

CHAPTER 7. FUNDING

King County faces significant challenges in the years ahead to deal with a deteriorating system of flood protection facilities, most which were built nearly five decades ago. Many flood protection facilities are currently damaged, are not regularly or adequately maintained due to funding limitations, and are subject to major damage or failure during a major flood event. Failure of these facilities could have dramatic and adverse impacts on people's lives and property. Adverse impacts from floods also extend to roads, bridges and other public and private infrastructure and cause significant impacts on important natural and environmental resources.

Maintaining and reconstructing King County's flood risk reduction infrastructure to present day standards is vitally important for public safety and for the economic well being of King County. Continuing the current, limited levels of service for ongoing maintenance and repair will inevitably result in the citizens of King County facing a flooding disaster with serious financial implications.

A strategic financial investment plan is essential to the future implementation of structural capital improvements; maintenance and repair of existing flood protection facilities; acquisition, relocation and elevation of repetitively damaged structures; and flood hazard mapping studies. In addition, flood hazard warning and education are essential to protecting the significant public and private investments throughout King County. However, King County's limited fixed funding sources jeopardize the ability to provide regional, comprehensive flood hazard management services that ensure protection of public safety in the event of a flood disaster.

This chapter describes existing funding sources and accomplishments, federal and state partnerships, levy increase limitations, short- and long-term funding levels, new or expanded funding options, and a recommendation for a new regional funding source. The recommendation presented is to establish and enact a countywide flood control zone district at a funding level necessary to provide enhanced flood hazard management services that will ensure long-term funding of flood risk reduction actions to protect lives, public and private properties, regional economic centers, natural resources and prime agricultural soils.

7.1 LOCAL FUNDING DEDICATED FOR FLOOD RISK REDUCTION

Existing dedicated sources for funding the recommendations in this Plan through the River and Floodplain Management Program are the countywide River Improvement Fund, the Inter-County River Improvement Fund, and the Green River Flood Control Zone District. Annual funding from these sources in recent years has been between \$3.3 million and \$3.5 million, while the total projected annual need to accomplish all Action Plan recommendations is a minimum \$17.9 million and up to \$33.5 million annually over the next 10 years.

7.1.1 Current Funding

The River Improvement Fund and the Green River Flood Control Zone District property tax levies are the major revenue sources for the River and Floodplain Management Program and represent 98.6 percent of the dedicated funds, based on 2005 revenues. The remaining 1.4 percent of dedicated funds comes from the Inter-County River Improvement Fund. Tables 7-1 and 7-2 summarize average annual revenues from these sources and revenue trends from 1991 through 2005.

**TABLE 7-1.
RIVER AND FLOODPLAIN MANAGEMENT PROGRAM LEVY AMOUNTS, 1991-2005**

Year	Yearly Levy Revenue			Total
	River Improvement Fund	Green River Flood Control Zone District	Inter-County River Improvement Fund	
1991	\$1,744,871	\$410,505	\$49,761	\$2,205,137
1992	\$1,924,521	\$447,721	\$50,049	\$2,422,291
1993	\$1,925,619	\$474,607	\$50,339	\$2,450,565
1994	\$1,925,918	\$502,979	\$50,028	\$2,478,925
1995	\$1,924,680	\$533,178	\$49,775	\$2,507,633
1996	\$1,950,239	\$565,205	\$49,803	\$2,565,247
1997	\$1,950,066	\$599,125	\$50,198	\$2,599,389
1998	\$1,950,101	\$635,052	\$50,016	\$2,635,169
1999	\$2,159,870	\$714,606	\$50,476	\$2,924,952
2000	\$2,189,774	\$748,642	\$49,891	\$2,988,307
2001	\$2,277,832	\$786,904	\$50,352	\$3,115,088
2002	\$2,362,974	\$799,554	\$50,545	\$3,213,073
2003	\$2,428,529	\$849,988	\$49,464	\$3,327,981
2004	\$2,498,868	\$873,826	\$49,039	\$3,421,733
2005	\$2,575,805	\$901,356	\$49,331	\$3,526,492

Source: King County Department of Assessment's 1991-2005 Annual Reports

**TABLE 7-2.
LEVY INCREASE AND PERCENT CHANGE, 1991-2005**

	River Improvement Fund	Green River Flood Control Zone District	Inter-County River Improvement Fund	Total
Levy Increase, 1991–2005	\$830,934	\$490,851	\$(430)	\$1,321,355
Percent Change, 1991–2005	47.6%	119.6%	-0.9%	59.9%
Average Annual Increase	3.4%	8.5%	-0.1%	4.3%

These dedicated funding sources changed over this 14-year period as follows:

- The River Improvement Fund levy increased nearly \$831,000, an increase of 47.6 percent for this period, or 3.4 percent annually. The levy rate was not increased between 1992 and 1998. An increase in the levy rate was requested and approved in 1999 and in each successive year through 2006.
- The Green River Flood Control Zone District levy increased \$490,851, an increase of 119.6 percent for this period, or 8.5 percent annually. The Green River Flood Control Zone District's Executive Committee recommended, and its Board of Supervisors approved, levy increases up to the statutory limits over each prior year's levy.

- The Inter-County River Improvement Fund levy has remained relatively constant at approximately \$50,000 annually since 1991.

7.1.2 Impacts of Levy Increase Limitations

Prior to 1997, taxing districts were limited to an annual property tax levy increase of 6 percent over the prior year's levy plus an allowance for new construction values. Under Washington State Referendum 47, passed by voters in 1997, the annual increase in levy revenue remained limited to 6 percent; however, to enact an increase greater than the general inflation rate required a super-majority vote by the taxing district's governing body. Many jurisdictions, including King County, responded to this initiative by limiting the annual growth in property taxes to the general rate of inflation.

In 2001, Washington State voters approved Initiative 747, which changed the 6 percent limit to 1 percent. The state law, which went into effect in 2002, limits annual levy revenue increases to 1 percent, unless a majority of voters approve a larger increase. This limitation affects King County's ability to fund flood hazard management projects and programs because the River Improvement Fund and Inter-County River Improvement Fund property tax levies are effectively allocations of the countywide general property tax levy which the Current Expense, or general fund, relies on for funding other essential programs. As such, this limitation does not provide financial surety for revenue to keep pace with inflation, nor is it adequate to maintain service levels needed to provide long-term regional, comprehensive flood hazard management services and corresponding benefits to King County residents. Furthermore, the limited funding results in flood damage risks at a level that would likely be deemed unacceptable by those residents.

As the assessed valuation of properties in King County appreciates at a rate greater than the 1-percent levy rate increase limit set by Initiative 747, the levy rate and total levy revenue decrease relative to existing property values. Since passage of the 1-percent annual levy increase limit, the average annual levy increase for all dedicated River and Floodplain Management Program funds has been 3.3 percent (see Table 7-3). The increase beyond 1 percent is directly attributable to new construction values that are added to King County's total assessed valuation, which is not included in the levy increase limit. While levy increases have been relatively consistent with the rate of inflation, the resultant level of funding is inadequate to address the total flood risk reduction needs.

**TABLE 7-3.
LEVY INCREASE AND PERCENT CHANGE, 2002-2005**

	River Improvement Fund	Green River Flood Control Zone District	Inter-County River Improvement Fund	Total
Levy Increase 2002–2005	\$212,831	\$101,802	\$(1,214)	\$313,419
Percent Change 2002–2005	9.0%	12.7%	-2.4%	9.8%
Avg. Annual Increase	3.0%	4.2%	-0.8%	3.3%
See Table 7-1 for annual levy amounts.				

7.1.3 River Improvement Fund

The River and Floodplain Management Program and the majority of regional flood management services are largely funded by the River Improvement Fund, created in the 1950s for the purpose of funding the construction and repair of flood control facilities on major rivers throughout King County. Authorized under Chapter 86.12 RCW, the River Improvement Fund is a countywide property tax levy, including

properties in incorporated cities, assessed at an equal levy rate and based on a property's total taxable assessed valuation. Based on King County's Department of Assessments, the 2005 River Improvement Fund levy rate is \$0.01039 per \$1,000 of assessed value and generated \$2.58 million in levy revenue in 2005. The owner of a property assessed at \$303,000—the amount of a 2006 median priced home in King County—paid \$3.15 to the River Improvement Fund levy in 2005.

Under state law, the River Improvement Fund levy can be assessed up to a rate of \$0.25 per \$1,000 of assessed value. As explained above, however, this authorization must fall within the countywide levy which also provides a significant portion of King County's general fund revenues. Since the mid-1980s, the River Improvement Fund levy has averaged under \$0.02 per \$1,000 of assessed value and in recent years has been \$0.01 per \$1,000 of assessed value. The King County Council's ability to increase the River Improvement Fund levy by direct action is constrained by the limitations of Initiative 747 on the countywide levy. The majority of the countywide levy is allocated to the general fund, also known as the Current Expense fund, and funds other mandatory and essential services, including police, public health, courts and other criminal justice programs. The connection of the River Improvement Fund to King County's general levy and Current Expense fund limits the ability to capture the difference between the statutory maximum and the current levy rate value. Because state law sets limits on both the total tax levy and the annual rate of increase in tax revenue collected, the revenue generated by the River Improvement Fund levy as a component of King County's general levy competes with other essential and mandatory services.

