	✓		✓	
3.	✓	✓	✓	✓	✓	Public Education: All Hazards	City, Fire District; PC DEM	Ongoing	✓	✓	✓	✓	✓	
4.	✓	✓	✓	✓	✓	Public Education: Post-Disaster	City, Fire District; PC DEM	Ongoing	✓	✓	✓	✓	✓	✓

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City of University Place Mitigation Strategy

Priority: MH-Startup- 1

Plan Maintenance

Hazards: All

University Place will adopt those processes outlined in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = 1-6
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = UP Administration
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: MH-HMF- 1

Pierce County Hazard Mitigation Forum

Hazards: All

University Place will work in conjunction with the County to establish the Pierce County Hazard Mitigation Forum (HMF). The Forum will function as a means of coordinating mitigation planning efforts among all jurisdictions within the County that have completed a mitigation plan. This will ensure efficient use of resources and a more cooperative approach to making a disaster resistant county. The HMF will meet annually, every October. This is addressed in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = 1-6.
2. **Cost of Measure** = Minor
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = PC DEM; UP Administration).
5. **Timeline** = Short-term
6. **Benefit** = Regional
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 1

Seismic Evaluation: City Facilities

Hazards: EQ

The City will evaluate City-owned critical facilities to determine their earthquake structural integrity. The city will partner with facility owners of designated shelters to do the same. The cost of retrofitting will be highly dependent on the results of the evaluation. This requires preparation of information to allow budgeting for renovation of those facilities that are not up to current code or have structural deficiencies that have developed over the years.

Facilities include:

- Chambers Creek Bridge (not constructed/retrofitted to meet current code)
- Day Island Bridge (not constructed/retrofitted to meet current code)
- Peach Creek Bridge (not constructed/retrofitted to meet current code)
- Public Works Shop (not constructed/retrofitted to meet current code)

Not included in this list is City Hall. Although City Hall has not constructed/retrofitted to meet current code, it is currently being replaced by a new building that will meet current code.

1. **Goal(s) Addressed** = 1-2,6
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = City Development Services.
5. **Timeline** = 5 year
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = Life of undamaged/unaltered structure
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 2

Non-Structural Retrofitting for Remodel Projects

Hazards: EQ

Non-structural seismic retrofitting of offices and other city workspaces will serve to limit damage to property and increase the safety of the work environment during seismic events.

The City will conduct non-structural seismic retrofitting of city facilities and equipment. The facilities listed in Section 6 of this plan will be the target facilities for this measure

1. **Goal(s) Addressed** = 1-2
2. **Cost of Measure** = Approx \$500 per facility.
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = City Departments, Parks & Recreation
5. **Timeline** = 5 year
6. **Benefit** = City facilities, employees, and occupants.
7. **Life of Measure** = Life of non-structural action.
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 3

Underground Utilities

Hazards: EQ, SS, W

The City in will encourage the placement of all utilities (i.e., power lines) underground. This will limit the potential damage to infrastructure as well as damage the infrastructure could cause to life and property. Where not economically feasible for the utility provider, homeowners could have the option to have their utilities placed underground through an individualized rate structure.

University Place has already placed utilities underground on many of the major arterials. Public Works has one stretch of arterial already planned:

• Drexler Drive	1 mile	\$1,500,000
Total		\$1,500,000

Two others have been identified but are not planned:

• Bridgeport (from Cirque to city limits)	1.5 miles	\$2,250,000
• 67 th	3 miles	\$4,500,000
Total		\$6,750,000

The City will incorporate the two identified arterials into the plan and implement per the plan's timeline.

1. **Goal(s) Addressed** = 1-3
2. **Cost of Measure** = Planned only: \$1,500,000. Identified only: \$6,750,000
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = Local utility providers, City Development Services.
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: HMPT 4

Pierce County Non-Structural Retrofit Program

Hazards: EQ

The City will support the PC Non-Structural Retrofit Program and its implementation in facilities within University Place. This non-structural retrofit program focuses on childcare centers and senior centers and is successful because private and public sector partners provide labor and hardware, and because the retrofits not only provide real mitigation, they are a great teaching opportunity for parents, staff and other occupants of the building(s). The childcare center program is highly cost effective, when coupled with public education and media opportunities.

Non-structural seismic retrofitting of childcare centers and senior centers will serve to limit damage to property and increase the safety of the care/living centers during seismic events.

University Place has a total of 8 childcare facilities and 4 senior living centers (1 nursing home, 2 assisted living facilities, and 1 critical care facility). The City will work with the County to provide non-structural retrofits of these facilities.

1. **Goal(s) Addressed** = 1-3,5.
2. **Cost of Measure** = Approx \$500/facility. 12 facilities= \$6,000.
3. **Funding Source and Situation** = Currently funded through DHS Citizen Corps Innovative Grant and various local private and non-profit partnerships. Funding could be obtained through local budgets or grants.
4. **Lead Agency(ies)/Organization(s)** = City of University Place; PC DEM; American Red Cross, other volunteer agencies.
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Life of non-structural action
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 5

Tree Maintenance Program

Hazards: SS, W

The City will continue to conduct its diseased and dangerous tree survey to determine which trees within the right-of-way or on city properties might threaten the safety of either the citizens or the public infrastructure. Identified trees are trimmed or removed.

The City may expand the program to work with gardening centers, Master Gardeners, and the Extension Service to develop a continuing program to assist the public with preventing storm damage through the proper use of vegetation and trimming of dangerous limbs.

1. **Goal(s) Addressed** = 1-2.
2. **Cost of Measure** = \$134,000 annually (approx)
3. **Funding Source and Situation** = Funding is obtained through local budgets.
4. **Lead Agency(ies)/Organization(s)** = Development Services, Parks & Recreation, Puget Sound Energy
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide (Esp. Eastern PC and Peninsula Region).
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: HMPT 6

Essential Facilities: Auxiliary Power

Hazards: All

The City will work with facility owners to ensure backup generators are installed in all essential facilities. This includes not only ensuring city essential services, but working with schools and churches that provide emergency shelter to determine the need for backup power generation capability during and after a disaster.

Ensuring sustainment of power for the city's essential functions will aid in response and recovery operations, thereby reducing the impact to life and property caused by disasters.

The City will use the list of facilities in Section 6 of this Plan for evaluation of essential services. Once the need is identified, the City will seek to provide needed generators.

1. **Goal(s) Addressed** = 1-2
2. **Cost of Measure** = \$75,000-150,000 per generator.
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = City Community Services Department, HMPT
5. **Timeline** = 3 years
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = Life of unit
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 7

Slope Stabilization

Hazards: EQ, FI, LS

The City will install rock walls to help stabilize slope and prevent debris from covering roadway at the following locations:

- Bridgeport and Chambers Land
- Cirque and 67th
- Lakewood Drive

This will help to reduce damage to public infrastructure during weather and seismic events and will help to ensure that critical lifelines stay open to ensure successful response and recovery operations.

