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Land Use Policy

FINAL REPORT

WEST SACRAMENTO 200-YEAR FLOOD PROTECTION IN-LIEU FEE STUDY

Prepared for:

City of West Sacramento and the West Sacramento Flood Control Agency

Prepared by:

Economic & Planning Systems, Inc.

May 7, 2007

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Ordinance Effective: July 2, 2007

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[Note: This FINAL REPORT of the WEST SACRAMENTO 200-YEAR FLOOD PROTECTION IN-LIEU FEE STUDY FINAL REPORT has been prepared as a “redline strikeout” version reflecting the Statement of Errata, dated April 18, 2007, to the PUBLIC REVIEW DRAFT REPORT dated APRIL 11, 2007.]

STATEMENT OF ERRATA DATED APRIL 18, 2007
TO THE
PUBLIC REVIEW DRAFT REPORT OF THE
“WEST SACRAMENTO 200-YEAR FLOOD PROTECTION IN-LIEU FEE STUDY”
DATED APRIL 11, 2007

- Table 1 on Page 8 will be modified to reflect Exhibit A of Resolution No. 07-34 and will incorporate the revised footnotes explaining the land use designations.
- Paragraph 2 on Page 37 beginning with “The replacement of existing...” will be modified to read as follows:

The in-lieu fee will not apply to a new structure replacing a previously existing structure of similar type (e.g., single-family home replacing another single-family home) provided both of the following conditions apply:

 - The replacement structure does not increase the square footage of the structure by more than 15 percent; and
 - The building permit application for construction of the new structure is filed within 12 months of the date the previous structure was removed.
- The following language will be added to the Fee Study after the revised paragraph 2 (above) on page 38.

The in-lieu fee will not apply to a new structure if the building permit application for the structure was determined by the City to be complete before the effective date of this chapter. In addition, the in-lieu fee will not apply to a new structure that is an “accessory structure” and is not intended for use as a dwelling. The in-lieu fee will not apply to remodels or additions to existing structures.
- The paragraph that commences before the heading “REIMBURSEMENTS AND CREDITS” on page 39 and begins with “The In-Lieu Fee may be adjusted...” will be deleted from the In-Lieu Fee Study.
- The paragraph after the heading “ANNUAL INFLATION ADJUSTMENT” on page 41 that begins with “The In-Lieu Fee may be adjusted...” will be deleted from the In-Lieu Fee Study.

<p>CITY OF WEST SACRAMENTO IN-LIEU FLOOD PROTECTION FEES BY LAND USE</p>

Commencing January 1, 2009, the in-lieu fee shall be adjusted each January 1st to reflect inflationary costs. The fees shall be increased by the ratio that the *Engineering News Record's* Construction Cost Index (20 cities) for the most recent December bears to the December 2007 index.

Land Use [3]	Summary of Flood Protection In-Lieu Fees (2007\$)	
	Zone 1 [1]	Zone 2
	-----Per Dwelling Unit-----	
Residential		
Single Family [2]		
<1,100 sq. ft.	\$223	\$1,124
1,101 - 2,500 sq. ft.	\$365	\$1,840
>2,500 sq. ft.	\$507	\$2,555
Multifamily > 900 sq. ft. [4]	\$77	\$906
Multifamily < 900 sq. ft. [4]	\$115	\$1,359
	-----Per 1,000 Building Square Feet-----	
Commercial [3]		
Retail	\$465	\$2,338
Office	\$301	\$2,183
Industrial	\$111	\$1,048

"summary"

- [1] Zone 1 includes the Triangle Area and Pioneer Bluff east of South River Road (high ground) and Zone 2 is the rest of the City.
- [2] Gross building square feet.
- [3] Land Uses are defined as follows:
 - Single-Family— This designation provides for single-family homes and duplexes and similar uses.
 - Multifamily— This designation provides for multifamily units, triplex units, higher density housing, and similar uses.
 - Retail— This designation provides for light retail, including but not limited to eating and drinking establishments, grocery stores, general merchandise, and similar uses.
 - Office— This designation provides for professional and administrative offices, medical and dental clinics, laboratories, financial institutions, and similar uses.
 - Industrial— This designation provides for industrial parks, heavy retail, sales, service, wholesale commercial, warehouses, distribution centers, fuel storage, trucking terminals, railroad facilities, manufacturing, and similar uses.
 - Mixed Use— This designation provides for development projects that are a combination of the other Land Use classifications. Mixed uses development will be proportionately computed to the percentage of land in each land use category.
- [4] Varying the multifamily fee for two unit sizes was calculated by dividing the multifamily fee (\$1,359) by the average size of multifamily units (900 sq. ft.) and applying that amount (\$1.51 per sq. ft.) to a 600-sq.-ft. unit, which is reflective of the average size unit in the under-900-sq.-ft. category.

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I. EXECUTIVE SUMMARY

PURPOSE OF THE STUDY

Economic & Planning Systems, Inc., (EPS) has prepared this West Sacramento 200-Year Flood Protection In-Lieu Fee Study (Fee Study) on behalf of the City of West Sacramento and the West Sacramento Flood Control Agency (WSFCA). This study provides the basis for the 200-Year Flood Protection In-Lieu Fee (In-Lieu Fee) related to the improvement of levees surrounding the City of West Sacramento (City).

Before the issuance of a building permit, new development in West Sacramento must demonstrate that the proposed structure will have 200-year flood protection. New development can demonstrate that 200-year flood protection has been achieved through one of two ways. First, new development can construct flood management improvements, or other mitigation measures, beyond those set forth in Title 18 of the Municipal Code. Alternatively, new development will have an option of making a payment to the City of an in-lieu fee.

The purpose of this study is to determine a reasonable method for apportioning the cost of a portion of the local match for levee improvements allocated to future development across the City's land use categories and subcategories to derive a basis for a Flood Protection In-Lieu Fee (In-Lieu Fee).

AUTHORITY

The authority to require that new development must demonstrate that 200-year flood protection has been achieved for proposed structures, by either constructing flood management improvements or paying an in-lieu fee, is based on the following:

- The authority granted to cities under Art. XI, §7 of the California Constitution
- The authority granted to cities by the legislature of the State of California through Government Code Sections 65302, 65560, and 65800, which confer upon local government units authority to adopt regulations designed to promote the public health, safety and general welfare of its citizenry
- The authority provided by the National Flood Insurance Program, which has established regulations for local agencies to adopt in Part 60 of 44 CFR.
- The authority provided by Goal C, Policy 5 of the Public Facilities and Services Element of the West Sacramento General Plan, which provides that: "the City shall cooperate with other responsible agencies in ensuring that levees

surrounding the city are maintained and improved to provide a minimum of 200-year flood protection.”

- The authority provided by Title 18 of the West Sacramento Municipal Code, which pertains to the City’s floodplain management regulations.
- The authority provided by the proposed City Ordinance 07-11, enacting Chapter 15.50 related to flood management, which allows new development to 200-year flood protection through the construction of flood management improvements or payment of an in-lieu fee.

OVERVIEW

The City is encircled by waterways which could experience uncontrolled flood events. The Sacramento River borders the City to the North and East; the Deep Water Shipping Channel bisects the City, joining with the Sacramento Bypass and the Yolo Bypass, forming the Western Boundaries of the City. Until recently the City had been told that the levee system along these waterways met and exceeded the level of protection necessary to protect the City from at least a 200-year flood.¹

The Federal Emergency Management Agency (FEMA) is undertaking a major update of its Flood Insurance Rate Maps (FIRMs). As part of the update from paper to digital maps, FEMA is requiring that all floodplain management agencies certify that the levees shown on the FIRMs meet the 100-year standard using current evaluation criteria. Since the last review of the levees protecting the City of West Sacramento, the Army Corps of Engineers has adopted new criteria for evaluating levees.

Based on recently completed preliminary levee evaluation studies initiated by the WSFCA and the City, evidence exists that the levee system surrounding the City currently does not provide the minimum level (100-year) of flood protection, required by FEMA. A designation by FEMA of sub 100-year flood protection would impact the City in two ways.

- First, property owners in West Sacramento would be required to purchase mandatory flood insurance at higher rates than the current preferred rates.

¹ The definition of a flood event is typically calibrated to the 100-year flood. A 100-year flood is “the flood elevation that has a 1-percent chance of being equaled or exceeded each year.” The 100-year flood is sometimes referred to as the 1-percent flood, since a 1 percent chance exists of such a flood occurring in any year. Ten-year floods have a 10 percent chance of occurring in any given year; 50-year floods a 2 percent chance; 100-year, 1 percent; 200-year, 0.5 percent, 500-year, 0.2 percent; and 1000-year, 0.1 percent.

- Second, a sub 100-year flood protection designation would impact new development. If FEMA designates the City as an AE zone, finished habitable floor elevations would be required to be, at or above, the 100-year flood level, which for much of West Sacramento is 15 feet. This would render most development infeasible. If FEMA designates West Sacramento as an AR zone and considers the City to be a “developed area,” finished floor elevations would be required to be 3 feet above the ground, which would likely impact feasibility but not necessarily preclude development from occurring. If portions of the City are deemed by FEMA to not be “developed area”, finish floor elevations would have to be constructed above the 100 year flood levels, even in an AR zone.

A series of levee improvements is needed to provide a level of flood protection to the City consistent with FEMA requirements to protect the community from a 100-year flood and meet the City’s standards of protecting the community from a minimum 200-year flood event. The levee improvements will directly benefit existing and future development in the City. Two Flood Risk Zones have been defined in the City.

- Zone 1 consists of the Triangle area as well as the portions of Pioneer Bluff East of South River Road. This zone consists of high ground with a lower risk related to an uncontrolled flood event than other areas of the City protected by levees.
- Zone 2 is the area consisting of the remainder of the City outside of Zone 1. This zone consists of land that is subject to a higher risk related to an uncontrolled flood event than the areas of the City in Zone 1.

This study establishes the methodology for allocating the costs associated with improving the levees surrounding the City to the two zones. The allocation of cost is the basis for establishing the Flood Protection In-Lieu Fee, which would be an option to new development in lieu of constructing flood protection improvements to ensure that the proposed structure has 200-year flood protection.