In order for King County's general countywide levy to stay within statutory levy limits, any increases in the River Improvement Fund levy must be offset by equivalent reductions in funding for other services funded by King County's general levy. Increases in the River Improvement Fund levy without such offsets could only be increased by a majority vote of King County voters to allow an increase that exceeds state limits.

7.1.4 Green River Flood Control Zone District

Several flood control zone districts have been created in King County to raise funds for construction and maintenance activities in specific areas and along specific rivers. Presently, the Green River Flood Control Zone District remains the only active flood control zone district in King County that generates revenue. Annual funding for the Green River Flood Control Zone District in recent years has been between \$850,000 and \$900,000, while the total projected annual need to accomplish identified recommendations of this Plan within the Green River Flood Control Zone District is over \$4.5 million annually.

The Green River Flood Control Zone District, which is a quasi-municipal corporation and independent taxing authority of the State of Washington authorized by Chapter 86.15 RCW, was originally established with concurrence of the affected Lower Green River valley cities of Tukwila, Renton, Kent and Auburn in 1960. Early activities were limited to local sponsorship of federal flood control improvements affecting tributaries to the Green River, such as construction of the pump stations serving the Springbrook Creek and Southcenter drainage, and some limited property acquisitions affecting Mill Creek channels in Auburn. In 1978, King County and the Green River valley cities signed an interlocal agreement to form the Green River Basin Program, which supported a more comprehensive and programmatic interjurisdictional flood control and drainage program for the Lower Green River Basin. The Green River Basin Program was funded by a cost-share agreement between King County and the Lower Green River cities.

In 1990, the King County Council passed Resolution GR-1, which activated the Green River Flood Control Zone District's taxing authority and established the first budget and levy for the Green River

Flood Control Zone District at approximately \$550,000. The purposes of the Green River Flood Control Zone District as established in the enacting legislation include funding the operation, maintenance and repair of levees, revetments and pump stations on the Green River and administration of the program. In 1992 and 2002, 10-year interlocal agreements between King County and the Lower Green River cities were executed that set forth standards and procedures for maintaining and repairing the levees and revetments within the District's boundaries.

Since the early 1990s, District revenue has been generated through an ad valorem tax levy on all taxable properties within its boundaries. According to King County's Department of Assessments, the Green River Flood Control Zone District's levy rate in 2005 was \$0.04658 per \$1,000 of assessed valuation and generated approximately \$900,000. The owner of a property assessed at \$303,000 paid \$14.11 to the Green River Flood Control Zone District levy in 2005.

State law limits the annual increase in total District levy revenue to 1 percent; as the assessed valuation of properties in the District appreciates at a rate greater than 1 percent, the District's relative levy rate and total levy revenue decrease relative to existing property values. However, new construction values also affect the District's overall levy rate and provide a source of revenue beyond the 1 percent in existing assessed property valuations. New construction values generate approximately \$15,000 annually in additional levy funds.

7.1.5 Inter-County River Improvement

Under Washington State law, whenever a river forms the boundary or part of the boundary between two counties or where the river waters alternate between counties with potential for flood damage in both counties, the counties may enter into an interlocal agreement to cooperatively develop and fund flood control improvements and maintenance.

King and Pierce Counties created the Inter-County River Improvement in 1914, under the authorization of Chapter 86.13 RCW, for the purpose of jointly funding maintenance and repair of flood protection facilities along the White and Puyallup Rivers.

The Inter-County River Improvement Fund is a countywide property tax levy within King County assessed at an equal levy rate and based on a property's total taxable assessed valuation. From 1991 through 2005, the Inter-County River Improvement Fund tax levy has remained constant, collecting approximately \$50,000 per year, while the total projected need to accomplish high priority White River recommendations identified in the Plan is over \$1.12 million annually.

The 2005 Inter-County River Improvement Fund levy rate was \$0.0002 per \$1,000 of assessed value. The owner of a property assessed at \$303,000 paid \$0.06 to the Inter-County River Improvement levy in 2005.

Like the River Improvement Fund, the Inter-County River Improvement levy is a component of King County's general levy and subject to statutory levy limits. Any levy increases beyond 1 percent in the Inter-County River Improvement levy must be offset by equivalent reductions in funding for other services funded by King County's general levy, unless a majority vote of King County voters approves an increase that exceeds statutory levy limits.

7.1.6 Historical Project and Program Expenditures

The River and Floodplain Management Program has made significant progress on the implementation of flood risk reduction projects since 1991. Over \$34 million in capital projects and technical studies have been accomplished, with a 2-to-1 leverage rate of federal and state funds to local dedicated funds for these

projects. Tables 7-4 and 7-5 summarize the accomplishments since 1991 by major program area, river basin and funding source.

**TABLE 7-4.
ACCOMPLISHMENTS BY PROGRAM AND RIVER BASIN, 1991-2005**

Program	Local Funds	Federal and State Funds	Total
Facility Repair & Construction			
Cedar	\$747,700	\$1,478,800	\$2,226,500
Green	\$3,544,200	\$6,184,200	\$9,728,400
Sammamish	\$191,900	\$348,100	\$540,000
Skykomish	\$124,400	\$403,400	\$527,800
Snoqualmie	\$3,572,500	\$8,391,000	\$11,963,500
White	\$35,300	\$46,600	\$81,900
<i>Facility Repair & Construction Total</i>	\$8,216,000	\$16,852,100	\$25,068,100
Acquisition			
Cedar	\$860,900	\$2,281,500	\$3,142,400
Green	\$38,600	\$247,000	\$285,600
Snoqualmie	\$222,700	\$1,767,100	\$1,989,800
White	\$260,000	\$545,000	\$805,000
<i>Acquisition Total</i>	\$1,382,200	\$4,840,600	\$6,222,800
Floodplain Mapping			
Cedar	\$203,800	\$29,500	\$233,300
Green	\$120,700	—	\$120,700
Skykomish	\$88,900	\$123,200	\$212,100
Snoqualmie	\$415,600	\$806,000	\$1,221,600
<i>Floodplain Mapping Total</i>	\$829,000	\$958,700	\$1,787,700
Channel Migration Zone Mapping			
Cedar	\$16,000	\$47,500	\$63,500
Green	\$63,000	—	\$63,000
Skykomish	\$15,000	\$45,000	\$60,000
Snoqualmie	\$140,000	—	\$140,000
White	\$51,000	—	\$51,000
<i>Channel Migration Zone Mapping Total</i>	\$285,000	\$92,500	\$377,500
Home Elevation			
Snoqualmie	\$4,800	\$562,400	\$567,200
<i>Home Elevation Total</i>	\$4,800	\$562,400	\$567,200
TOTAL	\$10,717,000	\$23,306,300	\$34,023,300

**TABLE 7-5.
ACCOMPLISHMENTS BY RIVER BASIN AND PROGRAM, 1991-2005**

River Basin	Local Funds	Federal and State Funds	Total
South Fork Skykomish River			
Facility Repair & Construction	\$124,400	\$403,400	\$527,800
Floodplain Mapping	\$88,900	\$123,200	\$212,100
Channel Migration Zone Mapping	\$15,000	\$45,000	\$60,000
<i>South Fork Skykomish Total</i>	<i>\$228,300</i>	<i>\$571,600</i>	<i>\$799,900</i>
Snoqualmie River			
Facility Repair & Construction	\$3,572,500	\$8,391,000	\$11,963,500
Acquisition	\$222,700	\$1,767,100	\$1,989,800
Floodplain Mapping	\$415,600	\$806,000	\$1,221,600
Channel Migration Zone Mapping	\$140,000	—	\$140,000
Home Elevation	\$4,800	\$562,400	\$567,200
<i>Snoqualmie River Total</i>	<i>\$4,355,600</i>	<i>\$11,526,500</i>	<i>\$15,882,100</i>
Sammamish River			
Facility Repair & Construction	\$191,900	\$348,100	\$540,000
<i>Sammamish River Total</i>	<i>\$191,900</i>	<i>\$348,100</i>	<i>\$540,000</i>
Cedar River			
Facility Repair & Construction	\$747,700	\$1,478,800	\$2,226,500
Acquisition	\$860,900	\$2,281,500	\$3,142,400
Floodplain Mapping	\$203,800	\$29,500	\$233,300
Channel Migration Zone Mapping	\$16,000	\$47,500	\$63,500
<i>Cedar River Total</i>	<i>\$1,828,400</i>	<i>\$3,837,300</i>	<i>\$5,665,700</i>
Green River			
Facility Repair & Construction	\$3,544,200	\$6,184,200	\$9,728,400
Acquisition	\$38,600	\$247,000	\$285,600
Floodplain Mapping	\$120,700	—	\$120,700
Channel Migration Zone Mapping	\$63,000	—	\$63,000
<i>Green River Total</i>	<i>\$3,766,500</i>	<i>\$6,431,200</i>	<i>\$10,197,700</i>
White River			
Facility Repair & Construction	\$35,300	\$46,600	\$81,900
Acquisition	\$260,000	\$545,000	\$805,000
Channel Migration Zone Mapping	\$51,000	—	\$51,000
<i>White River Total</i>	<i>\$346,300</i>	<i>\$591,600</i>	<i>\$937,900</i>
TOTAL	\$10,717,000	\$23,306,300	\$34,023,300

7.2 PLAN IMPLEMENTATION AND ACTION PLAN FUNDING

King County's current funding level and pay-as-you-go approach does not provide sufficient funding to address the existing needs for flood protection facility maintenance, repair and reconstruction. Existing dedicated funding sources must be enhanced in order for King County to provide adequate flood hazard management services and implement preventive projects and programs, or at a minimum to reverse the trend of declining levels of protection. In this section, the costs for project and program recommendations in the 10-year Action Plan are summarized and evaluated in light of existing local funds to calculate the shortfall in revenue for Plan implementation.