In 2001, through a combination of local budgets and federal grants, the City repaired Chambers Creek Road to prevent future sliding. The cost of this project was approximately \$1.5 million.

1. **Goal(s) Addressed** = 1-2,4,6
2. **Cost of Measure** = \$1,000,000
3. **Funding Source and Situation** = City budget.
4. **Lead Agency(ies)/Organization(s)** = City Public Works
5. **Timeline** = 5 years
6. **Benefit** = City-Wide
7. **Life of Measure** = Life of installation.
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 8

Emergency Vehicle Access

Hazards: All

The City has a number of street ends that can be made into through streets. In some cases this lack of connection significantly increase emergency vehicle response times and limits the ability to access areas if existing accesses are block by fire, congestion or debris.

Increasing response times and reducing access limitations will result in first responders being able to more effectively limit the impact to life and property caused by disasters. This will also allow for more rapid damage assessment. Working with the Police Department and the Fire District, the City’s Public Works Department has identified and prioritized these connections.

The City has already completed several of these mitigation projects but more remain. Below is a listing of completed projects with the attached cost, followed by a listing of remaining projects with estimated costs.

Completed:

• Drexler Drive	\$1,000,000
• Alameda	\$ 230,000
• Morrison Road	\$ 75,000
Total	<u>\$1,305,000</u>

Planned:

• Alameda Extension (Cirque to 67 th)	\$ 800,000
• 37 th Street	\$ 800,000
• 37 th Street	\$ 800,000
Total	<u>\$2,400,000</u>

1. **Goal(s) Addressed** = 1-4
2. **Cost of Measure** = Planned: \$2,400,000. Completed: \$1,305,000.
3. **Funding Source and Situation** = Funding could be obtained through local budgets.
4. **Lead Agency(ies)/Organization(s)** = UP Public Works, UP Police, and Fire District
5. **Timeline** = 6 years
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: HMPT 9

Shelter Development: Equipment

Hazards: All

Following the City/Fire District joint 2005 annual exercise, the jurisdictions discovered a need to develop a more extensive shelter management and support system. In 2006 the City, the Fire District, and the Mt. Rainier Chapter of the Red Cross conducted shelter management training that proved successful in assisting residents in an apartment fire.

A robust shelter management system will allow the Fire District and the City to help reduce the impacts of disasters on its citizens through comprehensive and efficient emergency mass care and housing.

The City will implement its plans to develop equipment caches for shelter management. The City and Fire District will continue to find and develop designated shelter sites, including consideration of backup generators.

Equipment:

• Emergency Trailer	\$	4,395
• Cache for Trailer*	\$	3,000
• Office and Misc. Supplies	\$	500
• Red Cross Materials	\$	300
Total	\$	8,195

1. **Goal(s) Addressed** = 1
2. **Cost of Measure** = \$8,195 (Cost only includes shelter management equipment and does not address TBD generator needs)
3. **Funding Source and Situation** = Funding could be accomplished with local budgets or grants.
4. **Lead Agency(ies)/Organization(s)** = City Community Services Department, American Red Cross; Fire District
5. **Timeline** = Ongoing
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

* Cache includes: 50 Cots, 100 Blankets, Nurse's Kit, Shelter Mgt Kt, basic Kitchen Supplies, Coffee Maker, Tables and Chairs, Comfort Kits.

Priority: HMPT 10

Day Island Warning System and Evacuation Route

Hazards: FI, SS

Day Island and Sunset Beach are areas with limited access and many homes located within the 100-year flood plain. The practicality of a flood warning system should be assessed. Working with public safety and the Red Cross the City will establish evacuation route for residents of Day Island.

1. **Goal(s) Addressed** = 1,2,5
2. **Cost of Measure** = Minor
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = Public Safety, Red Cross, Development Services
5. **Timeline** = 2 years
6. **Benefit** = Day Island.
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal is likely to be somewhat controversial.

Priority: HMPT 11

Response: Emergency Resource Maintenance

Hazards: All

The City will maintain the resources needed to respond to emergency flood situations. This includes the following:

- Continue implementation of the University Place Comprehensive Emergency Management Plan so that the staff, equipment, communication tools, technology, materials, and contractors needed to respond to emergency events effectively are prepared.
- Continue to update emergency evaluation/hot spot areas.
- Continue to coordinate with other local, state, and federal agencies to review and update flood response efforts.

1. **Goal(s) Addressed** = 1-4
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide and specifically vulnerable populations.
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 12

Shelter Development: Training

Hazards: All

Following the City/Fire District joint 2005 annual exercise, the jurisdictions discovered a need to develop a more extensive shelter management and support system. In 2006 the City, the Fire District, and the Mt. Rainier Chapter of the Red Cross conducted shelter management training that proved successful in assisting residents in an apartment fire.

A robust shelter management system will allow the Fire District and the City to help reduce the impacts of disasters on its citizens through comprehensive and efficient emergency mass care and housing.

The City will continue to work with its municipal, non profit, and citizen to expand its cadre of trained shelter management personnel through joint trainings.

1. **Goal(s) Addressed** = 1
2. **Cost of Measure** = \$100 (Only cost is training materials.)
3. **Funding Source and Situation** = Funding could be accomplished with local budgets or grants.
4. **Lead Agency(ies)/Organization(s)** = City Community Services Department, American Red Cross
5. **Timeline** = Ongoing
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 13

Seismic Evaluation: Shelter Sites

Hazards: EQ

The Fire District will work with the City to ensure that seismic evaluations are performed on all shelters. The focus will initially be on those not meeting current code to determine their earthquake structural integrity. This requires preparation of information to allow budgeting for renovation of those facilities that are not up to current code or have structural deficiencies that have developed over the years.

1. **Goal(s) Addressed** = 1-2,6
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = Development Services, Fire District.
5. **Timeline** = 5 year
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = Life of undamaged/unaltered structure
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: Local City 1

Regulations: Building Code

Hazards: EQ, SS, W, Fl, LS

The City will continue to administer UPMC 14.05 the City's Building and Construction Code, which dictate the standards to which new construction must adhere. University Place has adopted the International Building Code (2003). This will reduce the likelihood of damage to new businesses and homes and associated property value losses to all hazards, most notably earthquake hazards.

1. **Goal(s) Addressed** = 1-4,6
2. **Cost of Measure** = 0
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants. Funding could be obtained through a federal or state mitigation grant.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide (Esp. Leach Creek Basin and Day Island)
7. **Life of Measure** = Perpetual (contingent upon FIRM updates and Comprehensive Plan review schedule).
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: Local City 2

Regulations: Geologically Hazardous Areas

Hazards: EQ, LS

The City will continue to administer UPMC 17.10 Geologically Hazardous Areas, which limit the opportunity for new homes and businesses to be constructed in geologically hazardous areas including steep slopes, landslide and erosion hazard areas, and seismic hazard areas. This will reduce likelihood of damage to new businesses and homes and associated property value losses caused by landslides, erosion, and seismic events.