ORGANIZATION OF THE REPORT

The report is divided into six chapters including this Executive Summary. **Chapter II** describes the justification for, purpose of, and methodology of the West Sacramento Flood Protection In-Lieu Fee Study. **Chapter III** describes the land uses in the City. **Chapter IV** provides the cost allocations used to determine the amount of the fee distributed to each land use and zone. **Chapter V** describes the levee improvements. **Chapter VI** describes the calculation of the In-Lieu Fee. **Chapter VII** describes fee implementation and administration. This report includes two appendices. **Appendix A** shows the method for adjusting the Fee for Single-Family Residential homes by home size, and the method for determining the Assumed Flood Damage Percentage for Zone

2. **Appendix B** identifies the full fee amount that is justified assuming no federal funds are contributed to the funding of the levee improvements. **Appendix C** contains the Ordinance that implements the In-Lieu Fee and the Resolution that sets the In-Lieu Fee.

II. INTRODUCTION

JUSTIFICATION FOR THE FEE

Recent changes in Army Corps of Engineers levee evaluation criteria will be reflected in certification of 100-year protection for purposes of FIRM updates presently underway. A review of the levees surrounding the City has indicated that the levee system does not meet 100-year protection based on the recently adopted Army Corps of Engineers levee criteria. The likely result of this will be a FEMA remapping of the City and its surroundings.

Federally backed mortgages are not made available to properties, which are shown on FIRMs to be in the floodplain, that do not possess flood insurance. The National Flood Insurance Program, the sole entity to offer flood insurance, does not offer flood insurance to new development in a 100-year flood plain. In addition, remapping by FEMA will likely result in requirements to construct new development at least 3 feet above grade and possibly higher than 15 feet above grade, depending on which zone FEMA designates the City. This may have implications for the feasibility of new development within the City.

The State has expressed a desire that in urban areas a 200-year level of flood protection be achieved. In the Department of Water Resources (DWR) Fiscal Year 2007-2008 Bond Expenditure Plan DWR states, "The project selection criteria [is that]...there is a strategy by the local agency for achieving 200-year or better flood protection for the area and the project fits into this strategy."

The City's goals and policies have been focused on attaining a minimum of 200-year flood protection. The City must continue to aim to achieve 200-year flood protection to receive priority for funding from the State.

By paying the Flood Protection In-Lieu Fee or taking the necessary steps to demonstrate that their structure has 200-year flood protection, developers will contribute to the City-wide flood protection system.

BASIS FOR THE FEE AMOUNT

The In-Lieu Fee amount depends on the estimated local share of levee improvement costs to be raised. The determination of the estimated local share of levee improvement costs was done by bracketing the range of federal and State contributions to establish a realistic local match for future State and federal funds. The following outlines a low and high range of local contributions to the levee improvements based on varying levels of

federal and State commitment and identifies the local funds assumed for purposes of this in-lieu fee (Scenario 3).

COST SHARE SCENARIOS

	SCENARIO 1 Low Local Contribution (Historic Cost Sharing)	SCENARIO 2 High Local Contribution (No Federal Contribution— State/Local Funds Only)	SCENARIO 3 Doubling the Historic Local Contribution (Assumed for In-Lieu Fee)
Federal Share	75.0 percent	00.0 percent	50.0 percent
State Share	14.5 percent	50.0 percent	29.0 percent
Local Share	10.5 percent	50.0 percent	21.0 percent
TOTAL	100.0 percent	100.0 percent	100.0 percent

- Scenario 1—Local Contribution (Historic Cost Sharing).** Scenario 1 generally represents the historical cost sharing that has occurred in West Sacramento. The cost sharing percentages shown under Scenario 1 generally are based on federal projects that have been authorized before 1999.² Future levee improvements in West Sacramento may not be funded using the historic cost sharing formulas assumed previously. Given competing priorities at the federal level, competition for federal and State bond funds for flood protection, and the timing implications that result from waiting for the federal authorization process to occur, West Sacramento must be more aggressive in its plans to provide a local match for levee improvements. As a result, the in-lieu fee is not based on Scenario 1.
- Scenario 2—High Local Contribution (No Federal Contribution—State/Local Funds Only).** Scenario 2 assumes no federal contribution to future levee improvements in West Sacramento. Given the uncertainties in federal funding priorities and timing, this scenario assumes that the State and the local community fully fund all the levee improvements in West Sacramento. This scenario requires that 50 percent of the costs for levee improvements be the responsibility of West Sacramento. Scenario 2 also increases the State share of the costs to 50 percent and assumes the State will use its Proposition 1E bond funds that were authorized for flood protection by the voters in November 2006. The federal government has

² The existing West Sacramento project was authorized before 1999 and as a result has a technical 7.5 percent local cost share requirement. Because of other provisions of the cost sharing agreements that require local funds to be responsible for lands, easements, and rights of way in addition to requirements that a certain amount of funds being required as cash payment, however, the historic local share in West Sacramento has been closer to 10.5 percent.

responsibility for improving levees, however, and federal funding is expected to be available to improve flood protection systems. As a result, the cost sharing identified in Scenario 2 is not appropriate for calculating the recommended in-lieu fee. Never the less, an alternative fee that is based on a 50/50 State and local cost sharing approach was calculated and is shown in **Appendix B**. This fee amount is higher than the recommended fee amount and, while not recommended, this higher fee amount is justified based on the uncertainties associated with the federal process.

- **Scenario 3—Doubling the Historic Local Contribution** (assumed for the In-Lieu Fee). Scenario 3 assumes that the historical local and State contributions are doubled and the federal share is reduced from 75 percent to 50 percent. This cost sharing approach forms the basis for calculating the recommended In-Lieu Fee amount shown in this report.

COST ALLOCATION BETWEEN EXISTING AND NEW DEVELOPMENT

Based on Scenario 3, the assumed local share of levee improvement costs to provide adequate flood protection, including costs associated with the issuance of bonds, is approximately \$84 million (2007\$). Existing development will pay the historic cost sharing percentage of 10.5 percent (approximately \$42 million), and future development will have the option to pay a similar amount, which would double the historic share as proposed in Scenario 3, described previously. If new development chooses to pay the In-Lieu Fee as opposed to meeting the requirements to demonstrate 200-year flood protection through the construction of flood management improvements, \$42 million of the levee improvement costs would be collected through the In-Lieu Fee.

While Scenario 3 provides the most realistic assumption about the local share of system wide levee improvement costs, Scenario 2 is a fully justifiable, but less realistic target of funds that can be collected from both existing and new development. Under Scenario 2, 50 percent of levee improvement costs would be the responsibility of both existing development and new development. Assuming an equal distribution of funds between new and existing development, approximately \$100 million would be the fair share requirements of new development and \$100 million would be the fair share requirements of existing development. However, the ability of existing development and future development to fully fund a 50 percent local share is unrealistic. Moreover, federal funds will be available for levee improvements in West Sacramento. As a result, Scenario 3 forms the basis for establishing the In-Lieu Fee to be collected from future development and the annual parcel assessments to be collected from existing development.

Existing development is being asked to pay for about half of the local share through a proposed flood protection assessment district. A vote of property owners is scheduled to begin in May 2007 to consider the proposed assessment district.

In addition to the assessment district, future development may contribute to the flood protection system through the construction of flood management improvements that demonstrate that the development achieves 200-year flood protection or pay of an In-Lieu Fee. Because there is no basis for estimating the extent to which new development will pay the in-lieu fee or decide to take the necessary actions to achieve 200-Year Flood protection for their structure, the In-Lieu Fee Study assumes that all developers opt to pay the Fee.

STUDY METHODOLOGY

The underlying methodology in this Study is based on the principle that the In-Lieu Fee by land use should be proportional to its risk of property value damage in an uncontrolled flood event. Generally, new development that is at risk of a higher loss associated with an uncontrolled flood event would have the option to pay a higher In-Lieu Fee.

IMPLEMENTATION OVERVIEW

If the developer opts to pay the In-Lieu Fee, the fee would be collected at the issuance of a building permit, it would be charged on a per-unit basis for residential properties, and on a per-1,000-square-foot (pro-rated) basis for commercial and industrial properties. The In-Lieu Fee presented in this Study is based on the best available information about relative land and structure damage, estimates of public funding, cost of financing, and land use information at this time. If costs change significantly in either direction, or if other funding to construct the facilities becomes available, the Fee should be adjusted accordingly. The City periodically will conduct a review of the fee program and determine if adjustments are necessary. If changes in the fee program are deemed necessary, the City will revise the Fee. **Table 1** provides the fee schedule to be implemented.

Table 1
West Sacramento Flood Protection - In-Lieu Fee Program
Summary of Fees (2007\$)

(Revised According to Statement of Errata 4/18/07)

Land Use [3]	Summary of Flood Protection In-Lieu Fees (2007\$)	
	Zone 1 [1]	Zone 2
-----Per Dwelling Unit-----		
Residential		
Single-Family [2]		
<1,100 sq. ft.	\$223	\$1,124
1,101 - 2,500 sq. ft.	\$365	\$1,840
>2,500 sq. ft.	\$507	\$2,555
Multifamily > 900 sq. ft. [4]	\$77	\$906
Multifamily < 900 sq. ft. [4]	\$115	\$1,359
-----Per 1,000 Building Square Feet-----		
Commercial [3]		
Retail	\$465	\$2,338
Office	\$301	\$2,183
Industrial	\$111	\$1,048

"summary"

[1] Zone 1 includes the Triangle Area and Pioneer Bluff east of South River Road (high ground) and Zone 2 is the rest of the City.

[2] Gross building square feet.

[3] Land Uses are defined as follows:

Single-Family - This designation provides for single-family homes and duplexes, and similar uses.

Multifamily - This designation provides for multifamily units, triplex units, higher density housing and similar uses.

Retail - This designation provides for light retail, including, but not limited to, eating and drinking establishments, grocery stores, general merchandise, and similar uses.

Office - This designation provides for professional and administrative offices, medical and dental clinics, laboratories, financial institutions, and similar uses.

Industrial - This designation provides for industrial parks, heavy retail, sales, service, wholesale commercial, warehouses, distribution centers, fuel storage, trucking terminals, railroad facilities, manufacturing and similar uses.

Mixed Use - This designation provides for development projects that are a combination of the other Land Use classifications. Mixed uses development will be proportionately computed to the percentage of land in each land use category.

[4] Varying the multifamily fee for two unit sizes was calculated by dividing the multifamily fee (\$1,359) by the average size of multifamily units (900 sq. ft.) and applying that amount (\$1.51 per sq. ft.) to a 600-sq.-ft. unit, which is reflective of the an average size unit in the under 900 sq. ft. category.

III. LAND USE

The costs of part of the assumed local share for levee improvements and related expenses are spread across the planned private land use designations within the City.

LAND USE CATEGORIES

For the purpose of this cost allocation, the following land-use categories are used.

- Residential
 - Single-Family
 - Multifamily
- Commercial
 - Retail
 - Office
- Industrial
- Mixed Use

Single-Family—This designation provides for single-family homes and duplexes.