7.2.1 Summary of Action Plan Costs

This Plan's project and program recommendations, as described in the Action Plan detailed in Chapter 5 and summarized in Appendix F, have been divided into two categories: "status quo" and "enhanced."

- Status quo proposed actions can be completed in 10 years if current funding trends continue. The status quo recommendations include priority programs such as flood warning, flood protection facility assessment, routine maintenance, the River and Floodplain Management Program's 6-year capital improvement program, and retention of 12 employees, including engineering and program staff that manage and carry out all work.
- Enhanced proposed actions will require additional funding and time to complete, and would provide regional, comprehensive flood hazard management services to ensure protection of public safety.

When the River and Floodplain Management Program's 6-year capital improvement program is updated annually by the King County Council, a subset of the status quo and enhanced projects would be selected for implementation, based on feasibility, risk analysis, grant funding availability, annual facility conditions assessments and right-of-way fee simple or easement acquisitions. The categorization of proposed actions into status quo and enhanced funding provides a general sense of what can be accomplished with the two funding levels; actual implementation priorities may change as alternative analyses for each proposed action are developed and as field conditions change as result of future funding. It may be appropriate to implement some projects in phases over a long period, with early completion of phases that promise the greatest benefits or for which opportunities might be lost without prompt implementation.

Table 7-6 summarizes the estimated costs for status quo and enhanced recommended actions by river basin over a 10-year timeframe, as well as the total estimated costs of all recommended actions. Estimates of the actual cost to implement the Action Plan over a 10-year timeframe must factor in the rate of inflation in order to accurately represent the costs. Future value calculations of the costs identified in Table 7-6 have been calculated to include a constant 2.5-percent annual rate of inflation over the 10-year implementation timeframe. Table 7-7 shows Action Plan costs by year over the 10-year timeframe to demonstrate total revenues needs for full Action Plan implementation.

Additionally, Appendix G contains a complete listing of the known flood hazard management risk areas and flood protection facility maintenance needs identified by the River and Floodplain Management Program staff during the preparation of the *2006 King County Flood Hazard Management Plan*. Appendix G includes proposed projects in the Action Plan as well as a project list for which assessment and feasibility has yet to be completed. The total need for both project lists represents an estimated cost range of between \$179 million and \$335 million. Projects in Appendix G with completed assessment and feasibility will be considered during the River and Floodplain Management Program's annual 6-year capital improvement program update.

**TABLE 7-6.
FUNDING REQUIREMENTS FOR RECOMMENDED ACTIONS BY RIVER BASIN**

River Basin	Funding Requirement			Annualized Action Plan Costs
	Status Quo	Enhanced	Total	
Countywide Programs	\$14,035,000	\$4,550,000	\$18,585,000	\$21,341,000
Countywide Projects	\$2,700,000	\$23,275,000	\$25,975,000	\$29,828,000
South Fork Skykomish	\$3,493,000	\$4,494,000	\$7,987,000	\$9,172,000
Upper Snoqualmie	\$9,866,000	\$2,831,000	\$12,697,000	\$14,581,000
Lower Snoqualmie	\$2,959,000	\$5,589,000	\$8,548,000	\$9,816,000
Tolt	\$2,493,000	\$10,394,000	\$12,887,000	\$14,799,000
Raging	\$50,000	\$5,596,000	\$5,646,000	\$6,484,000
Sammamish	\$2,944,000	\$357,000	\$3,301,000	\$3,791,000
Cedar	\$1,297,000	\$25,339,000	\$26,636,000	\$30,587,000
Green	\$14,727,000	\$30,966,000	\$45,693,000	\$52,471,000
White	\$2,606,000	\$8,653,000	\$11,259,000	\$12,929,000
TOTAL	\$57,170,000	\$122,044,000	\$179,214,000	\$205,799,000

**TABLE 7-7.
ACTION PLAN COSTS BY YEAR**

Year	Amount
2007	\$18,369,000
2008	\$18,828,000
2009	\$19,299,000
2010	\$19,781,000
2011	\$20,276,000
2012	\$20,783,000
2013	\$21,303,000
2014	\$21,836,000
2015	\$22,382,000
2016	\$22,942,000
TOTAL	\$205,799,000

7.2.2 Projected Revenue

Existing dedicated sources for funding the Action Plan are the River Improvement Fund, the Green River Flood Control Zone District and the Inter-County River Improvement Fund. Table 7-8 shows projections of dedicated revenue for 2007 through 2016, based on the 2005 levy amounts for these sources and average annual levy increases over the past three years of 3.0 percent for the River Improvement Fund, 4.2 percent for the Green River Flood Control Zone District, and 1.0 percent for the Inter-County River Improvement Fund. Table 7-8 also lists projections of revenue from external sources, based on the River and Floodplain Management Program's historical leveraging experience.

**TABLE 7-8.
PROJECTED REVENUE BY YEAR**

Year	Dedicated Revenue	External Revenue	Total Revenue
2007	\$3,629,000	\$1,089,000	\$4,718,000
2008	\$3,738,000	\$1,121,000	\$4,859,000
2009	\$3,850,000	\$1,155,000	\$5,005,000
2010	\$3,966,000	\$1,190,000	\$5,156,000
2011	\$4,085,000	\$1,226,000	\$5,311,000
2012	\$4,208,000	\$1,262,000	\$5,470,000
2013	\$4,334,000	\$1,300,000	\$5,634,000
2014	\$4,464,000	\$1,339,000	\$5,803,000
2015	\$4,598,000	\$1,379,000	\$5,977,000
2016	\$4,736,000	\$1,421,000	\$6,157,000
TOTAL	\$41,608,000	\$12,482,000	\$54,090,000

7.2.3 Annual Revenue Shortfall for Action Plan Programs and Projects

Comparison of the estimated annual cost of the 10-year Action Plan against total projected annual revenue for the same period demonstrates a minimum funding shortfall of over \$151 million, as shown in Table 7-9. When the additional identified need in Appendix G is included, the total annualized shortfall is estimated between \$151 million and \$331 million.

**TABLE 7-9.
ESTIMATED MINIMUM ANNUAL REVENUE SHORTFALL**

Year	Total Need	Total Revenue	Minimum Annual Shortfall
2007	\$18,369,000	\$4,718,000	\$13,651,000
2008	\$18,828,000	\$4,859,000	\$13,969,000
2009	\$19,299,000	\$5,005,000	\$14,294,000
2010	\$19,781,000	\$5,156,000	\$14,625,000
2011	\$20,276,000	\$5,311,000	\$14,965,000
2012	\$20,783,000	\$5,470,000	\$15,313,000
2013	\$21,303,000	\$5,634,000	\$15,669,000
2014	\$21,836,000	\$5,803,000	\$16,033,000
2015	\$22,382,000	\$5,977,000	\$16,405,000
2016	\$22,942,000	\$6,157,000	\$16,785,000
TOTAL	\$205,799,000	\$54,090,000	\$151,709,000

7.2.4 Designated Emergency Fund

In addition to the funding requirements for the status quo and enhanced programs and projects, the River and Floodplain Management Program's unmet funding needs include a designated source of local funds to match federal and state funds that are available in declared flood disasters. In order for King County to appropriately respond to federally declared flood disasters, it is necessary to set aside funds to respond to federally declared flood disaster with financial certainty. The current River Improvement Fund balance is not sufficient to meet these needs. Following the federal disasters in 1990, 1995 and 1996, King County was unable to take full advantage of available disaster funds due in part to the lack of local matching funds. Thus, King County was unable to repair all damaged facilities and, in some cases, these facilities became ineligible for future federal disaster funding. (The current status of King County flood protection facility eligibility for federal funding is provided in Appendix E.)

A designated emergency fund established by explicit criteria would put King County in a position to maximize opportunities for disaster funds. The designated emergency fund would be used for facility repairs and flood mitigation projects, thereby capitalizing on opportunities to implement project recommendations identified in this Plan. Although most federal grant programs allow for "in-kind" services to be applied to the local match, having a dedicated source of funding available enhances a project's chances for funding from competitive programs such as FEMA's Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program. A defined accumulation of funds and specific objectives for their expenditure should be determined, and the designated fund balance should carry over from year to year. The reserve allocation would be based on such factors as known historical damage and federal and state public assistance cost-share standards for flood disaster recovery.

For instance, the Green River Flood Control Zone District established a designated fund balance in 1993 for two purposes:

- Future use as local match for federal and state disaster assistance funding and grants following federally declared flood disaster events
- Repair, replacement and upgrade of equipment at the Green River pump stations.