1. **Goal(s) Addressed** = 1-4,6
2. **Cost of Measure** = 0
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants. Funding could be obtained through a federal or state mitigation grant.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide (Esp. Leach Creek Basin and Day Island)
7. **Life of Measure** = Perpetual (contingent upon FIRM updates and Comprehensive Plan review schedule).
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: Local City 3

Regulations: Flood Damage Reduction

Hazards: FI

The City will continue to administer UPMC 14.15 Flood Damage Prevention, UPMC 17.30 Flood Hazard Areas, and UPMC 17.35 Wetlands. Each of these are regulations, which limit the opportunity for new homes and businesses to be constructed in flood hazard areas through both development regulations and land use restrictions. This will reduce likelihood of flood damage to new businesses and homes and associated property value losses.

1. **Goal(s) Addressed** = 1-4,6
2. **Cost of Measure** = 0
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants. Funding could be obtained through a federal or state mitigation grant.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide (Esp. Leach Creek Basin and Day Island)
7. **Life of Measure** = Perpetual (contingent upon FIRM updates and Comprehensive Plan review schedule).
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: Local City 4

Regulations: Surface Water Reduction Control Standards

Hazards: FI

The City will enforce stormwater control standards for new development. This will help to reduce peak flow impacts commonly associated with increased impervious cover.

1. **Goal(s) Addressed** = 1-4.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = City's Surface Water Management Utility Fee, REET funds.
Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = 4 years
6. **Benefit** = City-Wide
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: Local City 5

Regulations: Natural Resource Protection

Hazards: All

The City will assess areas of wetland that should be protected from development in perpetuity to provide flood storage capacity. These wetlands and other natural flood-water storage areas should be purchased or otherwise held from development. This will be accomplished through the implementation, and enforcement of critical areas regulations related to wetlands and floodplains and site development regulations, and potentially property acquisitions.

1. **Goal(s) Addressed** = 1-2,4,
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = City's Surface Water Management Fund, Acquisitions by others, Local grants.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide Wide (Esp. Leach Creek).
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: Local City 6

Hazard Disclosure Statement

Hazards: All

The City will continue to require developments in potentially hazardous areas to provide notice on all recorded plans and plats titles to property to give prospective buyers property-specific hazard information warning them that identified hazards may limit the ability to develop or use the real property.

The Statement would affect the private real estate market and prospective buyers would learn to be wary of residential property in areas labeled as prone to natural hazards.

1. **Goal(s) Addressed** = 1-3,5
2. **Cost of Measure** = 0
3. **Funding Source and Situation** = NA.
4. **Lead Agency(ies)/Organization(s)** = City Development Services
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: Local City 7

City Hall Replacement

Hazards: EQ, W

The City Hall is not built to current code. The City is currently engaged in a Town Center rebuild project, and among the individual projects included in this effort is a rebuild of City Hall. Government offices will, within 5 years, be located in this new building that will be built to current code.

1. **Goal(s) Addressed** = 1-2
2. **Cost of Measure** = TBD (part of larger Town Center rebuild project)
3. **Funding Source and Situation** = Local Budgets.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = 5 years (underway)
6. **Benefit** = City-Wide
7. **Life of Measure** = Life of Building)
8. **Community Reaction** = The proposal is endorsed by the entire community.

Priority: Local City 8

Surface Water Reduction: Low Impact Developments

Hazards: FI

The City will research Low-Impact Development Standards, and will encourage Low-Impact Development through model projects. This will help to reduce peak flow impacts commonly associated with increased impervious cover.

1. **Goal(s) Addressed** = 1-2,4,6.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = City's Surface Water Management Fund, REET funds. Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = Long-term
6. **Benefit** = City-Wide
7. **Life of Measure** = Pilot (TBD)
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 1

Pierce County Neighborhood Emergency Team (PC NET)

Hazards: All

University Place will continue to support Pierce County's PC NET program in the City. PC NET is a neighborhood-oriented approach to emergency preparedness. Based on the belief that the most effective way to protect neighborhoods and to prepare for a major disaster must be locally based, it organizes neighborhoods into a variety of disaster response teams, each with a one-page checklist outlining their tasks. No special skills or equipment are needed and only a minimal time commitment is required. Individuals are trained to mutually assist each other to render aid, save lives and protect property. It reinforces 72 hours individual preparedness.

1. **Goal(s) Addressed** = 1-5
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = Pierce County Emergency Management
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 2

Public Education: All Hazards

Hazards: All

The City will continue to work with the County, and work independently, to develop and deliver public education campaigns many times throughout the year to audiences ranging from preschoolers to senior citizens, on topics from appropriate use of 911 to awareness of and preparedness for the natural hazards that affect the region. In general these programs focus on preparing citizens to prepare for and respond to disasters. Such programs are critical to reminding the public of the natural hazards in University Place and the region, and of the necessity of having on hand the supplies and materials to survive independently for a minimum of 72 hours. These programs will be continued and be expanded upon.

1. **Goal(s) Addressed** = 1-5.
2. **Cost of Measure** = Varies
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants. Funding could be obtained through a federal or state mitigation grant.
4. **Lead Jurisdiction(s)** = City, Fire District
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 3

Public Education: Post-Disaster, All Hazards

Hazards: All

The City will expand on its current public education campaigns to develop post-disaster public education campaigns. These campaigns will speak specifically to the previously occurring disaster, and will focus on at-risk and affected areas. This campaign will work in conjunction with the FEMA post-disaster public education efforts to ensure that local needs and issues are addressed. This will ensure that the public has an understanding of the resources available and the process for utilizing those resources. The campaign will be a coordinated effort with the Fire District and the County and will be an element of the recovery plan.

1. **Goal(s) Addressed** = 1-5
2. **Cost of Measure** = Varies
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = City, Fire District
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 4

Public Education: Hazard Insurance Information

Hazards: All (Natural)

The City will partner with the WA Office of the Insurance Commissioner (OIC) to help increase public awareness of natural hazard insurance options and the benefits of carrying various hazard insurance. This will entail dissemination of an FAQ list regarding hazard insurance topics including property tax relief following a disaster.

1. **Goal(s) Addressed** = 1-3,5
2. **Cost of Measure** = Minor
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = HMPT, Insurance Industry, PC DEM.
5. **Timeline** = 1-2
6. **Benefit** = City-Wide
7. **Life of Measure** = Pilot (perpetual)
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 5

Pre-Disaster Business Mitigation Loan Program

Hazards: All

The City will pursue a program of disseminating public information concerning the SBA Pre-Disaster Mitigation Loan Program to relevant groups. The goal is to make low-interest, fixed-rate loans available to small businesses for the purpose of implementing mitigation measures. This is a pilot program, supporting FEMA's Pre-Disaster Mitigation Program. SBA's Pre-Disaster Mitigation Program is available to businesses whose proposed mitigation measure conforms to the priorities and goals of the mitigation plan for the community, as defined by FEMA, in which the business is located.