Multifamily This designation provides for multifamily units, triplex units, and higher density housing.

Retail—This designation provides for light retail, including, but not limited to, eating and drinking establishments, grocery stores, and general merchandise.

Office—This designation provides for professional and administrative offices, medical and dental clinics, laboratories, and financial institutions.

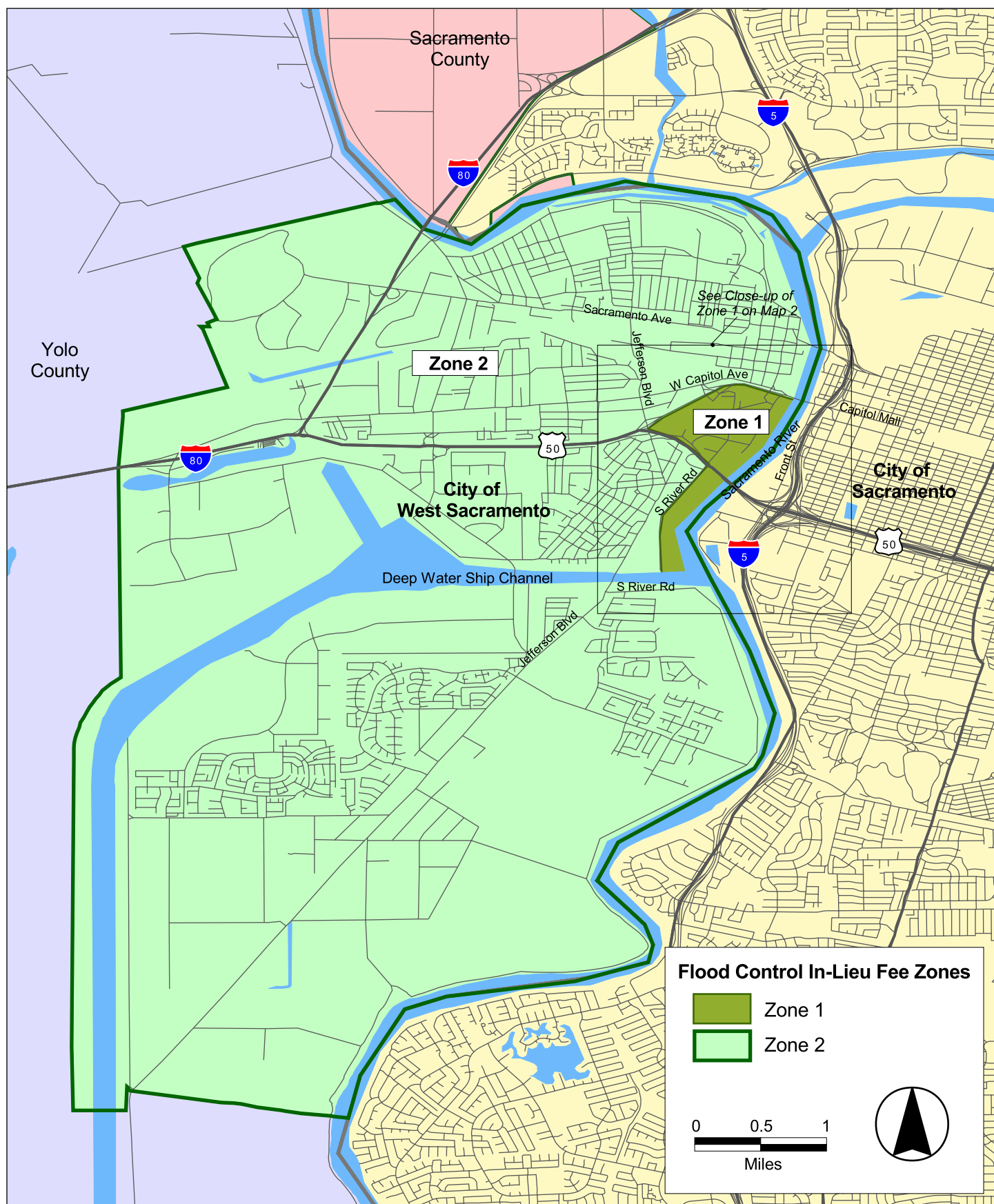
Industrial—This designation provides for industrial parks, heavy retail, sales, service, wholesale commercial, warehouses, distribution centers, fuel storage, trucking terminals, railroad facilities, and manufacturing.

Mixed Use—This designation provides for development projects that are a combination of the other Land Use classifications.

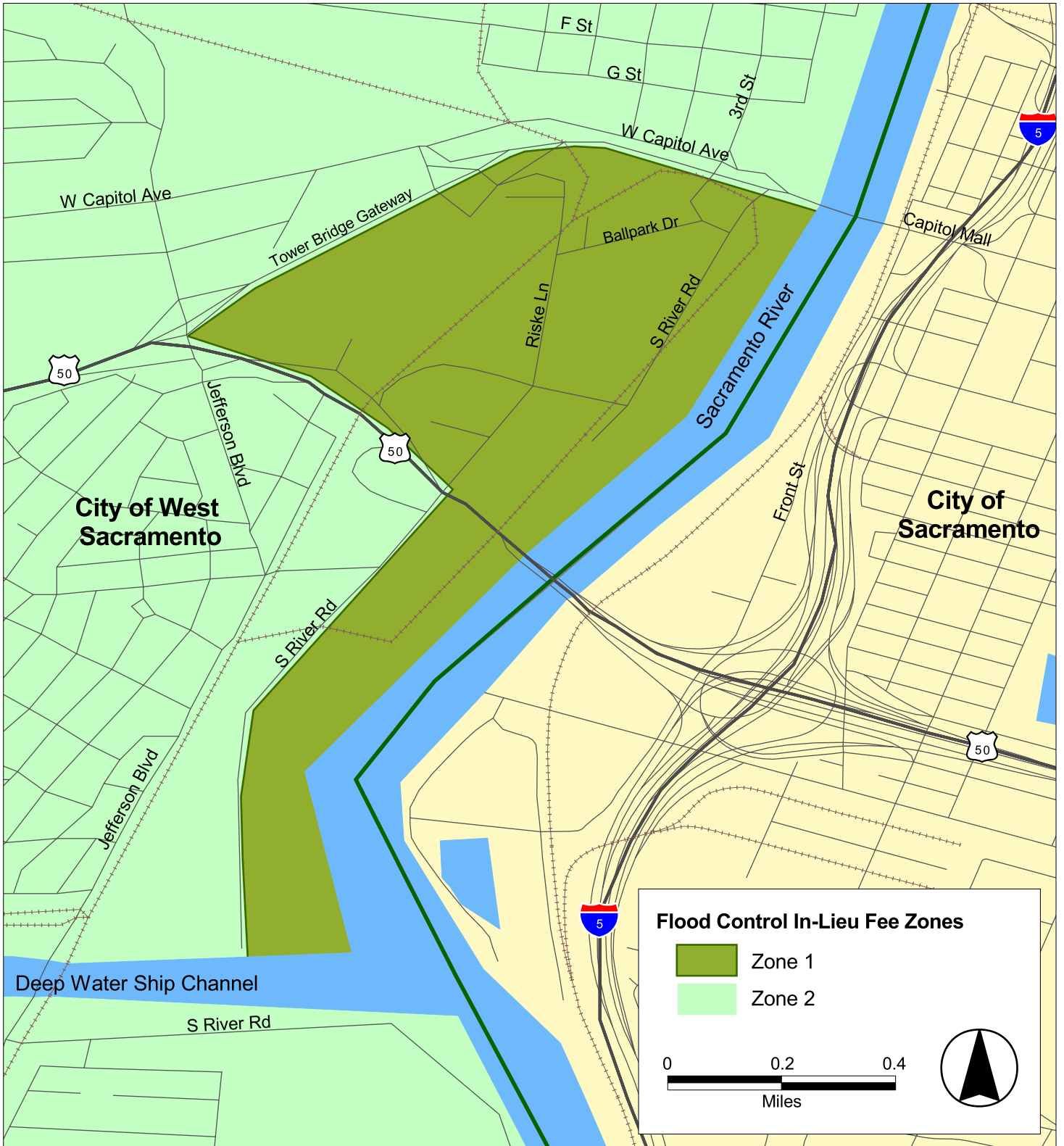
ZONES

Two zones have been assigned within the City to acknowledge that the areas in the Triangle and Pioneer Bluff East of South River Road (Zone 1) are at a significantly lower risk of being affected by an uncontrolled flood event than areas in the remainder of the City (Zone 2). **Map 1** shows the location of the two zones. **Map 2** shows a close up view of Zone 1. **Table 2** shows the number of units in each of the two zones for existing and future development. **Table 3** shows the acreages by land use of existing and future development. **Table 4** shows the unit densities assumed for future development in Zone 1. These assumed densities have been used to determine the amount of development in Zone 1. The acres for Zone 1, calculated in **Table 4**, are used to determine the acres in Zone 2 by subtracting the calculated acres from the known total future development. **Table 5** shows the future developed acreages by land use split between the two zones.

Map 1
West Sacramento Flood Control
Flood Control In-Lieu Fee Area Map



Map 2
West Sacramento Flood Control
Flood Control In-Lieu Fee - Zone 1 Area Map



Source: Census 2005 Tiger/Line data, 2nd Ed.; and EPS.

Prepared by EPS, March 19, 2007

Table 2
West Sacramento Flood Protection - In-Lieu Fee Program
Existing and Future Land Uses by Zone

Land Use	Existing Development [1]			Future Development [2]			Total at Buildout
	Zone 1	Zone 2	Total	Zone 1	Zone 2	Total	
-----Dwelling Units-----							
Residential							
Single-Family	0	11,153	11,153	187	6,983	7,170	18,323
Multifamily	5	6,273	6,278	3,800	3,991	7,791	14,069
Subtotal Residential	5	17,426	17,431	3,987	10,974	14,961	32,392
-----Building Square Feet (1,000's)-----							
Commercial							
Retail	18	2,371	2,389	1,547	2,524	4,071	6,460
Office	49	3,104	3,153	2,926	2,242	5,168	8,321
Subtotal Commercial	67	5,475	5,542	4,473	4,766	9,239	14,781
Industrial	436	16,840	17,276	603	11,473	12,076	29,352

"lu_benefit"

Source: City of West Sacramento, DKS Traffic Model Update

[1] Existing residential development is based on the units identified in the DKS Traffic Model updated, using City information on specific projects. Existing nonresidential development also is based on the DKS Traffic Model updated, using City information on specific projects. EPS translated the employment estimates in the DKS Traffic Model into building square feet, using standard square feet per employee factors.