Annually, \$50,300 in Green River Flood Control Zone District funds are set aside; \$11,000 for local flood disaster assistance match and \$39,300 for pump station equipment repair, replacement and upgrades. The accumulation of the designated fund balance has provided surety in the event of a flood that requires significant financial contributions for local match and repair costs. Through 2005, \$697,830 has been set aside in the Green River Flood Control Zone District's designated fund.

In contrast, the River Improvement Fund balance target is based on 7 percent of annual adopted revenues in order to retain sufficient funds for unforeseen supplemental expenditure needs. Based on the 2005 levy collections of \$2.6 million, the River Improvement Fund balance is set at approximately \$182,000.

Using combined damage costs from the November 1995 and February 1996 federally declared flood disaster events of \$7.26 million (See Table 3-3), and adjusting this amount to present value dollars assuming a constant 2.5-percent rate of inflation, those costs in today's dollars would be \$9.29 million. Historically, approximately 25 percent of the damage costs in federally declared flood events have been the responsibility of the local jurisdiction. As such, a designated emergency fund balance of about \$2.5 million would be required to ensure that King County could meet its share of repair costs for two events such as these within a relatively short time period. The Action Plan includes a recommendation to annually set aside a pre-designated amount of funds over the 10-year period in order to achieve a \$2.5 million designated fund balance, which should be deposited into an account for interest earning

capabilities. This would also shelter the Current Expense fund from being drawn upon for local match as a last resort.

7.3 POTENTIAL NEW AND ENHANCED LOCAL FUNDING OPTIONS

The Action Plan identifies priority repairs and maintenance actions for flood protection facilities throughout King County to achieve desired standards for public safety and to implement high priority flood risk reduction projects. This section describes new and enhanced funding options and a recommendation to address the total annualized revenue shortfall estimated between \$151 million and \$331 million to implement the high priority recommendations identified in this Plan and additional identified needs in Appendix G. Each option's legal, financial and implementation considerations are summarized for further review and action by the King County Council.

7.3.1 River Improvement Fund Levy Increase

The River Improvement Fund levy is currently assessed at approximately \$0.01 per \$1,000 of assessed valuation, although state law allows it to be assessed up to \$0.25 per \$1,000 of assessed value. Given the River Improvement Fund levy's connection to King County's general levy and Current Expense fund, the ability to increase the River Improvement Fund levy is limited, because the levy competes with other mandatory and essential services, including police, public health, courts and other criminal justice services. An increase in the River Improvement Fund levy that exceeds statutory levy limits, without directly impacting other current programs, could only be enacted with a majority vote of King County voters. Support for offsetting funds from mandatory and essential services to pay for flood hazard reduction purposes would likely meet significant opposition; and voters may not approve of this option if they do not fully recognize the regional economic impacts of flooding. Therefore, this option is not considered to be a viable, long-term funding solution for Plan implementation.

7.3.2 Surface Water Management Fee Increase

King County is required by state and federal law to provide surface water management services in unincorporated King County. King County Code currently authorizes the County to collect \$102 annually for a single-family residential property and a scaled fee based on impervious surface for all commercial property on all unincorporated parcels. King County's surface water management fees are used to pay for the design and construction of stormwater control facilities to improve local drainage and water quality. Enhanced King County surface water management fees could be designated to help support flood risk reduction projects and programs by resolution with a majority vote of the King County Council.

However, several issues and limitations make this option impractical and not an appropriate or significant future source of funds for Plan implementation:

- First and foremost, the surface water management fee addresses local stormwater issues in unincorporated King County only whereas flooding and its impacts are a regional countywide issue.
- Second, current surface water management revenues would be inadequate to support other high priority and legally mandated programs, such as responding to requirements of the Endangered Species Act and National Pollution Discharge Elimination System, while concurrently funding countywide flood risk reduction programs and projects.
- Third, King County's surface water management fees are collected only in unincorporated areas of King County while proposed projects and programs provide regional benefits in incorporated areas as well.

- Last, over the next 10 years it is anticipated that approximately 46 percent of the surface water management fees will be lost to annexations and incorporations throughout King County.

7.3.3 Countywide or Basin-Level Flood Control Zone Districts

Countywide Flood Control Zone Districts

RCW 86.15.025 gives King County the authority to establish either countywide or basin-level flood control zone districts that would create additional opportunities for new, dedicated funding sources and a dedicated countywide district to ensure effective implementation. Such districts can incorporate the boundaries of any and all watersheds located within the county that are not already specifically organized into a flood control zone district. The purpose of a flood control zone district is to undertake, operate or maintain flood control projects or stormwater control projects that are of benefit to a specified area.

The King County Council has the authority by resolution to establish a countywide flood control zone district. However, flood control zone districts cannot overlap and therefore active districts like the Green River Flood Control Zone District and Patterson Creek Flood Control Zone District, along with inactive flood control zone districts would have to be abolished if a countywide district were formed. Under this scenario, the existing Green River Flood Control Zone District's existing programmatic costs and enhanced capital project needs would be incorporated into the countywide district's responsibilities and authorities. No levy is currently collected within the Patterson Creek Flood Control Zone District. However, this district has a very active Advisory Committee which has partnered with the county on a number of grant-funded flood hazard, water quality, and fish habitat projects. The Patterson Creek Flood Control Zone District Advisory Committee has requested that the County Council establish a new Patterson Creek Citizens Advisory Committee in the event that a countywide district is created and the Patterson Creek Flood Control Zone District is abolished. The River Improvement Fund and Inter-County River Improvement Fund levies would be unaffected by the creation of a countywide flood control zone district.

In 2003, the Washington State legislature amended Chapter 86.15 RCW to allow flood control zone districts to participate in and expend up to ten percent of revenues on cooperative watershed management actions, including watershed management partnerships and other intergovernmental agreements, for purposes of water supply, water quality, and water resource and habitat protection and management. The extension of these authorities, however, was not extended to Chapter 86.12 RCW for River Improvement Fund activities and Chapter 86.13 RCW for Inter-County River Improvement activities.

Flood Control Zone District Funding

Funding for a flood control zone district may be initiated through an ad valorem tax levy, similarly to the Green River Flood Control Zone District, based on the total assessed valuation of taxable property within the district's designated boundaries. Under state law, a flood control zone district levy can be assessed up to a rate of \$0.50 per \$1,000 of assessed value.

Article 7, Section 2 of the Washington Constitution limits the amount of property tax that may be imposed on an individual parcel of property without voter approval to 1 percent of its true and fair value. Taxes imposed under the 1 percent limit are termed "regular" levies, and they are further restricted by statute as follows (see Figure 7-1):

- The state portion of the property tax levy is limited to \$3.60 per \$1,000 of assessed value.
- The county portion of the property tax levy is limited to \$1.80 per \$1,000 of assessed value.

- The portion of the property tax levy for cities and towns is limited to \$3.375 per \$1,000 of assessed value.
- The combined levies by cities, counties, and junior taxing districts are limited to \$5.90 per \$1,000 of assessed value. If the combined rates of these districts exceed \$5.90, the rates of these taxing districts are reduced according to statutorily set priorities until the combined rate is within the \$5.90 limit.

Currently, the excess capacity within the \$5.90 limit varies across jurisdictions, based on voter-approved levies, and ranges upward from a minimum of approximately \$0.35. Sufficient capacity currently exists within the \$5.90 limit to implement all proposed actions in the 10-year Action Plan as well as additional projects to address identified areas at risk from flooding in Appendix G.

Table 7-10 shows the priorities established by statute for taxing authorities included in the \$5.90 limit on total local levies. A flood control zone district would be among the lowest priority taxing authorities—sixth out of seven categories—should the levies of local agencies exceed the \$5.90 limit and have to be scaled back. State statutes require that the lowest priority taxing district have its tax levy reduced pro rata or eliminated until the total levy limit is no longer exceeded. This represents a potential risk to funding reliability should a new flood control zone district be established. However, as noted above, there is currently excess levy capacity of approximately \$0.35 and due to decreasing levy rates created by rising assessed valuations and the 1 percent tax levy increase limit established by Initiative 747, this risk is significantly reduced.