1. **Goal(s) Addressed** = 1-3,5
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = SBA loan program
4. **Lead Agency(ies)/Organization(s)** = Economic Development , SBA; PC DEM; University Place Chamber of Commerce;
5. **Timeline** = 5 year
6. **Benefit** = City-Wide (business)
7. **Life of Measure** = Pilot (TBD)
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 6

Earthquake Home Retrofit Program

Hazards: EQ

University Place will continue to educate its property owners building contractors, and real property partners on methods to retrofit homes to mitigate damage incase of an earthquake. The City should encourage the insurance industry to distribute home retrofit information to owners/occupants of pre-1970 University Place homes, especially when homeowners are seeking to obtain earthquake insurance. This will reduce the total amount of uninsured damages due to earthquakes.

1. **Goal(s) Addressed** = 1-2,5
2. **Cost of Measure** = Minor
3. **Funding Source and Situation** = TBD
4. **Lead Agency(ies)/Organization(s)** = Development Services, City of Seattle
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide (residential)
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Fire District #3 (University Place) Mitigation Strategy

Priority: MH-Startup- 2

Plan Maintenance

Hazards: All

The Fire District will adopt those processes outlined in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = 1-6
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = UP Administration
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: MH-HMF- 2

Pierce County Hazard Mitigation Forum

Hazards: All

The Fire District will work in conjunction with the County to establish the Pierce County Hazard Mitigation Forum (HMF). The Forum will function as a means of coordinating mitigation planning efforts among all jurisdictions within the County that have completed a mitigation plan. This will ensure efficient use of resources and a more cooperative approach to making a disaster resistant county. The HMF will meet annually, every October. This is addressed in the Plan Maintenance Section of this Plan.

1. **Goal(s) Addressed** = 1-6.
2. **Cost of Measure** = Minor
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Jurisdiction(s)** = PC DEM; UP Administration).
5. **Timeline** = Short-term
6. **Benefit** = Regional
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 14

Emergency Vehicle Access

Hazards: All

The City has a number of street ends that can be made into through streets. In some cases this lack of connection significantly increase emergency vehicle response times and limits the ability to access areas if existing accesses are block by fire, congestion or debris. Increasing response times and reducing access limitations will result in first responders being able to more effectively limit the impact to life and property caused by disasters. The Fire District and the City’s Public Works and Police Departments have identified and prioritized these connections. While the City has the lead in project funding and execution, the Fire District co-leads in its design and application.

The City has already completed several of these mitigation projects but more remain. Below is a listing of completed projects with the attached cost, followed by a listing of remaining projects with estimated costs.

Completed:

• Drexler Drive	\$1,000,000
• Alameda	\$ 230,000
• Morrison Road	\$ 75,000
Total	<u>\$1,305,000</u>

Planned

• Alameda Extension (Cirque to 67 th)	\$ 800,000
• 37 th Street	\$ 800,000
• 37 th Street	\$ 800,000
Total	<u>\$2,400,000</u>

1. **Goal(s) Addressed** = 1-4
2. **Cost of Measure** = Planned: \$2,400,000. Completed: \$1,305,000.
3. **Funding Source and Situation** = Funding could be obtained through local budgets.
4. **Lead Agency(ies)/Organization(s)** = UP Public Works, UP Police, and Fire District
5. **Timeline** = 6 years
6. **Benefit** = City-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: HMPT 15

Seismic Evaluation: District Facilities and Shelters

Hazards: EQ

The Fire District will conduct seismic evaluations its facilities and will implement all necessary structural retrofit measures resulting from the evaluation. This requires preparation of information to allow budgeting for renovation of those facilities that are not up to current code or have structural deficiencies that have developed over the years.

The Emergency Services Center/EOC has been constructed to meet current code and is unlikely to require a retrofit. For Station 32, see the measure under the Local Fire category of this section. The Fire District will work with the City to ensure that seismic evaluations are performed on all shelters as well. The focus will initially be on those not meeting current code to determine their earthquake structural integrity.

1. **Goal(s) Addressed** = 1-2,6
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = Fire District, UP Community Development
5. **Timeline** = 5 year
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = Life of undamaged/unaltered structure
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 16

Response: Emergency Resource Maintenance

Hazards: All

The City will maintain the resources needed to respond to emergency flood situations. This includes the following:

- Continue implementation of the University Place Comprehensive Emergency Management Plan so that the staff, equipment, communication tools, technology, materials, and contractors needed to respond to emergency events effectively are prepared.
- Continue to update emergency evaluation/hot spot areas.
- Continue to coordinate with other local, state, and federal agencies to review and update flood response efforts.

1. **Goal(s) Addressed** = 1-4
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = Development Services
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide and specifically vulnerable populations.
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 17

Seismic Evaluation: Water/Hydrant System

Hazards: EQ

The Fire District will promote a seismic evaluation of the water system and in particular the hydrant system, to ensure provision of firefighting service. Continuity of this infrastructure is essential at all times, but in particular following an earthquake when it is more prone to be damaged and the number of fires due to the shaking will be greatest.

The Fire District does not own this system and will have to work with Tacoma Public Utilities to complete the assessment and implement any necessary seismic mitigation measures

1. **Goal(s) Addressed** = 1-2,6
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = Tacoma Public Utilities, Fire District.
5. **Timeline** = 5 year
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = Life of undamaged/unaltered structure
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 18

Hazardous Materials Identification

Hazards: All

The Fire District will identify hazardous material in its coverage area and maintain a catalogue of its location and quantity. The District will promote any measures necessary to secure these materials and their stability during disasters. This catalogue will provide the District with pre-hazard documentation of where subsequent damages could occur due to disaster-induced spills. This will be done in coordination with the Local Emergency Planning Committee (LEPC)

1. **Goal(s) Addressed** = 1, 2, 4.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = Fire District.
5. **Timeline** = Short-term
6. **Benefit** = Fire District-Wide
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 19

Shelter Development: Equipment and Training

Hazards: All

Following the City/Fire District joint 2005 annual exercise, the jurisdictions discovered a need to develop a more extensive shelter management and support system. In 2006 the City, the Fire District, and the Mt. Rainier Chapter of the Red Cross conducted shelter management training that proved successful in assisting residents in an apartment fire.

A robust shelter management system will allow the Fire District and the City to help reduce the impacts of disasters on its citizens through comprehensive and efficient emergency mass care and housing.