[2] To estimate future development in the City, the estimates of existing development in the City were subtracted from the expected buildout of the City. The estimated buildout of the City is based on the DKS Traffic Model. The amount of future development in Zone 1 is based on identifies projects in the Triangle Area Specific Plan. The amount of future development in Zone 2 is the incremental difference between the citywide future development and Zone 1.

Table 3
West Sacramento Flood Protection - In-Lieu Fee Program
Existing and Future Acreage

Land Use	Existing Development (acres)	Future Development (acres) [1]	Total Acres
Residential			
Single-Family	1,667	2,270	3,937
Multifamily	313	653	966
Subtotal Residential	1,980	2,923	4,904
Commercial			
Retail	297	418	715
Office	262	375	637
Subtotal Commercial	559	792	1,352
Industrial	1,371	875	2,246
Total	3,910	4,591	8,501

"acres"

Source: City of West Sacramento, DKS Traffic Model Update
 [1] See comments on Table 2.

Table 4
West Sacramento Flood Protection - In-Lieu Fee Program
Unit Density - Zone 1

Land Use	Future Development	Assumed Density [1]	Estimated Gross Developable Acres [2]
Residential	<i>units</i>	<i>units per acre</i>	
Single-Family	187	15	12
Multifamily	3,800	70	54
Subtotal Residential	3,987		66
Commercial	<i>thousands of sq. ft.</i>	<i>FAR [3]</i>	
Retail	1,547	0.75	27
Office	2,926	0.75	50
Subtotal Commercial	4,473		77
Industrial	603	0.65	9
Total			152

"unit_density"

[1] Assumed densities from Triangle Area Specific Plan and standard high density commercial FAR assumptions.

[2] Gross Developable Acres - Gross acres minus arterial roads and infrastructure.

[3] FAR - Floor Area Ratio.

Table 5
West Sacramento Flood Protection - In-Lieu Fee Program
Future Development Acreage by Zone

Land Use	Zone 1	Zone 2	Total
		[1]	
<i>source</i>	<i>Table 4</i>		<i>Table 3</i>
Residential			
Single-Family	12	2,258	2,270
Multifamily	54	599	653
Subtotal Residential	66	2,857	2,923
Commercial			
Retail	27	391	418
Office	50	324	375
Subtotal Commercial	77	715	792
Industrial	9	866	875
Total	152	4,439	4,591

"acres_zone"

Source: City of West Sacramento, DKS Traffic Model Update

[1] Zone 2 acres are the incremental acres of each land use remaining when Zone 1 acres are subtracted.

IV. COST ALLOCATION

ALLOCATION METHODOLOGY

This chapter describes the cost allocation methodology and provides the calculation of the West Sacramento Flood Protection In-Lieu Fee.

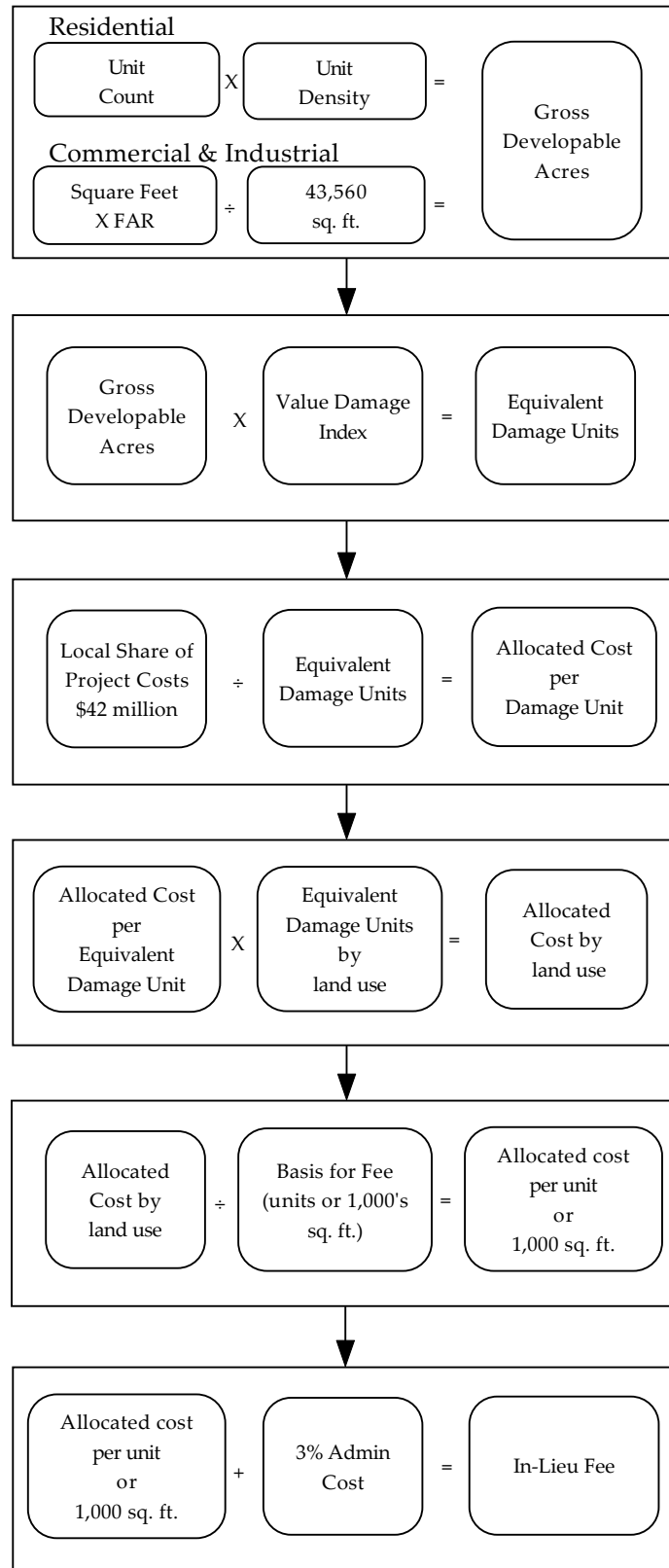
The methodology for calculating the Fee is summarized below.

1. Determine the number of residential units, square feet of office space, square feet of retail space, and square feet of industrial space within the two zones to be developed in the future.
2. Convert the number of residential units and square feet of office space, retail space, and industrial space into gross developable acres.
3. Convert the acreage in each zone to Equivalent Damage Units by multiplying the acreage by the Total Value Damage Index
4. Adjust the Equivalent Damage Units by the Flood Risk Index to calculate Risk Units.
5. Allocate the cost of levee improvements on a per-Weighted Flood Risk Unit basis to the land use categories in each zone.
6. Allocate the cost allocated to each land use by the number of units in the case of residential, or the square footage, in the case of retail, office, and industrial space, to calculate the per-unit or per-1,000-square-foot allocated cost.
7. Apply the 3-percent administration cost to the Allocated Cost per Unit or 1,000 square feet to calculate the Fee on a per-unit or per-1,000-square-foot basis, thus determining the In-Lieu Fee.

COST ALLOCATION

The purpose of allocating improvement costs among the various land uses is to provide a reasonable method of funding required for infrastructure. The key to the apportionment of the cost of public improvements to different land uses is the assumption that the risk associated with an uncontrolled flood event is related to land use type and that such risk can be stated in relative terms for all non-public land uses. Only by relating the risk from an uncontrolled flood event to land use types can a reasonable relationship be established for the apportionment of the costs to that land use.

Figure 1
West Sacramento Flood Protection - In Lieu Fee Program
Allocation Methodology



TOTAL VALUE DAMAGE INDEX

The levee improvement costs allocated to the land-use categories are based on the relative total value damage of each land use. Two property-related components are examined for determining total value damage. They are Structure Value Damage and Land Value Damage.

STRUCTURE VALUE DAMAGE

Tables 6 and 7 show the calculation of damageable structure square feet per acre for each zone. The “damageable square feet per acre” is defined as the footprint of the building. Damageable Square Feet per Acre differs between the two zones due to higher intensity of development in Zone 1. The result is that Zone 1 has greater Damageable Square Feet per Acre than Zone 2.

Tables 8 and 9 show the relative comparison of structure value between land use types and calculate the relative structure damage per acre. These values represent the relative structure values and do not represent current market values or construction costs. An estimate of the average structural damage per acre is calculated based on the assumed flood damage percentage for each zone as identified by the Army Corps of Engineers. The assumed flood damage percentage reflects the damage to the structure and its contents as a percent of the structure value and varies by land use and depth of flooding. Zone 1 has one set of assumed flood damage percentages that reflect the average high ground terrain. Zone 2 has another set of assumed flood damage percentages that reflect the average depth of flooding in the rest of the City.

LAND VALUE DAMAGE

Table 10 shows the “relative land value damage per acre” assumptions for all land uses. The relative land value damage per acre represents the relative damage to land for parcels of land and do not represent current market values. The relative land value damage figures are based on land value alone, exclusive of improvements.

TOTAL VALUE DAMAGE

Tables 11 and 12 show the Value Damage Index for each land use. Values are shown as a multiple of the total property value for the Single-Family Residential land use category. The Value Damage Index represents the total risk to which each land use is subject as compared to new single-family residential development. The Value Damage

Table 6
West Sacramento Flood Protection - In-Lieu Fee Program
Damageable Square Fee of Structure per Acre - Zone 1

Land Use	Total Building Footprint (square feet)	Acres	Damageable Square Feet of Structure per Acre
	[1]		
<i>source</i>		<i>Table 4</i>	
<i>formula</i>	<i>a</i>	<i>b</i>	<i>c=a/b</i>
Residential			
Single-Family	110,400	12	9,200
Multifamily	750,600	54	13,900
Commercial			
Retail	869,400	27	32,600
Office	991,700	50	19,700
Industrial	36,000	9	4,000
Total	2,758,100	152	

"z1_struct"

[1] Residential acreages are based on the Triangle Area Specific Plan. Commercial and Industrial acreages were estimated using square-feet-per-employee averages of 500, 300, and 1,000 square feet per employee for retail, office, and industrial land uses respectively, and employee estimates taken from the 2004 Traffic Demand Model Update prepared by DKS.