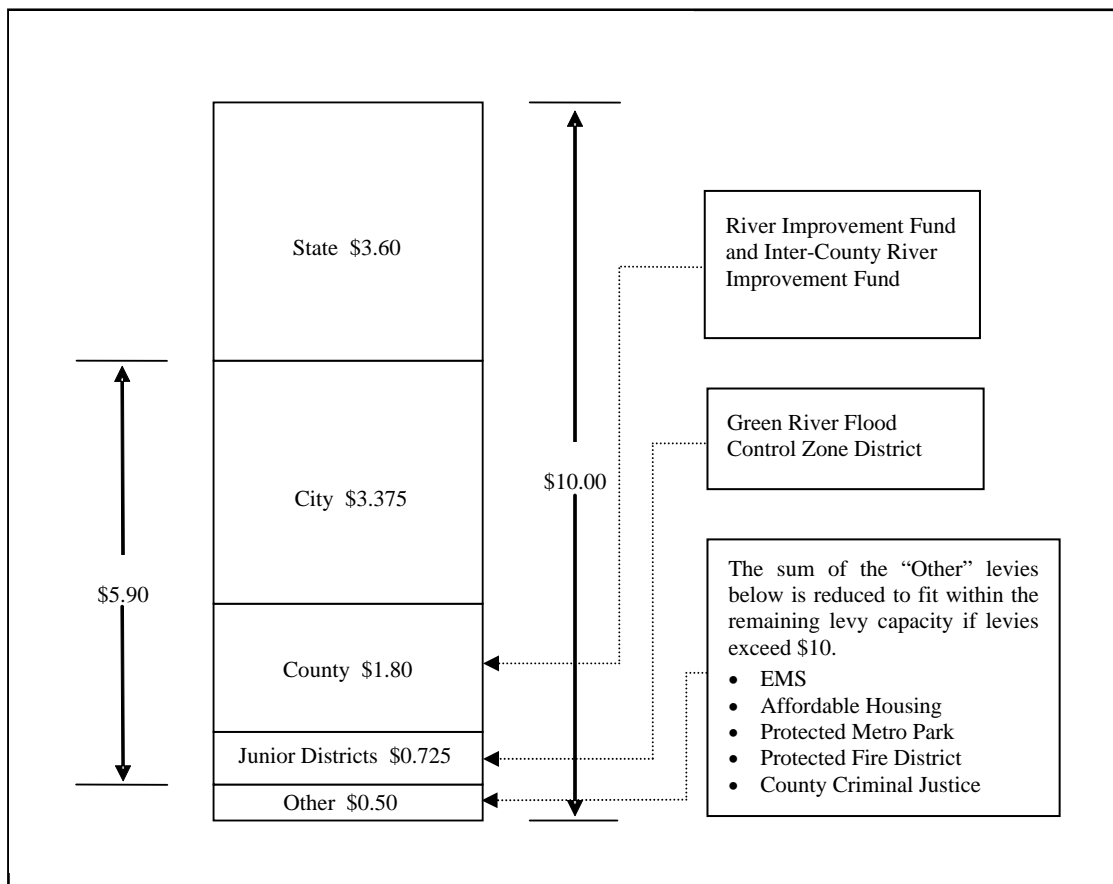


Figure 7-1. Authorized Levies Under 1-Percent Limit

**TABLE 7-10.
ORDER OF PRIORITY WITHIN THE \$5.90 LIMIT FOR PROPERTY TAX**

Priority Ranking	Local Taxing Authority	
First	County— <i>Includes River Improvement Fund and Inter-County River Improvement Fund</i> County Road City	Highest Priority
Second	Fire (1st 50¢) Regional Fire Protection Service Authority (1st 50¢) Library Metropolitan Park created before 1/1/2002 (1st 50¢) Public Hospital (1st 50¢)	
Third	Fire (2nd/3rd 50¢) Regional Fire Protection Service Authority (2nd/3rd 50¢)	
Fourth	Metropolitan Park created after 1/1/2002	
Fifth	Public Hospital (25¢) Unprotected Metropolitan Park (25¢) Cemetery (11.25¢) All other junior districts except those in 4th & 5th priorities	
Sixth	Flood Control Zone Districts	
Seventh	Park & Recreation Service Area Park & Recreation Cultural Arts, Stadium City Transportation Authority (Monorail)	

In addition to generating revenue based on assessed value, revenue generation for a flood control zone district can be established by the King County Council through a service fee or charge, as authorized in RCW 86.15.176, across the 571,000 parcels within King County. This could take a number of forms, including, but not limited to:

- Flat service charge per parcel
- Hierarchical service charge based on parcel use—for example commercial, industrial or residential—similar to surface water fees which are based in part on impervious surface
- Per parcel service charge based on benefit districts—for example parcels with a higher risk of flooding, such as those in the floodplain, could be assessed a greater service charge than those outside the floodplain

An ad valorem property tax levy would provide the most equitable revenue mechanism for a regional countywide flood control zone district because a flood disaster would severely impact countywide, regional economic benefits and public safety. In addition, the Citizen's Advisory Committee established in 2004 to help guide County staff's development of this Plan strongly recommended the use of an ad valorem property tax levy for the purposes of funding long-term funding of flood risk reduction actions.

Recommendation

- **FUND-1:** King County should establish and enact a countywide flood control zone district that would incorporate the boundaries of all watersheds within the County. The new countywide flood control zone district should be funded via an ad valorem property tax levy at a level sufficient to provide enhanced flood hazard management services that will ensure long-term dedicated, regional funding of flood risk reduction actions to protect lives, public and private properties, natural resources and prime agricultural soils.

7.3.4 Summary of Enhanced Revenues Options

Table 7-11 highlights the primary considerations for the revenue enhancement options described above.

TABLE 7-11.

SUMMARY OF CONSIDERATIONS FOR ENHANCED FUNDING OPTIONS

Option	Consideration
River Improvement Fund Levy Increase	<ul style="list-style-type: none"> • Equal levy rate across all taxable King County properties based on assessed value • Requires a simple majority vote in countywide election or a greater allocation of the Current Expense levy, which funds other mandatory and essential services including police, fire, public health, courts and parks • <u>Conclusion:</u> Not recommended because of limitations in securing a majority vote of King County voters to approve an increase in property taxes as well as concerns in apportioning additional Current Expense funds to the detriment of other countywide mandatory and essential services.
King County Surface Water Management Fee Increase	<ul style="list-style-type: none"> • Can be enacted by simple majority vote of the King County Council • Surface water management addresses local stormwater issues whereas flooding is a regional issue • Considered inequitable because King County's surface water management fees are collected in unincorporated areas only while flood hazard management actions are provided regionally • Rate increase would compete with future surface water management fee needs, requiring a corresponding fee increase and therefore not a significant source of funds • Total revenue from surface water management fees is expected to be reduced by approximately 46 percent over a 10-year horizon because of annexations and incorporations • <u>Conclusion:</u> Not recommended because King County surface water management fees are assessed only in unincorporated areas of the County and are insufficient in amounts necessary to fund critical countywide regional flood hazard management projects and programs.

TABLE 7-11. (continued)
SUMMARY OF CONSIDERATIONS FOR ENHANCED FUNDING OPTIONS

Countywide Flood Control Zone Districts	<ul style="list-style-type: none"> • Can be created by simple majority vote of the King County Council • Equal levy rate across all taxable King County properties based on assessed value • Can participate in cooperative watershed management actions for purposes of water supply, water quality, and water resource and habitat protection • Existing flood control zone districts would have to be abolished and any ongoing programs and facility maintenance incorporated into the countywide district • Flood control zone districts are “junior” taxing districts at risk of being eliminated or reduced if \$5.90 aggregate total for county, city and junior taxing districts is exceeded • <u>Conclusion</u>: Recommended because the statutory authorities for this option are fully consistent with the goals and objectives for Plan implementation, this option provides a long-term solution to funding flood risk reduction actions, and it represents an equal allocation of costs between current and future rate payers and beneficiaries.
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7.3.5 Capital Financing

King County’s current funding levels are insufficient to address current needs for flood protection facility maintenance and repair. As an alternative, the acquisition, design, construction, mitigation, permit compliance, or other activities such as technical studies needed to achieve a specific “fixed” tangible capital asset such as a levee, revetment and pump station could be financed through capital bond financing. Capital bond financing can be used for projects with a long useful life that add capacity to a facility, replace a facility, or enhance a facility’s effectiveness. However, the funding options identified in this Plan do not require bonding and the recommendation to create a countywide flood control zone district does not rely on bonding to address the revenue shortfall.

Capital bond financing is an option to repay the debt over a longer period of time, thus reducing the annual revenue needed to support a given level of investment. Additionally, the debt service cost of the investments is spread across a larger set of future taxpayers who would benefit from the investment in the long term. A significant disadvantage of capital bond financing is that cumulative lifetime debt service costs are often 60 to 100 percent more than the proceeds from the bond sale, depending on the duration of debt service and interest rate. Implementation of this Plan does not require capital bond financing.

Bond Alternatives Available to King County

General Obligation Bonds

Unlimited general obligation bonds are approved through an excess capital levy, which requires 60 percent voter approval and voter turnout of more than 40 percent of the turnout for the last general state election. Debt service for general obligation bonds is through an excess property tax levy. The feasibility of bond financing through a countywide flood control zone district is still being assessed because of statutory limitation.

Limited Tax General Obligation Bonds

Limited tax general obligation bonds, which are non-voted bonds backed by King County’s general tax authority, are approved by ordinance and a simple majority vote of the King County Council. Authorization to establish rates, fees or service charges for debt service is by a simple majority vote of the King County Council.

Revenue Bonds

RCW 36.67.500 provides the legislative authority to contract indebtedness and to issue revenue bonds that are issued and sold in accordance with Chapter 39.46 RCW. Revenue bonds may be issued and sold in amounts deemed necessary by the legislative authority of each county to provide sufficient funds to carry out all county powers, including acquisition, construction, reconstruction, maintenance and repair of flood hazard protection facilities.