The City has taken responsibility to implement plans to develop equipment caches for shelter management. The City and Fire District will continue to find and develop designated shelter sites, including consideration of backup generators.

The Fire District will continue to work with its municipal, non profit, and citizen to expand its cadre of trained shelter management personnel through joint trainings. The City and Fire District will continue to find and develop designated shelter sites, including consideration of backup generators.

Equipment:

• Emergency Trailer	\$	4,395
• Cache for Trailer*	\$	3,000
• Office and Misc. Supplies	\$	500
• Red Cross Materials	\$	300
Total	\$	<u>8,195</u>

1. **Goal(s) Addressed** = 1
2. **Cost of Measure** = \$8,195 (Cost only includes shelter management equipment and does not address TBD generator needs)
3. **Funding Source and Situation** = Funding could be accomplished with local budgets or grants.
4. **Lead Agency(ies)/Organization(s)** = City Community Services Department, American Red Cross; Fire District
5. **Timeline** = Ongoing
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

* Cache includes: 50 Cots, 100 Blankets, Nurse's Kit, Shelter Mgt Kt, basic Kitchen Supplies, Coffee Maker, Tables and Chairs, Comfort Kits.

Priority: HMPT 20

Essential Facilities: Auxiliary Power (Public Safety Building and Shelter Sites)

Hazards: All

The Fire District will work with facility owners to ensure backup generators are installed in all facilities essential to District operations. This includes not only ensuring city essential services, but working with schools and churches that provide emergency shelter to determine the need for backup power generation capability during and after a disaster.

Ensuring sustainment of power for the District's essential functions will aid in response and recovery operations, thereby reducing the impact to life and property caused by disasters.

The District will work with its partners for evaluation of essential services. Once the need is identified, the District will seek to provide needed generators.

1. **Goal(s) Addressed** = 1-2
2. **Cost of Measure** = \$25,000-50,000 per generator.
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = Community Services Department, HMPT
5. **Timeline** = 3 years
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = Life of unit
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 21

Assessment: Essential Facilities Access Limitation

Hazards: All

The Fire District will evaluate all facilities essential to emergency operations located within the district to determine which require access limitations for security purposes. The District will take the necessary steps to provide access limitation security to those facilities. This will occur in accordance with the FEMA 426 planning recommendations.

1. **Goal(s) Addressed** = 1, 2.
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = Fire District, City, County
5. **Timeline** = Short-term
6. **Benefit** = Facility Specific, Fire District-Wide
7. **Life of Measure** = TBD
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 22

Pierce County Non-Structural Retrofit Program

Hazards: EQ

The Fire District will support the City in its effort to implement the PC Non-Structural Retrofit Program in facilities within University Place. This non-structural retrofit program focuses on childcare centers and senior centers and is successful because private and public sector partners provide labor and hardware, and because the retrofits not only provide real mitigation, they are a great teaching opportunity for parents, staff and other occupants of the building(s). The childcare center program is highly cost effective, when coupled with public education and media opportunities.

Non-structural seismic retrofitting of childcare centers and senior centers will serve to limit damage to property and increase the safety of the care/living centers during seismic events.

University Place has a total of 8 childcare facilities and 4 senior living centers (1 nursing home, 2 assisted living facilities, and 1 critical care facility). The Fire District will work with the City and County to provide non-structural retrofits of these facilities.

1. **Goal(s) Addressed** = 1-3,5.
2. **Cost of Measure** = Approx \$500/facility. 12 facilities= \$6,000.
3. **Funding Source and Situation** = Currently funded through DHS Citizen Corps Innovative Grant and various local private and non-profit partnerships. Funding could be obtained through local budgets or grants.
4. **Lead Agency(ies)/Organization(s)** = City of University Place; Fire District; PC DEM; American Red Cross, other volunteer agencies.
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Life of non-structural action
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: HMPT 23

Day Island Warning System and Evacuation Route

Hazards: FI, SS

Day Island and Sunset Beach are areas with limited access and many homes located within the 100-year flood plain. The practicality of a flood warning system should be assessed. The Fire District will work with the City and Red Cross to establish evacuation route for residents of Day Island.

1. **Goal(s) Addressed** = 1,2,5
2. **Cost of Measure** = Minor
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = Fire District, Red Cross, Community Services;
Development Services
5. **Timeline** = 2 years
6. **Benefit** = Day Island.
7. **Life of Measure** = Perpetual
8. **Community Reaction** = The proposal is likely to be somewhat controversial.

Priority: HMPT 24

Underground Utilities

Hazards: EQ, SS, W

The Fire District will support the City in placing all utilities (i.e., power lines) underground. This will limit the potential damage to infrastructure as well as damage the infrastructure could cause to life and property. Where not economically feasible for the utility provider, homeowners could have the option to have their utilities placed underground through an individualized rate structure.

University Place has already placed utilities underground on many of the major arterials. Public Works has one stretch of arterial already planned:

• Drexler Drive	1 mile	\$1,500,000
Total		\$1,500,000

Two others have been identified but are not planned:

• Bridgeport (from Cirque to city limits)	1.5 miles	\$2,250,000
• 67 th	3 miles	\$4,500,000
Total		\$6,750,000

The City will incorporate the two identified arterials into the plan and implement per the plan's timeline.

1. **Goal(s) Addressed** = 1-3
2. **Cost of Measure** = Planned only: \$1,500,000. Identified only: \$6,750,000
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = Local utility providers, City Development Services.
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal would be somewhat controversial.

Priority: Local Fire 1

Seismic Retrofit: District Facilities (Station 32)

Hazards: EQ

The Fire District will conduct seismic retrofit of its facilities not meeting current code. This requires preparation of information to allow budgeting for renovation of those facilities that are not up to current code or have structural deficiencies that have developed over the years.

A cursory evaluation and estimate of Station 32 resulted in several projects to secure the facility ranging from reconstructing the sprinkler system to rebuilding the bay doors. The total estimate for this project is \$355,000.

1. **Goal(s) Addressed** = 1-2,6
2. **Cost of Measure** = \$355,000
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Agency(ies)/Organization(s)** = Fire District.
5. **Timeline** = 5 year
6. **Benefit** = Facility Specific, City-Wide Services
7. **Life of Measure** = Life of undamaged/unaltered structure
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: Local Fire 2

Non-Structural Retrofitting for Remodel Projects

Hazards: EQ

Nonstructural seismic retrofitting of offices and other city workspaces will serve to limit damage to property and increase the safety of the work environment during seismic events.

The District will conduct nonstructural seismic retrofitting of district facilities and equipment.

1. **Goal(s) Addressed** = 1-2
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = Fire District
5. **Timeline** = 5 year
6. **Benefit** = City-Wide
7. **Life of Measure** = Life of nonstructural action.
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: Local Fire 3

Vulnerable Population Assessment

Hazards: All

The Fire District will work with Pierce County and the City to identify locations of vulnerable populations, i.e., elderly, disabled, and other populations. EPFR will maintain a list of residents with special needs so that these vulnerabilities may be addressed and potentially reduced in disaster situations.