Table 7
West Sacramento Flood Protection - In-Lieu Fee Program
Damageable Square Feet of Structure per Acre - Zone 2

Land Use	Total Building Footprint (square feet)	Acres	Damageable Square Feet of Structure per Acre
[1]			
<i>source</i>		<i>Table 5</i>	
<i>formula</i>	<i>a</i>	<i>b</i>	<i>c=a/b</i>
Residential			
Single-Family	16,315,750	2,969	5,496
Multifamily	804,254	76	10,520
Commercial			
Retail	3,313,837	410	8,092
Office	3,313,837	410	8,092
Industrial	15,690,980	1,391	11,279
Total	39,438,658	5,255	

"z2_struct"

[1] Building footprints based on the assessment database. This database is part of the proposed assessment district for flood protection in West Sacramento. It identifies existing footprints and acreages for each parcel in the City.

Table 8
West Sacramento Flood Protection - In-Lieu Fee Program
Relative Structure Damage - Zone 1

Land Use	Relative Structure Value per Sq. Ft. [1]	Damageable Square Feet of Structure per Acre [2]	Assumed Flood Damage Percentage [3]	Average Structure Damage per Acre
<i>source</i>		<i>Table 6</i>		
<i>formula</i>	A	B	C	$D=A \times B \times C$
Residential				
Single-Family	\$60	9,200	15%	\$82,800
Multifamily	\$60	13,900	15%	\$125,100
Commercial				
Retail	\$70	32,600	20%	\$456,400
Office	\$70	19,700	20%	\$275,800
Industrial	\$50	4,000	59%	\$118,000

"z1_struc_value"

Source: PB, Engineer's Report

[1] Assumed to be the relative value of the structure subject to an uncontrolled flood event.

[2] First flood square footage.

[3] Assumed to be percentage damage to the structure and contents as outlined in the Engineer's Report.

Table 9
West Sacramento Flood Protection - In-Lieu Fee Program
Relative Structure Damage - Zone 2

Land Use	Relative Structure Value per Sq. Ft. [1]	Damageable Square Feet of Structure per Acre [2]	Assumed Flood Damage Percentage [3]	Average Structure Damage per Acre
<i>source</i>		<i>Table 7</i>		
<i>formula</i>	A	B	C	$D=A \times B \times C$
Residential				
Single-Family	\$60	5,496	56%	\$185,753
Multifamily	\$60	10,520	49%	\$307,779
Commercial				
Retail	\$70	8,092	89%	\$504,067
Office	\$70	8,092	89%	\$504,067
Industrial	\$50	11,279	87%	\$491,262

"z2_struc_value"

Source: PB, Engineer's Report

[1] Assumed to be the relative value of the structure subject to an uncontrolled flood event.

[2] First flood square footage.

[3] Assumed to be percentage damage to the structure and contents as outlined in the Engineer's Report.

Table 10
West Sacramento Flood Protection - In-Lieu Fee Program
Relative Land Damage

Land Use	Relative Land Value per Acre [1]	Assumed Flood Damage Percentage [2]	Average Land Damage per Acre
Residential			
Single-Family	\$251,000	10%	\$25,100
Multifamily	\$278,000	10%	\$27,800
Commercial			
Retail	\$554,000	10%	\$55,400
Office	\$554,000	10%	\$55,400
Industrial			
	\$233,000	10%	\$23,300

"z_damage"

Source: PB, Engineer's Report

[1] Assumed to be the relative value of land in West Sacramento.

[2] Assumed to be the damage to land value as a result of flooding as outlined in the Engineer's Report.

Table 11
West Sacramento Flood Protection - In-Lieu Fee Program
Relative Property Damage - Zone 1

Land Use	Zone 1			Value Damage Index [1]
	Average Land Value Damage per Acre	Average Structure Value Damage per Acre	Total Damage per Acre	
<i>source</i>	<i>Table 10</i>	<i>Table 8</i>		
Residential				
Single-Family	\$25,100	\$82,800	\$107,900	1.00
Multifamily	\$27,800	\$125,100	\$152,900	1.42
Commercial				
Retail	\$55,400	\$456,400	\$511,800	4.74
Office	\$55,400	\$275,800	\$331,200	3.07
Industrial	\$23,300	\$118,000	\$141,300	1.31

"z1_val_index"

[1] The Property Value Damage Index is calculated by taking the relative value of property indicated for each land use and dividing it by the Total Value Damage per Acre for the Single-Family Residential land use, thereby providing a unitless proportionate measurement to relate relative Property Value Damage per acre across varying land uses.

Table 12
West Sacramento Flood Protection - In-Lieu Fee Program
Relative Property Damage - Zone 2

Land Use	Zone 2			Value Damage Index [1]
	Average Land Value Damage per Acre	Average Structure Value Damage per Acre	Total Damage per Acre	
<i>source</i>	<i>Table 10</i>	<i>Table 9</i>		
Residential				
Single-Family	\$25,100	\$185,753	\$210,853	1.00
Multifamily	\$27,800	\$307,779	\$335,579	1.59
Commercial				
Retail	\$55,400	\$504,067	\$559,467	2.65
Office	\$55,400	\$504,067	\$559,467	2.65
Industrial	\$23,300	\$491,262	\$514,562	2.44

"z2_val_index"

[1] The Property Value Damage Index is calculated by taking the relative value of property indicated for each land use and dividing it by the Total Value Damage per Acre for the Single-Family Residential land use thereby providing a unitless proportionate measurement to relate relative Property Value Damage per acre across varying land uses.

Index will be used to set the adjustment factor for the West Sacramento Flood Protection In-Lieu Fee.

Table 13 shows the adjusted acres for all land uses in Zone 1 and Zone 2 respectively. This table multiplies the existing acres by the Value Damage Index to calculate Equivalent Damage Units. Equivalent Damage Units are essentially adjusted acreages of future development by different land use to account for the relative structural damages and relative land damage that would occur because of an uncontrolled flood event. The adjusted acres (or Equivalent Damage Units) are all indexed off of the damage to a single-family unit.

Table 13
West Sacramento Flood Protection - In-Lieu Fee Program
Value Damage Adjusted Acres by Zone

Land Use	Zone 1			Zone 2			Total Equivalent Damage Units
	Acres	Value Damage Index	Equivalent Damage Units	Acres	Value Damage Index	Equivalent Damage Units	
<i>source</i>	<i>Table 5</i>	<i>Table 11</i>		<i>Table 5</i>	<i>Table 12</i>		
<i>formula</i>	<i>A</i>	<i>B</i>	<i>C=AxB</i>	<i>D</i>	<i>E</i>	<i>F=DxE</i>	<i>G=C+F</i>
Residential							
Single-Family	12	1.00	12	2,258	1.00	2,258	2,270
Multifamily	54	1.42	77	599	1.59	953	1,030
Subtotal Residential	66		89	2,857		3,212	3,300
Commercial							
Retail	27	4.74	126	391	2.65	1,038	1,164
Office	50	3.07	155	324	2.65	860	1,015
Subtotal Commercial	77		281	715		1,898	2,179
Industrial	9	1.31	12	866	2.44	2,114	2,126
Total	152		381	4,439		7,224	7,606

"zone_v_adjusted"

V. IMPROVEMENT PROGRAM

IMPROVEMENT PROGRAM

The City contracted HDR Engineering, Inc. to conduct a review of the City's levee system to determine the levee improvements required to attain 200-year protection. HDR investigated the City's levees in early 2007 and prepared preliminary cost estimates for the required improvements. The levee system improvements include slope flattening, erosion repair, installing set back levees, installing seepage berms or cutoff walls, and levee heightening.

PROGRAM COSTS

Table 14 shows total program costs currently are estimated to be \$400 million (2007\$). This cost includes improvements to the levees, the purchase of lands for levee improvements and mitigation, relocations of existing structures, project design, engineering, construction management, and funds set aside for contingency costs. Included in the \$400 million estimate is the cost of levee evaluation studies and environmental analysis, a general re-evaluation report, and economic analysis.

For the purpose of this study it has been assumed that the federal government will pay \$200 million (50 percent) of the estimated total project costs. The State of California is estimated to pay for \$116 million (29 percent) of the estimated project costs. The City's share of the project costs is estimated to be \$84 million (21 percent) of total project costs.

Estimates of program costs are based on the best available information at the time this study was prepared. Material changes in the costs associated with levee improvements may occur thus requiring an update the Fee schedule presented in this study.

Table 14
West Sacramento Flood Protection - In-Lieu Fee Program
Local Share of Capital Improvement Program

Item	Percent of Total	Cost
Levee Improvements		\$400,000,000
Federal Share	50%	\$200,000,000
Non-Federal		
State Share	29%	\$116,000,000
Local Share	21%	\$84,000,000
Total	100%	\$400,000,000
Breakdown of Local Share		
Existing Development (Assessment District)	50.0%	\$42,000,000
Future Development (In Lieu Fee [1])	50.0%	\$42,000,000

"cip"

[1] Cost share amounts are based on doubling the non-federal share of flood protection improvements to account for uncertainties in federal funding and potential timing implications from the federal process. Non-federal cost sharing is based on a post-1999 authorization. The West Sacramento project, however, was authorized before 1999 and may be eligible for a 7.5% local match.

VI. FEE CALCULATION

This section describes the process implemented to compute the Fee for the various land uses in the City.

COST PER DAMAGE UNIT

The total program costs are divided by the Total Units calculated in **Table 13** to calculate the Allocated Cost per Damage Unit. This calculation is presented on **Table 15**.

COST FOR EACH LAND USE

The total cost allocated to each land use is shown on **Table 16**. The cost allocated to each land use is calculated by multiplying the Total Equivalent Damage Units from **Table 13** by the Allocated cost per Acre from **Table 15**. The total local share of \$42 million is divided between the two zones according to the relative damage to the property in each zone.

FEE CALCULATION

The total average cost for each land use is then divided by the number of units or thousands of square feet for each land use to get the allocated Fee per unit or thousand square feet by land use. The allocated Fee by land use for each zone is then adjusted to account for 3 percent administrative costs to determine the final Fee per unit, according to size, or 1,000 square feet. The final allocated Fee is shown in **Tables 17 and 18** for Zone 1 and Zone 2 respectively. The total local share for the levee improvements excluding administrative costs is expected to be \$42.0 million; \$2.1 for Zone 1 and \$39.9 million for Zone 2.