Debt Service Payment

Financing capital projects without establishing an additional revenue stream to pay for the debt service costs will create additional financial strain on current funds. For instance, debt service on a \$15 million bond would require nearly one-half of the total River Improvement Fund levy collected annually and debt service on a \$33 million bond would require the entire River Improvement Fund levy collected annually. Such commitment to debt service would limit the ability to fund maintenance, staffing, flood warning and other essential projects and programs. Table 7-12 shows the annual debt service cost of bonds in the amounts of \$15 million, \$30 million and \$99 million. If flood hazard management projects are financed through bonds, at a minimum a new or enhanced revenue source would be needed to fund debt service payments in order to maintain King County's ability to fund current ongoing flood hazard management project maintenance and programs.

TABLE 7-12.
ANNUAL BOND DEBT SERVICE

Amount of Bond Financed	Annual Debt Service Payment ^a
\$15,000,000	\$1,267,742
\$30,000,000	\$2,535,484 ^b
\$99,000,000	\$8,367,032

a. 20-year term, 5.5% fixed interest rate and 1% issuance cost
b. 2005 River Improvement Fund levy revenue is \$2,575,805

7.4 LOCAL, STATE AND FEDERAL PARTNERSHIPS

The status quo and enhanced funding scenarios associated with Action Plan implementation reflect assumptions regarding ongoing partnerships and other external funding sources. The River and Floodplain Management Program regularly pursues and has been successfully awarded millions of dollars in federal, state and local grants and disaster assistance to supplement King County's dedicated funding sources for flood risk reduction projects. Grants and disaster assistance funds are typically limited to major capital improvement projects or limited-duration federal initiatives, such as FEMA's Map Modernization Program, and therefore are not a consistent, long-term dedicated funding source. Federal and state programs that offer grants and public assistance funds typically do not fund routine maintenance and repair activities. Moreover, limited funding resources for local flood hazard management often preclude the ability to meet requirements for local matching of federal or state funds.

This section highlights local, state and federal programs that provide funding opportunities for flood risk reduction activities and lists examples of projects that have benefited from these partnerships.

7.4.1 Local County Funding Programs

Conservation Futures Tax

Authorized under Chapter 84.34 RCW, conservation futures tax funds are collected from property taxes levied throughout King County and dedicated to the acquisition of open space and passive use lands in cities and rural areas. Annually, approximately \$9 to \$11 million is collected and allocated for acquisition. The acquisition component of multi-objective flood risk reduction projects have been funded with Conservation Futures Tax funds. The following are examples of recent activities using this funding source:

- In 2006, \$530,000 in conservation futures tax funds were awarded to supplement the project costs of the Rainbow Bend Buyout on the Cedar River to purchase 10 repetitively flood damaged homes.
- In 2002, \$100,000 in conservation futures tax funds were combined with River Improvement Funds and Parks funding to acquire open space parcels and remove an at-risk structure along the White River.

Real Estate Excise Tax

Chapter 82.46 RCW authorizes King County to impose two excise taxes on each sale of real property in unincorporated areas. Both are levied at one quarter of 1 percent of the selling price. Real Estate Excise Tax #1 (REET #1) may be used for capital improvements benefiting unincorporated residents and has typically been used to fund the planning, acquisition, repair and development of park facilities. Real Estate Excise Tax #2 (REET #2) is limited by County Ordinance No. 10455 to funding park planning, repair and construction. REET #2 is similar to REET #1 in its expenditures emphasis, however it is not used for acquisition of parks. The following is an example of activities using this funding source:

- Following the November 1995 and February 1996 flood events, \$300,000 in REET #1 funds were appropriated to help fund King County's local match for federal disaster relief funds and hazard mitigation grant programs.

7.4.2 State Funding Programs

Flood Control Assistance Account Program

The Washington State Legislature established the Flood Control Assistance Account Program in 1984 to help counties, cities, towns, and districts throughout Washington State reduce flood hazards and flood damage. The program, authorized under Chapter 86.26 RCW, is administered by the Department of Ecology's Shorelands and Environmental Assistance Program, which emphasizes resource protection, fisheries restoration, integrated planning, growth management, watershed planning and non-structural flood protection measures in an effort to foster watershed-based, multi-objective approaches to minimizing flood hazards. Eligible projects include acquisitions; flood protection facility retrofits, setbacks and removals; floodplain and channel migration zone mapping studies; comprehensive flood hazard management planning; and flood emergency warning services. Table 7-13 lists Flood Control Assistance Account Program grants received by King County since 1993.

**TABLE 7-13.
FLOOD CONTROL ASSISTANCE ACCOUNT PROGRAM GRANTS SINCE 1993**

Biennium	Project Name	Amount
1993-1995	Hamakami Levee Stabilization	\$50,000
1993-1995	Holberg Levee Stabilization	\$117,500
1993-1995	Green River Flood Control Zone District Levee Maintenance	\$75,200
1995-1997	McCoy-Breda Bioengineering	\$80,000
1995-1997	Plemmons Bioengineering	\$36,000
1995-1997	Cedar Grove Road Home Buyouts	\$80,000
1995-1997	Miller River Bridge/Old Cascade Scenic Highway Repair	\$134,440
1997-1999	Flood Warning Center Improvements	\$50,000
1997-1999	Narita Levee Biostabilization	\$80,000
1999-2001	Comprehensive Flood Hazard Management Plan Update	\$50,000
1999-2001	Cedar Grove Floodplain Restoration	\$75,000
1999-2001	Boeing Levee Setback	\$150,050
2001-2003	Cedar River Channel Migration Zone Mapping	\$47,500
2001-2003	Jones Road Buyout	\$60,000
2001-2003	Boeing Reach Levee Biotechnical Bank Stabilization	\$104,000
2003-2005	Flood Plan Update for CRS and DMA 2000 Compliance	\$30,000
2003-2005	South Fork Skykomish Historic Channel Mapping	\$45,000
2003-2005	Cedar River Floodway Property Acquisition/Demolition	\$125,000
2005-2007	Green River Floodplain Study and Risk Analysis	\$100,000
2005-2007	Economic Assessment of Ecological-Based Floodplain Mgmt.	\$24,900
	TOTAL	\$1,513,690

Salmon Recovery Grant Program

Since 1999, the Salmon Recovery Grant Program, under the direction of the Salmon Recovery Funding Board, provides grant funds for projects that protect, preserve, restore and enhance salmon habitat and watershed functions. Authorized under Chapter 77.85 RCW, the program is funded by state general obligation bonds and the federal Pacific Coast Salmon Recovery Fund. This program identifies and funds the most important habitat protection and restoration projects in a watershed, guided by the best available science. Projects are prioritized based on anticipated benefits to Endangered Species Act listed salmon stocks, the certainty that the project will be successful in providing those benefits, and the cost relative to anticipated benefits. Emphasis is placed on projects aimed at restoring natural habitat-forming processes and addressing degraded conditions. Eligible projects include acquisitions and flood protection facility retrofits, setbacks and removals.

The River and Floodplain Management Program has partnered with King County's watershed stewards and other jurisdictions to use Salmon Recovery Grant Program funds for projects that include acquisition and restoration design and levee removals and setbacks:

- In 2003 and 2004, \$424,000 and \$708,907, respectively, was awarded for the Cedar Rapids Floodplain Restoration Project for the acquisition, design and construction of a flood hazard reduction and habitat improvement project along the lower Cedar River. The project will set back and partially remove levees and revetments that line several thousand feet on both banks

of the Cedar River to increase flood storage and conveyance and reduce localized flood elevations and velocities along adjacent flood protection facilities. Additionally, the project will improve habitat conditions for fish and wildlife.

- In 2005, \$900,621 was awarded for the Rainbow Bend Floodplain Acquisition project to purchase 14 contiguous parcels, which include 10 flood-prone residential homes, in the floodway and floodplain of the Cedar River. The removal of structures and the subsequent reconnection of the floodplain will increase flood conveyance and storage to lower flood elevations and velocities along adjacent flood protection facilities. It will also improve habitat conditions, foster creation and reoccupation of side channels, and protect and enhance riparian vegetation.

7.4.3 Federal Funding Programs

The Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 authorizes the President to provide assistance to state and local governments, as well as some nonprofit entities and individual disaster victims, in the aftermath of federally declared emergencies and disasters through the Public Assistance Program.

The Public Assistance Program provides supplemental federal disaster grant assistance for the repair, replacement, or restoration of disaster-damaged, publicly owned or maintained facilities. The federal share of assistance cannot be more than 75 percent of the eligible cost for emergency measures and permanent restoration. Each individual state determines how the non-federal share of the cost, at least 25 percent, is split. Typically the state and the local jurisdiction are assigned 12.5 percent each. Since 1990, following a federally declared flood event, King County's ability to match federal and state disaster assistance has been contingent on the King County Executive's request to the King County Council for a supplemental budget appropriation. Despite supplemental budget appropriation, federal and state disaster assistance funds have been abandoned because of insufficient local matching funds. As a result, unrepaired flood protection facilities are ineligible for future federal and state disaster assistance; left unrepaired, these facilities are subject to increased risks of damage or failure.