1. **Goal(s) Addressed** = Protect Life and Property; Ensure Emergency Services.
2. **Cost of Measure** = Varies
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = PC DEM; Fire District
5. **Timeline** = Ongoing
6. **Benefit** = Fire District-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 7

Pierce County Neighborhood Emergency Team (PC NET)

Hazards: All

University Place will continue to support Pierce County's PC NET program in the City. PC NET is a neighborhood-oriented approach to emergency preparedness. Based on the belief that the most effective way to protect neighborhoods and to prepare for a major disaster must be locally based, it organizes neighborhoods into a variety of disaster response teams, each with a one-page checklist outlining their tasks. No special skills or equipment are needed and only a minimal time commitment is required. Individuals are trained to mutually assist each other to render aid, save lives and protect property. It reinforces 72 hours individual preparedness.

1. **Goal(s) Addressed** = 1-5
2. **Cost of Measure** = TBD
3. **Funding Source and Situation** = Funding could be obtained through local budget.
4. **Lead Agency(ies)/Organization(s)** = Pierce County Emergency Management
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 8

Public Education: All Hazards

Hazards: All

The Fire District will continue to work with City and with other regional partners to develop and deliver public education campaigns many times throughout the year. These campaigns are directed at audiences ranging from preschoolers to senior citizens, and include topics such as appropriate use of 911 and awareness of and preparedness for the natural hazards that affect the region. In general these programs focus on preparing citizens to prepare for and respond to disasters. Such programs are critical to reminding the public of the natural hazards in University Place and the region, and of the necessity of having on hand the supplies and materials to survive independently for a minimum of 72 hours. These programs will be continued and be expanded upon.

The Fire District will target preparedness campaigns at those areas that are most vulnerable to the events in Section 4 of this Plan and will target those audiences it deems most vulnerable to hazards and their impacts.

1. **Goal(s) Addressed** = Protect Life and Property; Promote A Sustainable Economy; Increase Public Preparedness.
2. **Cost of Measure** = Varies
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants. Funding could be obtained through a federal or state mitigation grant.
4. **Lead Jurisdiction(s)** = Fire District, City
5. **Timeline** = Ongoing
6. **Benefit** = City-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Priority: PE 9

Public Education: Post-Disaster, All Hazards

Hazards: All

The Fire District will expand on its current public education campaigns to develop post-disaster public education campaigns. These campaigns will speak specifically to the previously occurring disaster, and will focus on at-risk and affected areas. This campaign will work in conjunction with the FEMA post-disaster public education efforts to ensure that local needs and issues are addressed. This will ensure that the public has an understanding of the resources available and the process for utilizing those resources. The campaign will be a coordinated effort with the Fire District and the County and will be an element of the recovery plan.

1. **Goal(s) Addressed** = 1, 5
2. **Cost of Measure** = Varies
3. **Funding Source and Situation** = Funding could be obtained through local budget or grants.
4. **Lead Jurisdiction(s)** = Fire District, City.
5. **Timeline** = Ongoing
6. **Benefit** = County-Wide
7. **Life of Measure** = Varies
8. **Community Reaction** = The proposal is likely to be endorsed by the entire community.

Endnotes

¹ The mitigation plans for Clackamas County, OR, Salem, OR, the Town of Wendell, NC, and Riverside Fire Protection District #14, WA, and Pierce County, WA provided examples and models for the development of the eight Pierce County mitigation measure criteria. The Pierce County mitigation measure criteria are a hybrid of these, where sometimes only part of another jurisdiction's template criteria was used, and where other times the entire criteria was used.

² HMF = Hazard Mitigation Forum; HMPT = Hazard Mitigation Planning Team; PE = Public Education. These groups are described further in the Plan Implementation Section. They represent the levels and mechanisms of implementation.

³ HMF = Hazard Mitigation Forum; HMPT = Hazard Mitigation Planning Team; PE = Public Education. These groups are described further in the Plan Implementation Section. They represent the levels and mechanisms of implementation.

Section 6

Plan Maintenance Procedures Requirements

Monitoring, Evaluating, and Updating the Plan

Requirement §201.6(c)(4)(i): *[The plan maintenance process shall include a section describing the] method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.*

- Does the plan describe the method and schedule for **monitoring** the plan?
- Does the plan identify the party responsible for monitoring the plan and a schedule for meetings.
- Does the plan describe a schedule for updating the plan within the five-year cycle?

Implementation Through Existing Programs

Requirement §201.6(c)(4) (ii): *[The plan shall include a] process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate...*

- Does the plan identify other local planning mechanisms available for incorporating the requirements of the mitigation plan?
- Does the plan include a process by which the local government will incorporate the requirements in other plans, when appropriate?
- Does the plan include a timeframe or schedule for incorporating the plan into other planning mechanisms?

Continued Public Involvement

Requirement §201.6(c)(4) (iii): *[The plan maintenance process shall include a] discussion on how the community will continue public participation in the plan maintenance process.*

- Does the plan explain how continued public participation will be obtained?

**CITY OF UNIVERSITY PLACE/FIRE DISTRICT 03
PLAN MAINTENANCE PROCEDURES**

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The planning process begun in 2004 and undertaken over the past year is just the foundation of an ongoing process to break the disaster cycle by planning for a disaster resistant City and Fire District. This section acts as a guide for implementing the hazard mitigation strategy, detailing the formal process that will guarantee the Plan remains an active and relevant document. The Plan Maintenance Procedures describe: the method and schedule of monitoring, evaluating, and updating the Plan within a five-year cycle; how the City and the Fire District intend to incorporate the outlined mitigation strategies into their existing mechanisms; and a process to integrate ongoing public participation throughout the plan maintenance.

Maintenance Strategy

The University Place/Fire District 03 Natural Hazard Mitigation Plan is a joint plan, conceived in collaboration between the City of University Place and the University Place Fire District 03. In doing so the decision was made to continue the collaboration forward throughout the existence of this plan in its continued maintenance. This is relatively simple since the two jurisdictions are almost congruent. It was initiated together, developed together and will continue to be updated through joint consultation. This consultation will take place through the Hazard Mitigation Planning Team.

The maintenance strategy developed by the Hazard Mitigation Planning Team for implementation, monitoring, and plan evaluation provides a structure that encourages collaboration, information exchange, and innovation. Through a three-tiered implementation method, the two jurisdictions will provide a series of coordinated policies and programs aimed at reducing the effects of natural hazards on the City and the Fire District. This plan will serve as a non-binding guide for those policies, programs and regulations associated with natural hazards.