Table 15
West Sacramento Flood Protection - In-Lieu Fee Program
Fee per Adjusted Acre

Item	Calculation		Amount
Total Local Improvement Costs Allocated to Future Development	<i>Source</i> Table 14	A	\$42,000,000
Total Equivalent Damage Units	Table 13	B	7,606
Allocated Cost Per Equivalent Damage Unit	C=A/B		\$5,522
			<i>"per_acre"</i>

Table 16
West Sacramento Flood Protection - In-Lieu Fee Program
Allocated Cost per Land Use Type

Land Use	Zone 1		Zone 2		Total Allocated Cost
	Zone 1 Equivalent Damage Units	Allocated Costs	Zone 2 Equivalent Damage Units	Allocated Costs	
<i>source formula</i>	<i>Table 13 A</i>	<i>Table 15 B=Ax\$5,522</i>	<i>Table 13 C</i>	<i>Table 15 D=Cx\$5,522</i>	<i>E=B+D</i>
Residential					
Single-Family	12	\$66,300	2,258	\$12,471,900	\$12,538,200
Multifamily	77	\$422,600	953	\$5,264,600	\$5,687,200
Subtotal Residential	89	\$488,900	3,212	\$17,736,500	\$18,225,400
Commercial					
Retail	126	\$697,700	1,038	\$5,730,100	\$6,427,800
Office	155	\$854,000	860	\$4,751,500	\$5,605,500
Subtotal Commercial	281	\$1,551,700	1,898	\$10,481,600	\$12,033,300
Industrial	12	\$65,000	2,114	\$11,676,300	\$11,741,300
Total	381	\$2,105,600	7,224	\$39,894,400	\$42,000,000

"per_unit1"

34

Table 17
West Sacramento Flood Protection - In-Lieu Fee Program
In Lieu Fee per Unit Including Fee Administration Costs - Zone 1

Land Use	Zone 1				
	Allocated Cost	Units/ Square Feet	Allocated Cost per Unit/ 1,000 sq. ft.	Fee Administration [1]	In-Lieu Fee
<i>source</i>	<i>Table 16</i>	<i>Table 2</i>			
<i>formula</i>	<i>A</i>	<i>B</i>	<i>C=A/B</i>	<i>D=3%*C</i>	<i>E=C+D</i>
Residential			----- <i>Dwelling Units</i> -----		
Single-Family	\$66,300	187	\$355	\$11	\$365
Multifamily	\$422,600	3,800	\$111	\$3	\$115
Subtotal Residential	\$488,900	3,987			
Commercial			----- <i>Building Square Feet (1,000's)</i> -----		
Retail	\$697,700	1,547	\$451	\$14	\$465
Office	\$854,000	2,926	\$292	\$9	\$301
Subtotal Commercial	\$1,551,700	4,473			
Industrial	\$65,000	603	\$108	\$3	\$111
Total	\$2,105,600				

"tri_fee"

[1] Assumes a cost of 3% of fee revenue to administer the fee program.

Table 18
West Sacramento Flood Protection - In-Lieu Fee Program
Fee per Unit Including Fee Administration Costs - Zone 2

Land Use	Zone 2				
	Allocated Cost	Units/ Square Feet	Allocated Cost per Unit/ 1,000 sq. ft.	Fee Administration [1]	In-Lieu Fee
<i>source</i>	<i>Table 16</i>	<i>Table 2</i>			
<i>formula</i>	<i>A</i>	<i>B</i>	<i>C=A/B</i>	<i>D=3%*C</i>	<i>E=C+D</i>
Residential			----- <i>Dwelling Units</i> -----		
Single-Family	\$12,471,900	6,983	\$1,786	\$54	\$1,840
Multifamily	\$5,264,600	3,991	\$1,319	\$40	\$1,359
Subtotal Residential	\$17,736,500	10,974			
Commercial			----- <i>Building Square Feet (1,000s)</i> -----		
Retail	\$5,730,100	2,524	\$2,270	\$68	\$2,338
Office	\$4,751,500	2,242	\$2,119	\$64	\$2,183
Subtotal Commercial	\$10,481,600	4,766			
Industrial	\$11,676,300	11,473	\$1,018	\$31	\$1,048
Total	\$39,894,400				

"city_fee"

[1] Assumes a cost of 3% of fee revenue to administer the fee program.

VII. IMPLEMENTATION

The West Sacramento Flood Protection In-Lieu Fee presented in this Study is based on the best levee improvement cost estimates, administrative cost estimates, and land use information available at this time. The West Sacramento Flood Protection In-Lieu Fee should be updated to reflect any significant changes to costs, type or amount of project development, if other funding becomes available, or any revisions to the underlying assumptions if the program changes.

After the Fee presented in this report is established, the City should conduct annual reviews of levee improvement costs and other assumptions used as the basis of this Study. Based on these reviews, the City may make adjustments to the West Sacramento Flood Protection In-Lieu Fee.

The cost estimates presented in this report are in 2007 dollars.

FEE COLLECTION, EXEMPTIONS AND ADJUSTMENTS

All new development projects occurring in the City shall either demonstrate to the City it has provided 200-Year Flood protection for the development project by the construction of flood management improvements or pay the Flood Protection In-Lieu Fee before receipt of a building permit, except as specifically exempted herein. For purposes of fee collection at building permit, the unit count or building square feet noted on the construction plans will be used for determination of the fee.

Fee revenue may be used for any of the following purposes, not listed in any particular order or priority:

- Construction of levee and environmental improvements,
- Land condemnation or property acquisition,
- Reimburse public funding or other sources of funds lent to the City and/or WSFCA for levee improvement, or levee evaluations, planning, or engineering,
- Be reserved for future construction or financing needs,
- Cover unanticipated construction costs related to the levee system on a pay-as-you-go basis, or
- Cover other costs required to attain a 200-year level of flood protection,

EXEMPTIONS FROM THE FEES

The following land uses are exempt from the fee:

- Existing residential, industrial, retail development
- Vacant residential, industrial, or retail land until developed
- Agriculture land
- “Other” land

Agriculture land slated to become new development will no longer be exempt once a building permit is issued. “Other” land includes land such as drainage canals, detention ponds, open space, well sites, and railroad right of way.

The in-lieu fee will not apply to a new structure replacing a previously existing structure of similar type (e.g., single-family home replacing another single-family home) provided both of the following conditions apply:

- The replacement structure does not increase the square footage of the structure by more than 15 percent; and
- The building permit application for construction of the new structure is filed within 12 months of the date the previous structure was removed.

~~The replacement of existing buildings with new buildings shall not be subject to the West Sacramento Flood Protection In-Lieu Fee provided that the new buildings do not possess significant improvements over the previous buildings. Significant improvements include but are not limited to increasing the square footage of the structure by more than 15 percent or changing the use of the structure.~~

The in-lieu fee will not apply to a new structure if the building permit application for the structure was determined by the City to be complete before the effective date of this chapter. In addition, the in-lieu fee will not apply to a new structure that is an “accessory structure” and is not intended for use as a dwelling. The in-lieu fee will not apply to remodels or additions to existing structures.

With written approval from the City, any or all portions of the proposed fees may be waived if it can be determined that a proposed project will not derive permanent benefit for which the fees are collected. Written fee waivers may be available on a case-by-case basis for certain temporary structures such as a mobile home used for construction management purposes.

ADJUSTMENTS AND REDUCTIONS TO THE FEES

The City may reduce the In-Lieu Fee for applicable properties under certain circumstances, such as economic development, economic hardship and other community benefit purposes. Any reduction in the fees will be based on the City’s independent analysis and review of the particular property.

~~The In-Lieu Fee may be adjusted in the event of significant improvements to a structure, defined as increasing the square footage of the structure by more than 15 percent. An increase in building square footage will result in the property owner paying the incremental fee proportionate to the increase in building square footage.~~

REIMBURSEMENTS AND FEE CREDITS

There are three scenarios that could result in either the developer not paying the In-Lieu Fee or the developer receiving an In-Lieu Fee credit, reimbursement, or repayment

- 1) If the developer is able to demonstrate that the proposed structure will have 200-year flood protection, the In-Lieu Fee is not required.
- 2) If the developer chooses to construct physical improvements in lieu of paying the Fee, a performance bond might be required subject to a credit agreement. If the developer builds improvements per the pre-established value set forth in a credit agreement, they will get an equal fee credit.
- 3) If the developer funds and/or constructs levee improvements beyond the obligation of the developer's specific project, a fee reimbursement system is required. In this case, an In-Lieu Fee reimbursement could be provided to the developer for advancing the construction of eligible facilities beyond those required to just serve the proposed development, assuming that funds are available to provide reimbursement for the over sizing of the improvements.

In terms of scenario 3, as is typical with fee programs, many of the public infrastructure facilities are needed before adequate revenues from the Fee collection would be available to fund such improvements. Consequently, some type of private funding is often necessary to pay for the public improvements when they are needed. This private financing may be in the form of land secured bonds, bonds secured by a pledge of future fees, developer equity, direct construction of the facility, or other form of private financing. Developers would first obtain In-Lieu Fee credits up to their In-Lieu Fee obligation. If their advanced funding exceeded their In-Lieu Fee obligation, reimbursements would be provided by revenue collected from other Fee payers.

REQUIREMENTS OF CREDITS, REIMBURSEMENTS, REPAYMENTS

The following describes the general requirements of a credit, reimbursement, or repayment agreement for the In-Lieu Fee.

- To obtain credits, reimbursements, or repayments, developers must enter into a developer reimbursement agreement with the City.
- Reimbursement, credit, or repayment will only begin when the City accepts the public improvements.
- Before a Final Map is recorded, developers will have to submit a written request documenting levee improvements and specifying the level of fee credits, reimbursements, or repayments.
- When funds are available, reimbursements will be paid monthly, quarterly, semi-annually, or as otherwise determined by the City.
- Reimbursements, credits, or repayments are payable solely from the West Sacramento Flood Protection In-Lieu Fees and are not an obligation of any other funding source (e.g., General Fund).
- There will be no credit given for the administration portion of the In-Lieu Fee.
- The value of any developer-installed improvements for reimbursement / repayment / fee credit shall not exceed the total cost estimate (as adjusted for inflation) used to establish the amount of the Fee or actual costs if the Fee is updated to include actual costs, as set forth in the credit or reimbursement agreement.
- The City maintains the flexibility to allocate Fee credits in a manner it chooses.

COST ADJUSTMENT AND PERIODIC FEE REVIEW

The Fee also will be subject to periodic updates based on unanticipated changes in developable land, levee cost estimates, or outside funding sources, for example. The City will review the costs and Fee annually to determine if any updates to the fees are warranted. During the annual reviews, the following aspects will be analyzed:

- Changes to the required facilities listed in the Study;
- Changes in the cost to update or administer the fees;
- Changes in annual financing costs;
- Changes in assumed land uses; and
- Changes in other funding sources.

Any changes to the West Sacramento Flood Protection In-Lieu Fee based on the periodic update will be presented to the City Council for approval before an increase of the Fee.