The Disaster Mitigation Act of 2000 (Public Law 106-390) amended the Stafford Act in October 2000. It provides an opportunity for states, Native American tribes, and local governments to replace previous hazard mitigation planning with new requirements that emphasize coordination among state, tribal, and local entities. The act requires states and local governments to have a federally approved all hazards mitigation plan to be eligible to receive project grant funding for nearly all federally sponsored programs. FEMA approved the King County Regional Hazard Mitigation Plan in 2004 for compliance with the federal Disaster Mitigation Act of 2000. This *Flood Hazard Management Plan* will function as the flood component in future revisions to the King County Regional Hazard Mitigation Plan.

Hazard Mitigation Grant Program

Authorized under Section 404 of the Stafford Act, the Hazard Mitigation Grant Program administered by FEMA provides grants to states and local governments to implement long-term hazard mitigation measures after a federal disaster declaration. The purpose of the program is to reduce or eliminate the long-term risk to human life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster. The Hazard Mitigation Grant Program is activated after a federally declared disaster, with available funds calculated as a percentage of the total disaster costs, typically at 15 percent. Local and state match monies or in-kind services are required.

States and communities use the hazard mitigation planning process to set short and long-range mitigation goals and objectives. Hazard mitigation planning is a collaborative process whereby hazards affecting the community are identified, vulnerability to the hazards is assessed, and consensus by the affected communities is reached on how to minimize or eliminate the effects of these hazards. Based on program amendments under the Disaster Mitigation Act, projects funded under the Hazard Mitigation Grant Program are contingent upon having an approved hazard mitigation plan that has identified actions attributable to that project. Under the Disaster Mitigation Act, states are also required to have approved Hazard Mitigation Plans for program eligibility. States such as Washington with approved enhanced mitigation plans in effect at the time of a federal disaster declaration may receive additional Hazard Mitigation Grant Program funding, dependant upon Congressional appropriation.

King County has received several grants from the Hazard Mitigation Grant Program since 1993 that have assisted in the acquisition of 20 home buyouts in the Snoqualmie, Cedar, Sammamish and White River basins, one residential home elevation in the Sammamish River basin, and the repair of a flood protection facility on the Green River.

Flood Mitigation Assistance Program

The Flood Mitigation Assistance Program was created as part of the 1994 National Flood Insurance Reform Act with the goal of reducing or eliminating claims under the National Flood Insurance Program. Annual funding of up to \$20 million nationwide is provided through the National Flood Insurance Fund for the program. The Flood Mitigation Assistance Program is available to applicants annually and provides funding to assist states and communities in implementing measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program, with an emphasis on identified repetitive loss properties. The program offers two types of grants, with \$250,000 to \$500,000 annually available for Washington State:

- Planning grants—Available to states and communities to prepare flood mitigation plans. National Flood Insurance Program-participating communities with approved flood mitigation plans can apply for Flood Mitigation Assistance Project Grants.
- Project grants—Available to states and to communities participating in the National Flood Insurance Program to implement measures to reduce flood losses. Eligible projects include the elevation, acquisition, or relocation of National Flood Insurance Program-insured structures. The continuing priority of the Flood Mitigation Assistance program is to encourage states and communities to address repetitive loss properties.

The following is an example of an activity using this program in King County:

- In 1999 and 2000, the River and Floodplain Management Program was awarded two Flood Mitigation Assistance project grants totaling \$550,000 that funded the elevation of 10 residential homes in the lower and upper Snoqualmie River basin's floodplain.

Pre-Disaster Mitigation Grant Program

The Pre-Disaster Mitigation Program was authorized and created when the Disaster Mitigation Act of 2000 amended the Stafford Act to provide a funding mechanism that is not dependent on a federal disaster declaration. Funding for the program is provided through the National Pre-Disaster Mitigation Fund to assist states, local governments and Native American tribal governments in implementing cost-effective hazard mitigation activities that complement a comprehensive mitigation program. This is an annual grant program with funding limits established by congressional appropriation. Since this program is a pre-disaster program, a national competitive process has been established by FEMA that evaluates and ranks project applications, with an emphasis on overall project benefits versus costs. Like the Hazard Mitigation Program, project eligibility is limited based on program requirements. States and Native

American governments applying for Pre-Disaster Mitigation must have an approved mitigation plan to be eligible to receive project grant funding under the Pre-Disaster Mitigation Program.

The following is an example of an activity using this program in King County:

- In 2005, the River and Floodplain Management Program was awarded a \$1.2 million Pre-Disaster Mitigation grant for the Rainbow Bend Buyout to acquire 10 repetitively damaged homes from flooding in the Rainbow Bend neighborhood along the Cedar River.

FEMA Map Modernization Program

FEMA has the responsibility to map flood-prone areas throughout the United States. The Federal Insurance and Mitigation Administration's Hazard Mapping Division maintains and updates the National Flood Insurance Program maps. FEMA developed a plan in 1997 to modernize its flood mapping program to provide crucial guidance for future building, development, and flood mitigation efforts throughout the nation. In 2004, FEMA concluded that nearly 70 percent of the current flood map inventory was more than 10 years old. New flood studies are essential to address current land use conditions and enhanced hydrologic and hydraulic analyses, which can result in the changes to the 100-year floodplain map.

With funds appropriated by Congress in fiscal years 2000 through 2002, FEMA launched its Map Modernization Program including such activities as developing new flood mapping standards and procedures, expanding the Cooperating Technical Partner program that encourages state and local participation in flood hazard data development and maintenance and developing some digital flood maps.

In fiscal years 2003, 2004 and 2005, Congress appropriated \$150 million, \$200 million and \$200 million, respectively, allowing FEMA to initiate the Multi-Hazard Flood Map Modernization Program, a full-scale update of the nation's flood maps.

The following is an example of an activity using this program in King County:

- In 2003, King County was awarded \$739,000 to map the Lower Snoqualmie and Skykomish Rivers. Draft floodplain maps, developed in collaboration with Snohomish County and the Snoqualmie Valley cities for both rivers, were completed in December 2005 and submitted to FEMA. In 2006, a request to support a similar mapping effort of the Lower and Middle Green River has been initiated.

U.S. Army Corps of Engineers

The Flood Control Act of 1936 gave the U.S. Army Corps of Engineers the mission to provide flood protection to the entire country. Corps of Engineers flood control efforts range from small, local flood hazard protection projects such as levees or non-structural flood control measures to major projects, such as large-scale dams. Today, most flood protection projects constructed by the Corps of Engineers are owned and maintained by a sponsoring local agency, such as King County. The Corps of Engineers, however, continues to maintain and operate 383 dams and reservoirs for flood control nationwide, two of which are in King County, on the White and Green Rivers.

The Corps of Engineers conducts its emergency response activities under two basic authorities: the Flood Control and Coastal Emergency Act (Public Law 84-99, as amended) and the Stafford Disaster and Emergency Assistance Act (Public Law 93-288, as amended). Under the Stafford Act, the Corps of Engineers supports FEMA in carrying out the Federal Response Plan, which calls on 26 federal departments and agencies to provide coordinated disaster relief and recovery. Under this plan, the Corps of Engineers is one of the federal agencies tasked by FEMA to provide engineering, design, construction

and contract management for public works and engineering projects in support of federal disaster response and recovery operations

Emergency Response and Recovery Program

The Corps of Engineers provides emergency response to federally declared disasters under Public Law 84-99, which covers flood control and coastal emergencies. It also provides emergency support to other agencies, particularly FEMA, under Public Law 92-288.

Under Public Law 84-99, the Chief of Engineers is authorized to carry out disaster preparedness work; advanced measures; emergency operations such as flood fighting, rescue and emergency relief; rehabilitation of levee systems and flood control works threatened or destroyed by floods; and protection or repair of federally authorized shore protection works threatened or damaged by coastal storms. To be included in the PL 84-99 program, a levee system or flood control project must be routinely inspected by the Corps of Engineers and found to meet Corps of Engineers construction standards and to be maintained in a fashion that does not deter from its structural integrity. This act also authorizes the Corps of Engineers to provide emergency supplies of clean water in cases of drought or contaminated water supply. After immediate flooding has passed, the Corps of Engineers may provide temporary construction and repairs to essential public utilities and facilities and emergency access for a 10-day period, at the request of a state's governor.

Under the Stafford Act and the Federal Response Plan, the Corps of Engineers has a standing assignment to provide public works and engineering support in response to federal disaster declarations. Under this plan, the Corps of Engineers works directly with state authorities in providing temporary repair and construction of roads, bridges, and utilities, temporary shelter, debris removal and demolition, water supply, etc. The Corps of Engineers also provides support to other government agencies in accomplishing their missions under the Federal Response Plan.

The following is an example of an activity using this program in King County:

- During the November 1995 federal disaster declaration for King County, the Corps of Engineers used this authority to participate in an emergency response action at the Segale Levee to structurally stabilize the backside of the levee, which was in imminent danger of failure from piping, a condition that results when water seeping through the levee exits the backside and significantly compromises the structural integrity of the levee.

General Investigations Program

The Corps of Engineers helps communities solve water resource problems through the federally authorized General Investigations Program. In this program, the Corps of Engineers jointly conducts a study with a non-federal sponsor and constructs the project if the study shows it to be feasible. This requires that Congress provide the Corps of Engineers with authority and funds for the feasibility study and project construction. Local sponsors share the study and construction costs with the Corps of Engineers and usually pay for all operation and maintenance costs. This approach may be used for water resource problems including navigation, flood damage reduction and ecosystem restoration.