The Hazard Mitigation Planning Team (HMPT) will work in conjunction with both City departments and Fire District 03 to ensure that the strategy outlined in the Mitigation Strategy Section is employed to all extents possible. The Assistant City Manager and the Fire District Chief of Operations will Co-Chair the HMPT and will therefore be responsible for ensuring that the monitoring, evaluation, and update process described below is implemented.

Implementation

Plan Implementation through Existing Programs

Both Fire District 03 and the City of University Place will implement its mitigation strategy over the next five years primarily through their normal budget processes and varying grant application processes. All programs and entities identified in the Capability Identification will serve as the implementing mechanisms within those processes. The City Finance Division develops the University Place Biennial Budget. Within six months of the formal adoption of the City of University Place/Fire District 03 Mitigation Plan, the City will incorporate the goals and measures into the process of developing the next biennial budget.

In contrast, the Fire District operates on an annual budget, developed by the Board of Commissioners. Within six months of the formal adoption of the City of University Place/Fire District 03 Mitigation Plan, the Fire District will incorporate the goals and measures into the process of developing their next annual budget.

This process must, however, be flexible to adapt to the changing vulnerabilities that the two jurisdictions will face. Changing demographics, updated best available science (BAS), the possible future incorporation of social and technological hazards, as well as City and District solvency will all affect the implementation of, and updates to, the Plan.

For all identified mitigation measures that do not deal directly with land use and specific building improvements, the Hazard Mitigation Planning Team will seek to coordinate with those departments in the City and with the Fire District to ensure that progress is being made either on their implementation, or their revision.

The two jurisdictions have a variety of regulatory mechanisms that can be used to achieve the overall mitigation strategy. These are identified in detail in the Capability Identification Section. The HMPT will work in coordination with those departments identified in the Capability Identification, the Mitigation Strategy, and the Critical Facilities Sections to initiate the strategies outlined in those sections. University Place also has a capital improvement program through which specific measures regarding facilities may be achieved. For example, any facility-related capital improvement measures must be implemented through the Capital Facilities Plan and the various departments involved through the normal budget schedule.

The implementation of any measures related to an individual facility will ultimately be initiated by the party responsible for the structure, its maintenance and improvement. This Plan serves as a guide for the prioritization of said improvements. The Hazard Mitigation Planning Team will work in conjunction with those departments and businesses to ensure that the measures described in the Critical Facilities Section are employed to all extents possible.

Within the City boundaries, responsibility and authority for land use control, building code authority, and capital improvements projects to guide and control development resides with the City of University Place. Land use and related topics will continue to be implemented through collaboration with Development Services and its updating of the City of University Place Comprehensive Plan. The Critical Areas Ordinance will be adjusted as necessary to adapt to new realities as better “Best Available Science” becomes available. The current update (December, 2004) attempts to do just that. For those small areas located within the boundaries of the Fire District, but outside the City, such responsibility lies with Pierce County and is outside the control of the Fire District.

Other measures will be implemented through collaboration with the identified departments and through the mechanisms and funding sources identified in the Capability Identification Section.

This strategy must be adaptable to change while being consistent in its delivery. It must also provide a means for tracking and evaluating implementation so that benefit-cost ratios can be

maximized. It will be the duty of the Assistant City Manager (HMPT Co-Chair) to verify that mitigation plans, projects, and programs are addressed within the City Departments and implemented given City budget constraints. It will be the duty of the Fire District Chief of Operations (HMPT Co-Chair) to report to the HMPT the progress the Fire District has made in addressing the projects and programs that were its responsibility. These two positions will convene and report to the HMPT at a minimum of twice a year, in June and November on progress in fulfilling the aims of the Plan. A follow up report by the HMPT will be given to the Mayor, City Council, City Manager, District Fire Chief and the District's Board of Commissioners.

The implementation strategy for this plan is a four-tiered system that emphasizes local needs and vulnerabilities while addressing multi-jurisdictional policies and programs. The first tier is implementation through individual citizen level. This includes both existing and projected public education programs throughout the jurisdictions' boundaries targeted to both individual hazards and more generic preparedness (for example, at the neighborhood level through PC NET). The second is the local jurisdiction level—the city of University Place or Fire District #3. Measures are solely the responsibility of the local jurisdiction, for example a the critical area regulations are solely the responsibility of the city. The third tier is the Hazard Mitigation Planning Team (HMPT), a planning area wide mechanism for implementation of more multi-jurisdictional or collaborative measures, for example shelter development and training. This tier involves the agencies involved in this plan and provides a venue for engaging with other local partners. The fourth tier is an external and multi-jurisdictional mechanism to coordinate larger mitigation programs, policies and projects, the Hazard Mitigation Forum (HMF).

This system ensures that implementation speaks to unique vulnerabilities at the most local level, allows for coordination among and between levels, and promotes collaboration and innovation. Further, it provides a structured system of monitoring implementation. Finally, it is a system that can adapt to the changing vulnerabilities of the County, the region, and the times. These four levels and their methods of implementation and collaboration are described below.

Public Education Programs

At the individual citizen level, public education programs provide the City with a localized mechanism for implementation. Depending on the varying vulnerabilities of different neighborhoods public education programs will be tailored to fit the neighborhoods' needs. This tailoring need not just cover the hazards listed in this plan. An all hazard approach to education means that if one small section of homes is threatened by a hazard not covered in the Mitigation Plan, it does not preclude those homes from receiving educational and training materials related to that hazard. For example, homes located along Puget Sound and the railroad tracks have different needs than do those located near the Fircrest Golf Course.

Public education programs are also a means for directly involving the public in mitigation policy development. These programs will incorporate information not just on disaster preparedness and 72 hour self sufficiency. Rather they will incorporate site, or neighborhood, specific information regarding local hazards, the community's ability to respond and what both they and the wider

community can do to lessen the effects of hazard specific emergencies. Citizens will have a better understanding of, and ability to contribute over time to the continuing dialogue on which mitigation measures should be adopted within the jurisdictions' boundaries.

In a related example, in University Place, PC DEM develops neighborhood emergency teams through the PC NET program to assist citizens in preparing for, and responding to, emergencies and disasters. PC NETs provide a coordinated group of neighborhoods through which individuals can implement both home and neighborhood level mitigation measures.

Local Jurisdiction

This second tier provides a broader group through which mitigation measures may be implemented. This tier is generally targeted at a jurisdiction's specific capabilities for actions that require little collaboration and are limited both in impact and implementation to the jurisdiction.

For example, municipalities have land use authority and therefore much of the measures relating to this regulatory capability will be found in this section. Land use recommendations made at this level that address hazards will speak to local characteristics and vulnerabilities. Fire Districts however, are special purpose districts lacking much of the regulatory authorities of cities. This section for special purpose district speaks to items directly under the districts purview that impact district operations in a way that would mitigate impact of hazards on the community it serves.