ANNUAL INFLATION ADJUSTMENT

~~The In-Lieu Fee may be adjusted by the City annually to account for the inflation of construction, right of way acquisition, and environmental or design costs.~~

The in-lieu fee shall be adjusted each succeeding January 1st commencing January 1, 2008, to reflect inflationary costs. The fees shall be increased by the ratio which the *Engineering News Record's* Construction Cost Index (20 cities) for the most recent December bears to the December 2007 index."

FEE ADMINISTRATION

FEE COLLECTION

The In-Lieu Fee will be collected before issuance of a building permit.

The applicable fee is based on the location and type of the property paying the fee. The location of the property determines the appropriate zone based on **Map 1**. In the event the location of property cannot be determined using **Map 1**, the City will use its best efforts and all available information to determine the appropriate zone for the property paying the fee. For purposes of fee collection all questions of land use classification will be determined at the discretion of the City.

APPENDICES

APPENDIX A: SUPPLEMENTAL CALCULATIONS

APPENDIX B: SCENARIO 2 COMPARISON

APPENDIX C: ORDINANCE AND RESOLUTION

APPENDIX A

SUPPLEMENTAL CALCULATIONS

Table A-1	Single Family Residential Fee Calculation.....	A-2
Table A-2	Flood Damage Percentage Calculation—Zone 2	A-3

APPENDIX A

SUPPLEMENTAL CALCULATIONS

Appendix A provides several back-up calculations to the tables presented in this Study. A brief description of the back-up tables included in this appendix appears below.

Table A-1 Demonstrates the methodology used to adjust the single family residential fee based on home size.

Table A-2 Calculates the Average Flood Damage percentages for Zone 2.

**Table A-1
West Sacramento Flood Protection - In-Lieu Fee Program
Single-Family Residential Fee Calculation**

Home Size	Average In-Lieu Fee	Median Home Size	Fee per Square Foot
Residential Single-Family Zone - 1	\$365	1,800	\$0.203
<1,100 sq. ft.	\$223	1,100	\$0.203
1,101 - 2,500 sq. ft.	\$365	1,800	\$0.203
>2,500 sq. ft.	\$507	2,500	\$0.203
Residential Single-Family Zone - 2	\$1,840	1,800	\$1.022
<1,100 sq. ft.	\$1,124	1,100	\$1.022
1,101 - 2,500 sq. ft.	\$1,840	1,800	\$1.022
>2,500 sq. ft.	\$2,555	2,500	\$1.022

"home_size"

**Table A-2
West Sacramento Flood Protection - In-Lieu Fee Program
Flood Damage Percentage Calculation - Zone 2**

Land Use	Formula	1 - 5 feet	5 - 10 feet	10 - 15 feet	Total
Residential					
Single-Family					
Building Square Feet	A	6,285,125	8,978,750	1,051,875	16,315,750
Assumed Damage Percentage [1]	B	33%	70%	79%	
Weighted Building Square Feet	C=AxB	2,074,091	6,285,125	830,981	9,190,198
Weighted Average Damage Percentage	D=A/C				56%
Multifamily					
Building Square Feet	E	461,666	342,588	0	804,254
Assumed Damage Percentage [1]	F	33%	70%	79%	
Weighted Building Square Feet	G=ExF	152,350	239,812	0	392,161
Weighted Average Damage Percentage	H=E/G				49%
Commercial [2]					
Retail					
Building Square Feet	I	2,287,519	935,732	90,586	3,313,837
Assumed Damage Percentage [1]	J	72%	125%	146%	
Weighted Building Square Feet	K=IxJ	1,647,014	1,169,665	132,256	2,948,934
Weighted Average Damage Percentage	L=I/K				89%
Office					
Building Square Feet	M	2,287,519	935,732	90,586	3,313,837
Assumed Damage Percentage [1]	N	72%	125%	146%	
Weighted Building Square Feet	O=MxN	1,647,014	1,169,665	132,256	2,948,934
Weighted Average Damage Percentage	P=M/O				89%
Industrial					
Building Square Feet	Q	9,054,707	6,636,273	0	15,690,980
Assumed Damage Percentage [1]	R	74%	105%	136%	
Weighted Building Square Feet	S=QxR	6,700,483	6,968,087	0	13,668,570
Weighted Average Damage Percentage	T=Q/S				87%
Total Building Square Feet		20,376,536	17,829,075	1,233,047	39,438,658

"z2_damage_perc"

Source: PB, Engineer's Report

[1] Assumed to be percentage damage to the structure and contents as outlined in the Engineer's Report.

[2] In the analysis performed by PB no distinction was made between Retail and Office land uses. Retail and Office are assumed to be subject to an equal risk of damage in an uncontrolled flood event.

APPENDIX B

SCENARIO 2 CALCULATIONS

Table B-1	Summary of Fees	B-2
Table B-2	Scenario 2 Fee Comparison	B-3

APPENDIX B

SCENARIO 2

COMPARISON

Appendix B provides a comparison between the Fee schedule proposed in this study, Scenario 3 and the Fee proposed in Scenario 2.

Table B-1 summarizes the fee schedule under the proposed funding for Scenario 2.

Table B-2 compares the fee schedule under the proposed funding for Scenario 2 to the proposed funding for Scenario 3.

**Table B-1
West Sacramento Flood Protection - In-Lieu Fee Program
Summary of Fees (2007\$)**

Scenario 2

Land Use	Zone 1 [1]	Zone 2
	-----Per Dwelling Unit-----	
Residential		
Single-Family [2]		
<1,100 sq. ft.	\$547	\$2,676
1,101 - 2,500 sq. ft.	\$895	\$4,379
>2,500 sq. ft.	\$1,243	\$6,082
Multifamily	\$274	\$3,233
	-----Per 1,000 Building Square Feet-----	
Commercial [3]		
Retail	\$1,105	\$5,568
Office	\$716	\$5,200
Industrial	\$256	\$2,496

"Scenario_2"

[1] Includes the Triangle Area and Pioneer Bluff east of South River Road.

[2] Gross building square feet.

[3] Mixed use development will be computerd proportionally to the percentage of land in each land use category.

**Table B-2
West Sacramento Flood Protection - In-Lieu Fee Program
Scenario 2 Fee Comparison**

Scenario 2

Land Use	Zone 1 [1]			Zone 2		
	Scenario 2	Scenario 3	Difference	Scenario 2	Scenario 3	Difference
-----Per Dwelling Unit-----						
Residential						
Single-Family [2]						
<1,100 sq. ft.	\$547	\$223	\$324	\$2,676	\$1,124	\$1,552
1,101 - 2,500 sq. ft.	\$895	\$365	\$530	\$4,379	\$1,840	\$2,539
>2,500 sq. ft.	\$1,243	\$507	\$736	\$6,082	\$2,555	\$3,527
Multifamily	\$274	\$115	\$160	\$3,233	\$1,359	\$1,874
-----Per 1,000 Building Square Feet-----						
Commercial [3]						
Retail	\$1,105	\$465	\$641	\$5,568	\$2,338	\$3,230
Office	\$716	\$301	\$415	\$5,200	\$2,183	\$3,017
Industrial	\$256	\$111	\$145	\$2,496	\$1,048	\$1,448

"Scenario_comp"

[1] Includes the Triangle Area and Pioneer Bluff east of South River Road.
 [2] Gross building square feet.
 [3] Mixed use development will be proportionally computed to the percentage of land in each land use category.

B-3

APPENDIX C

ORDINANCE AND RESOLUTION

City Ordinance 07-11.....	C-2
City Resolution 07-34	C-6

APPENDIX C

ORDINANCE AND RESOLUTION

Appendix C contains the City Ordinance that implements the In-Lieu Fee and the Resolution that sets the In-Lieu Fee into place.

City Ordinance 07-11 defines the authority of the City to implement the Flood Protection In-Lieu Fee.

City Resolution 07-34 sets into place the West Sacramento Flood Protection In-Lieu Fee.

ORDINANCE 07-11

**AN ORDINANCE OF THE CITY COUNCIL
OF THE CITY OF WEST SACRAMENTO
ENACTING CHAPTER 15.50 RELATED TO 200 YEAR FLOOD PROTECTION**

The City Council of the City of West Sacramento does ordain as follows:

Section 1. Amendment:

Chapter 15.50 of the West Sacramento Municipal Code is hereby added to read as follows:

Chapter 15.50

200 Year Flood Protection

Sections:

15.50.010	Authority
15.50.020	Purpose and Intent
15.50.030	Findings
15.50.040	Definitions
15.50.050	Applicability
15.50.060	No Building Permit Until Compliance Demonstrated
15.50.070	Administration
15.50.080	Integration with Title 18
15.50.090	No Mandatory Duty of Care
15.50.100	Judicial Review

15.50.010 Authority

This ordinance is adopted pursuant to the authority granted to cities under Art. XI, §7 of the California Constitution and the additional authority granted to cities by the legislature of the state of California through Government Code Sections 65302, 65560, and 65800, which confer upon local government units authority to adopt regulations designed to promote the public health, safety and general welfare of its citizenry.

15.50.020 Purpose and Intent

It is the purpose of this chapter, together with Title 18, to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Increase preparedness for flooding in order to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

D. Minimize prolonged business interruptions;

E. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in areas of special flood hazard.

15.50.030 Findings

The City Council of the City of West Sacramento finds and determines that:

A. The flood hazard areas of the city of West Sacramento are vulnerable to periodic inundation which could result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

B. These flood losses are caused by uses that are inadequately protected from flood damage. New construction in areas that do not meet the 200-year criteria further increases these flood losses and may result in an increase of flood heights also contributing to additional flood loss.

C. New federal standards coupled with heightened commitment to flood protection by state and federal agencies prompted the city of West Sacramento to reassess the adequacy of its flood control system and to establish a flood management program designed to provide a minimum 200-year flood protection.

D. New structures depend on and will benefit from flood protection improvements.

E. Flood protection improvements should be integrated with the existing levee system and with federal, state and regional flood management efforts.

F. Goal C, Policy 5 of the Public Facilities and Services Element of the West Sacramento General Plan provides that: "the City shall cooperate with other responsible agencies in ensuring that levees surrounding the city are maintained and improved to provide a minimum of 200-year flood protection."

15.50.040 Definitions

Except as otherwise provided below, terms shall have the meaning set forth in Title 18 unless a different intent is evident from the context of the term's use.

15.50.050 Applicability

A. General. This chapter shall apply to all projects involving the construction of a new structure requiring a building permit, irrespective of whether the project may have vested rights under California law prior to the effective date of this Chapter. The City hereby finds and determines that the requirements of this Chapter shall apply to projects with vested rights because failure to do so would place the residents of the project or the immediate community, or both, in a condition dangerous to their health or safety, or both.