Hazard Mitigation Planning Team (HMPT)

The HMPT, as a multi-jurisdictional and departmental body, will be responsible for determining the direction of mitigation policy recommendations and will be responsible for reviewing the performance measures and Plan implementation. The HMPT includes representatives from Fire District 03 and University Place departments involved in emergency response and preparedness and whose departments will be responsible for many of the implementation activities. During the development of the Mitigation Plan, meetings of the HMPT occurred at least monthly, and in some cases more often. Annual review of the plan will occur in June, beginning in 2006, to coincide with the normal budgeting processes and provide an ample time period for review and adoption of any necessary changes to the implementation schedule. The HMPT will be responsible for monitoring, evaluating, and updating the Plan (discussed below). The HMPT will ultimately provide a mechanism for coordination among those engaged in mitigation to ensure that a comprehensive and efficient approach be undertaken in the City's and the Fire District's mitigation efforts.

Hazard Mitigation Forum (HMF)

The Pierce County Hazard Mitigation Forum (PC HMF), under the auspices of the Pierce County Emergency Management is a multi-jurisdictional approach to hazard mitigation. It is comprised of representatives of all Pierce County jurisdictions that have undertaken mitigation planning efforts. Meeting annually in October, it will serve as a coordinating body for developing, evaluating and implementing projects of a multi-jurisdictional nature. Many mitigation projects are too large for an individual jurisdiction with limited resources to attempt on their own, or cross the boundaries of multiple jurisdictions. This Forum will focus on those projects that can best be undertaken on a wider scale.

In addition the Forum will create an opportunity for jurisdictions to share successes, investigate other mitigation strategies, and learn from others' experiences. This will allow the City and the Fire District to hear of and evaluate other strategies which might work for them and incorporate promising ones into revisions of this Plan.

After the two jurisdictions officially adopt the University Place/Fire District 03 Natural Hazard Mitigation Plan, the Hazard Mitigation Planning Team will work closely with Pierce County Hazard Mitigation Forum to develop natural hazard mitigation measures covering multiple jurisdictions into the County-Wide planning process. Many of the hazards that might affect the community, like earthquakes and windstorms, are more regional in nature and multi-jurisdictional projects or programs are the best way to mitigate them. While University Place is responsible for most infrastructures in the City, and the Fire District is responsible for their facilities and equipment, neither one has jurisdiction outside their respective boundaries. To influence mitigation measures outside the City and District that have a direct bearing on the future of their citizens they must make their needs on measures of significance known to the larger audience participating in the PC HMF. By working with the PC HMF, plans, programs, and regulations, relating to these larger scale problems will be addressed. Some of these may involve the development of larger infrastructure projects with a much longer time frame than those associated with many of their other mitigation projects.

Initial members of the Forum include: City of Bonney Lake, City of Sumner, City of Puyallup, City of Tacoma, City of University Place, East Pierce Fire and Rescue, Riverside Fire District, Bethel School District, Clover Park School District, Sumner School District, Puyallup Tribe of Indians, and Pierce County.

Plan Evaluation and Update

The Plan will be continually addressed as both the City and the Fire District seek to fulfill their goals. The Hazard Mitigation Planning Team has developed a method to ensure that regular review and update of the Plan occurs within a five year cycle. The University Place Hazard Mitigation Planning Team will conduct the regular reviews. The HMPT along with Pierce County Emergency Management will be responsible for contacting the relevant experts and

planners and organizing meetings. It is expected that updated information regarding hazard analysis and an understanding of the hazards affecting the City can be researched jointly with other cities and towns in the County as well as with the County itself. Updates resulting from this will be coordinated through the HMPT. The Plan will be reviewed annually commencing in June 2006, and the Hazard Mitigation Planning Team will be responsible for monitoring and evaluating the progress of the mitigation strategies. Furthermore, the City of University Place and Fire District 03 will attend the Pierce County Hazard Mitigation Forum (PCHMF) which will meet annually and of which University Place is currently a member.

During the review, the Hazard Mitigation Planning Team will review each goal, objective, and measure to determine their relevance to changing situations in the City and the District, as well as changes in State or Federal policy, and to ensure that they are addressing current and expected conditions. They, working with the Pierce County Department of Emergency Management, will also review the risk assessment and capability assessment sections to determine if the information should be updated or modified based on new information. Implementation of various mitigation measures will be reviewed, and status reports of each measure will include which implementation processes worked well, any difficulties encountered, how coordination efforts are proceeding, and which goals, objectives, and measures should be revised.

Additional reviews will be required following disaster events and will not substitute for the scheduled annual review. Within ninety days following a significant disaster or an emergency event impacting the City and the Fire District, the Assistant City Manager and the Fire District Chief of Operations will lead the Hazard Mitigation Planning Team in providing an assessment that captures any “success stories” and/or “lessons learned” for the purpose of continuing development of, or reprioritization of mitigation measures or goals within the Plan. The assessment will detail direct and indirect damages to critical facilities and the community’s infrastructure as well as estimated response and recovery costs. It will then determine if any new mitigation initiatives should be incorporated into the Plan to avoid similar losses in future events.

Following the assessment, the City and the Fire District will have three months to update and make changes to the Plan before submitting it to the Washington State EMD and FEMA Region X.

Continued Public Involvement

Both the City and the Fire District are dedicated to continued public involvement and education in review and updates of the Plan. The Hazard Mitigation Planning Team will seek public comment at such time the plan undergoes a formal update. The public will also have the opportunity to provide ongoing feedback about the Mitigation Plan. Copies of the Mitigation Plan will be available for review by the public at selected City government sites and the City will also provide a copy of the Plan to the University Place Library, a member of the Pierce County Library system. It will be posted on the Fire District’s website <http://www.piercefire.org/up/>, and <http://www.cityofup.com/EmergencyInformation/HazardMitigation.asp> the University Place website with a link to them from PCHMF Website. Those tasked with maintaining the plan will

post any proposed changes, comments on, and updates to the respective websites. These measures taken together will ensure that the HMPT will receive citizen input over time.

Both jurisdictions are also committed to public education. They will include public information campaigns throughout the year regarding hazard mitigation, preparedness, and recovery for the various hazards threatening the community. They will continue to sponsor community disaster resistance in educational materials and presentations as appropriate. These are reflected in many of the mitigation measures selected for the plan (see Section 5). This will be enhanced by continued utilization of the Pierce County Emergency Management staff for education programs including the PC Net program.

Beginning in 2007 public meetings will be held on a biennial basis, or more frequently when deemed necessary, to provide the public a forum for which it can express its concerns, opinions, or ideas about the mitigation plan. Each biennial public meeting will be publicized and attempts will be made to maintain public involvement through various public media outlets and the City's and Fire District's web pages.

APPENDIX A—PLAN UPDATES

City of University Place/Fire District 03 Hazard Mitigation Plan Updates

Adoption by City of University Place
Adoption by Fire District 03

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