B. Exceptions. This chapter shall not apply to:

1. A new structure that replaces a previously existing structure of similar type (e.g. single family home replacing another single family home) provided both of the following conditions apply:

- a. The replacement structure does not increase the square footage of the structure by more than 15 percent; and
 - b. The building permit application for construction of the new structure is filed within 12 months of the date the previous structure was removed.
2. A new structure if the building permit application for the structure was determined by the City to be complete prior to the effective date of this chapter.
 3. A new structure that is both an "accessory structure", as defined in Title 17, and is not intended for use as a dwelling.

15.50.060 No Building Permit Until Compliance Demonstrated

A. No building permit shall be issued in connection with the construction of any new structure until the applicant for the building permit demonstrates to the satisfaction of the Floodplain Administrator that: 1) prior to occupancy, the structure will have two hundred year flood protection; and 2) any improvements constructed or measures implemented by the applicant to ensure two hundred year flood protection will not significantly increase the risk of flooding or the effect of flooding on any adjacent or nearby properties.

B. An applicant shall demonstrate compliance with this chapter either by:

1. The construction of flood management improvements or other mitigation measures beyond those set forth in Title 18. The Floodplain Administrator shall review the design and sufficiency of any such improvements or mitigation measures and may approve, conditionally approve, or disapprove proposed improvements and measures.

2. The payment to the City of an in-lieu flood management fee in an amount established by resolution of the City Council. In-lieu flood management fees shall be paid at the time of issuance of building permits and the Director of Finance shall maintain and separately account for the fees, including the interest that may accrue, and shall permit use of the fees exclusively for the purpose of flood protection management.

15.50.070 Administration

A. Decisions of the Floodplain Administrator approving, conditionally approving, or disapproving proposed improvements or mitigation measures shall be subject to appeal to the City Council in accordance with the procedures set forth in chapter 1.08.

B. The City Manager may promulgate guidelines for the implementation of this Chapter.

C. In addition to the in-lieu fee described in section 15.50.060, the City Council may, by resolution, establish a reasonable fee for the administration of this Chapter, including the review of proposed flood management improvements.

15.50.080 Integration with Title 18

The requirements set forth in this chapter shall be in addition to those contained in Title 18, and compliance with the requirements of this chapter or Title 18 shall not be deemed to be compliance with the other. In the event of any conflict between any provision contained in this chapter and Title 18, the more restrictive provision shall control.

15.50.090 No Mandatory Duty of Care

Nothing in this chapter shall be construed as requiring the city to enforce its provisions against any individual in violation hereof. This chapter is not intended to and shall not be construed or given effect in a manner that imposes upon the city or any officer or employee thereof a mandatory duty of care towards persons and property within or without the city so as to provide a basis of civil liability for damages, except as otherwise imposed by law.

15.50.100 Judicial Review

Nothing in this Chapter shall in any way preclude or limit any aggrieved party from seeking judicial review after such person has exhausted the administrative remedies provided in this Chapter. However, it shall be conclusively presumed that a litigant has not exhausted administrative remedies of any and all issues not raised in the administrative proceedings authorized herein.

Section 2. Severability

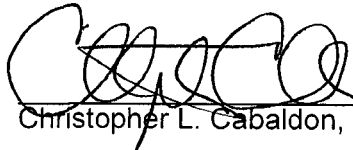
If any section, subsection, paragraph, sentence, clause or phrase of this Ordinance for any reason shall be held to be invalid or unconstitutional, the decision shall not affect the remaining portions of the Ordinance. The Council of the City of West Sacramento hereby declares that it would have passed this Ordinance and each article, section, subsection, paragraph, sentence, clause or phrase which is a part thereof, irrespective of the fact that any one or more articles, sections, subsections, paragraphs, sentences, clauses or phrases are declared to be invalid or unconstitutional.

Section 3. Effective Date and Publication

This ordinance shall take effect sixty (60) days after its adoption and, pursuant to Resolution 99-46, shall be published in summary format prior to adoption, and within fifteen (15) days after adoption, in a newspaper of general circulation published and circulated within the City of West Sacramento.

PASSED AND ADOPTED by the City Council of the City of West Sacramento this 2nd day of May, 2007, by the following vote:

AYES: Beers, Johannessen, Kristoff, Villegas, Cabaldon
NOES: None
ABSENT: None



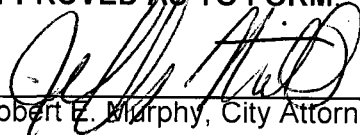
Christopher L. Cabaldon, Mayor

ATTEST:



Kryss Rankin, City Clerk

APPROVED AS TO FORM:



for Robert E. Murphy, City Attorney

Codify

RESOLUTION 07-34

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WEST SACRAMENTO
ESTABLISHING AN IN-LIEU FLOOD PROTECTION FEE**

WHEREAS, the City Council is considering the adoption of Ordinance 07-11, which will add Chapter 15.50 to the West Sacramento Municipal Code ("Chapter 15.50");

WHEREAS, Chapter 15.50 will require that developers demonstrate that prior to occupancy new structures will have two-hundred-year-flood protection;

WHEREAS, Chapter 15.50 will permit a developer to demonstrate two-hundred-year-flood protection through either: i) the construction of flood improvements or other mitigation measures, beyond those otherwise required by the City's Floodplain Management ordinance (Title 18); or ii) the payment to the City of an In-Lieu Fees (the "In-Lieu Fees");

WHEREAS, the City retained the firm of Economic & Planning Systems ("EPS") to conduct a study to determine a reasonable method for apportioning the cost of levee improvements allocated to future development by land use category and determining the appropriate levels of the In-Lieu Fees that will be authorized by Chapter 15.50;

WHEREAS, EPS has prepared a report entitled the "West Sacramento Flood Protection In-Lieu Fee Study" dated April 11, 2007 together with the "Statement of Errata" dated April 18, 2007 (the "In-Lieu Fee Study"), which has been presented to the City Council and is incorporated herein by this reference;

WHEREAS, the In-Lieu Fee Study analyzes the anticipated cost of the levee improvements needed to ensure two-hundred-year-flood protection and demonstrates that, for those developers electing to pay the In-Lieu Fees rather than construct improvements, the amount of the In-Lieu Fees are reasonable in light of the cost of these improvements and the other funding sources which the City anticipates will be available to finance those costs;

WHEREAS, the City Council finds that the schedule for the In-Lieu Fees set forth in Exhibit A attached hereto is consistent with the West Sacramento General Plan and Chapter 15.50;

WHEREAS, pursuant to Government Code section 66018, notice of a public hearing before the City Council on the In-Lieu Fees was published twice in the News Ledger at least five days apart, commencing at least ten days prior to the date of this resolution;

WHEREAS, the duly noticed public hearing was held on April 18, 2007, at which

hearing public testimony concerning the proposed In-Lieu Fees was received and duly considered;

WHEREAS, adoption of the In-Lieu Fees is not a "project" subject to the California Environmental Quality Act because it is a funding mechanism having no physical effect on the environment;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of West Sacramento:

1. Approval of Findings and Recitals. After considering the information and determinations contained in the In-Lieu Fee Study and the testimony received at the public hearing, the City Council hereby approves and expressly adopts the findings, determinations, and conclusions contained in the In-Lieu Fee Study. Furthermore, the recitals set forth above are approved and incorporated herein by reference.

2. Approval of In-Lieu Fees. The In-Lieu Fees set forth in Exhibit A attached hereto are hereby approved contingent on adoption of Ordinance 07-11.

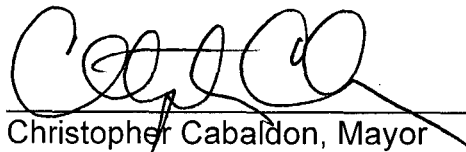
3. Effective Date. The In-Lieu Fees authorized by this Resolution shall become effective 60 days after the date of the adoption of this Resolution.

PASSED AND ADOPTED by the City Council of the City of West Sacramento this 18th day of April, 2007.

AYES: Beers, Johannessen, Villegas, Cabaldon.

NOES: None.

ABSENT: Kristoff.


Christopher Cabaldon, Mayor

Attest:


Krissy Rankin, City Clerk

EXHIBIT A OF RESOLUTION 07-34

<p>CITY OF WEST SACRAMENTO IN-LIEU FLOOD PROTECTION FEES BY LAND USE</p>

The in-lieu fee shall be adjusted each January 1st commencing January 1, 2008 to reflect inflationary costs. The fees shall be increased by the ratio which the Engineering News Record's Construction Cost Index (twenty cities) for the most recent December bears to the December 2007 index.

Land Use [3]	Summary of Flood Protection In-Lieu Fees (2007\$)	
	Zone 1 [1]	Zone 2 [1]
Residential	-----Per Dwelling Unit-----	
Single Family [2]		
<1,100 sq. ft.	\$223	\$1,124
1,101 - 2,500 sq. ft.	\$365	\$1,840
>2,500 sq. ft.	\$507	\$2,555
Multi-Family < 900 sq.ft. [4]	\$77	\$906
Multi-Family > 900 sq.ft. [4]	\$115	\$1,359
	-----Per 1,000 Building Square Feet-----	
Commercial		
Retail	\$465	\$2,338
Office	\$301	\$2,183
Industrial	\$111	\$1,048

"summary"

[1] Zone 1 includes the Triangle Area and Pioneer Bluff east of South River Road (high ground) and Zone 2 is the rest of the City.

[2] Gross building square feet.

[3] Land uses are defined as follows:

 Single-family – This designation provides for single-family homes and duplexes, and similar uses.

 Multi-family – This designation provides for multifamily units, triplex units, higher density housing, and similar uses.

 Retail – This designation provides for light retail, including, but not limited to, eating and drinking establishments, grocery stores, and general merchandise, similar uses.

 Office – This designation provides for professional and administrative offices, medical and dental clinics, laboratories, financial institutions, and similar uses.

 Industrial – This designation provides for industrial parks, heavy retail, sales, service, wholesale commercial, warehouses, distribution centers, fuel storage, trucking terminals, railroad facilities, manufacturing, and similar uses.

 Mixed Use – This designation provides for development projects that are a combination of the other Land Use classifications. Mixed use development will be proportionally computed to the percentage of land in each land use category.

[4] Varying the multi-family fee for two unit sizes was calculated by dividing the multi-family fee (\$1,359) by the average size of multi-family units (900 sq.ft.) and applying that amount (\$1.51 per sq.ft.) to a 600 sq.ft. unit, which is reflective of an average size unit in the under 900 sq.ft. category.