King County is currently participating with the Corps of Engineers and other state and federal governments and Native American tribes on the following four projects under the General Investigations Program:

- Puget Sound Nearshore Ecosystem Restoration Project to identify significant ecosystem degradation in the Puget Sound Basin, evaluate potential solutions, and restore and preserve critical nearshore habitat.

- Green-Duwamish River Basin Ecosystem Restoration Project in the Green River watershed to enhance and restore degraded habitats for anadromous fish and restore ecosystem functions and processes for fish and wildlife production.
- Lake Washington Basin Restoration Study to study and evaluate water-related issues in the greater Lake Washington basin for improved salmon migration and survival through water conservation and changes at the Hiram A. Chittenden Locks, and the creation of specific habitat improvements throughout the basin for fish and wildlife.
- White/Puyallup River Basin General Investigation to identify and implement measures to restore fish, riparian, and wildlife conditions, while alleviating chronic flooding in the White/Puyallup River Basin through actions that include setting back levees and reconnecting oxbows.

Continuing Authorities Program

The Continuing Authorities Program establishes a process by which the Corps of Engineers can respond to a variety of water resource problems without obtaining congressional authorization for each project. This decreases the time required to budget, develop, and approve a project for construction. The Seattle District of the Corps of Engineers has constructed numerous small projects under the Continuing Authorities Program and has developed a diversity of technical experience in solving problems associated with shoreline and streambank erosion, navigation, flood damage reduction, and environmental restoration. Under the Continuing Authorities Program, the Corps of Engineers is authorized to construct small projects within specific federal funding limits. The total cost of a project is shared among the federal government and non-federal sponsors.

The following is an example of an activity using this program in King County:

- The 14-mile Sammamish River channel connecting Lake Washington with Lake Sammamish was widened and deepened to protect adjacent farmlands from annual spring flooding. Completed in November 1966, the project was transferred to King County for operation and maintenance. The improvement significantly reduced flooding and drainage problems, but inflows into Lake Sammamish often exceed outflows through the Sammamish River, causing the lake level to rise, though well below pre-project flood elevations. Project costs were \$2,583,536 from federal funds and \$696,923 from local match contributions. Flood damage prevented through September 1998 is estimated by the Corps of Engineers to be \$18,668,000.

Small Flood Control Projects

Small flood control projects are authorized by Section 205 of the 1948 Flood Control Act, as amended; the federal share may not exceed \$7 million for each project under existing authorities. Work under this authority provides local protection from flooding by the construction or improvement of flood control works such as levees, channels, and dams. Non-structural alternatives may include flood warning systems, raising or flood-proofing of structures, and relocation of flood prone infrastructure.

Projects completed under this authority include the following:

- The Snoqualmie Flood Reduction Project lowered flood depths in and around the City of Snoqualmie and unincorporated King County. This was accomplished through the excavation of the right and left banks of the Snoqualmie River just above Snoqualmie Falls to increase conveyance and the removal of a partially failed railroad bridge to eliminate debris accumulation and potential backwater impacts. Construction was completed in 2005. Total project cost was \$7.65 million, of which the Corps funded \$4.40 million and King County

and the City of Snoqualmie equally split the local match of \$3.25 million, or \$1.625 million each.

- King County and the City of Tukwila requested a study in 1988 to upgrade levee protection along the Green River by providing standard project flood protection to a portion of the City of Tukwila. Construction was completed in May 1992, with the total federal cost for new work totaling \$912,000 and non-federal cost totaling \$121,000. The Green River Flood Control Zone District has operation and maintenance responsibilities of the Tukwila 205 project through an interlocal agreement with the City of Tukwila.
- In 1996, right bank levee improvements to provide enhanced flood protection on the Green River were completed from approximately River Mile 24.4 to River Mile 25.0 in the City of Kent along the Horseshoe Bend reach of the Green River. The Green River Flood Control Zone District was the local sponsor. Construction costs were \$373,820, with \$293,820 from the Army Corps of Engineers and \$80,000 from the Green River Flood Control Zone District.

Emergency Streambank and Shoreline Erosion

Emergency streambank and shoreline erosion projects are authorized by Section 14 of the 1946 Flood Control Act, as amended; the federal share may not exceed \$1 million for each project. Work under this authority allows emergency streambank and shoreline protection for public facilities, such as roads, bridges, hospitals, schools, and water/sewage treatment plants, which are in imminent danger of failing. The cost-share is 65 percent federal and 35 percent non-federal.

The following is an example of an activity using this program in King County:

- In 1980, 2,000 feet of eroded embankment along the Green River near the City of Kent was repaired by placing riprap below the ordinary high water mark, and four varieties of shrubs and grass were planted on the slopes to provide erosion resistance. Total cost of this project was \$489,320. King County remains the local sponsor of the project and the Green River Flood Control Zone District provides operation and maintenance.

Snagging and Clearing for Flood Control

Snagging and clearing for flood control projects are authorized by Section 208 of the 1954 Flood Control Act, as amended; the federal share may not exceed \$500,000 for each project. Work under this authority provides local protection from flooding by channel clearing and excavation, with limited embankment construction using materials from the clearing operation only. The cost-share is 65 percent federal and 35 percent non-federal. King County has not used this program in the past several decades.

Project Modifications for Improvement of the Environment

Project modifications for improvement of the environment are authorized by Section 1135 of the Water Resources Development Act of 1986, as amended. The federal share of each separate project may not exceed \$5 million, including studies, plans and specifications, and construction. A non-federal sponsor is required to provide 25 percent of the cost of the project. Work under this authority provides for modifications to the structures and operations of water resources projects constructed by the Corps of Engineers to improve the quality of the environment. Additionally, the Corps of Engineers may undertake restoration projects at locations where a Corps project has contributed to degradation. The primary goal of these projects is ecosystem restoration, with an emphasis on projects benefiting fish and wildlife. The project must be consistent with the authorized purposes of the project being modified, environmentally acceptable, and complete within itself.

King County's floodplain management approach of addressing flood risk reduction and habitat degradation allows this funding source to support project recommendations in this Plan. Projects already completed on major river systems under this authority include the following:

- The Sammamish River Flood Control weir, located in King County's Marymoor Park on the Sammamish River downstream of Lake Sammamish was modified under Section 1135 Restoration authority. The purpose was to modify the weir to improve upstream salmon migration and to improve the river bank habitat for wildlife. Construction was completed in October 1998. Total project costs were \$224,000 of which \$168,000 was from the Corps and \$56,000 from King County.
- The Sammamish River Flood Control project was modified to restore fish and wildlife habitat by excavating material from the sides of the channel, installing in-stream fish habitat features such as large organic debris and low flow deflectors, constructing an open channel and footbridge to bypass perched culverts, and planting native trees and shrubs. Construction was completed in November 1994. King County was the local sponsor. Total project cost was \$391,200 of which \$326,900 came from the Corps and \$64,300 from King County.

Aquatic Ecosystem Restoration

Aquatic ecosystem restoration projects are authorized by Section 206 of the Water Resources Development Act of 1996. The non-federal share of these projects is 35 percent and the federal share is limited to \$5 million, including studies, plans and specifications, and construction. Work under this authority may carry out aquatic ecosystem restoration projects that will improve the quality of the environment, are in the public interest, and are cost-effective. King County's floodplain management approach of addressing flood risk reduction and habitat degradation could support this funding source to implement project recommendations in this Plan. King County has not regularly used this program.

Planning Assistance to States Program

Section 22 of the Water Resources Development Act of 1974, as amended, provides authority for the Corps of Engineers to assist individual states, local governments, Native American tribes, and other non-federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. The Planning Assistance to States Program is funded annually by Congress. Allotments for each state or tribe are limited to \$500,000 annually, but typically are much less. Typical studies in recent years have included water supply, water quality, water conservation, hydropower development, flood control, environmental restoration, erosion, and navigation. Studies are cost-shared with 50 percent of the costs furnished by a local sponsor and 50 percent by the Corps of Engineers. King County has not recently used this program.

Flood Plain Management Services Program

Section 206 of the Flood Control Act of 1960 (Public Law 86-645) as amended, provides authority for the Corps to use its floodplain management technical capabilities to help public and private interests. The objective of the Flood Plain Management Services Program is to foster public understanding for dealing with flood hazards and to promote prudent use and management of the nation's floodplains. Program services are provided to state, regional and local governments, Native American tribes, and other non-federal public agencies without charge. However, local jurisdictions are encouraged to make available field survey data, maps, historical flood information and other related documentation to help reduce the cost of services. King County has not recently used this program.

U.S. Department of Housing and Urban Development, Community Development Block Grant Program

The Federal Financial Assistance Management Improvement Act of 1999 (Public Law 106-107) sets forth the authority for King County's annual receipt of Community Development Block Grant Program funds from Housing and Urban Development. The Community Development Block Grant Program is one of the largest federal grant programs and makes funds available to economically disadvantaged communities to fund, among other needs, hazard mitigation projects. The primary objective of the Community Development Block Grant Program as set forth by Congress is "the development of viable urban communities, by providing decent housing and a suitable living environment and expanding economic opportunities, principally for persons of low and moderate income."

King County administers Community Development Block Grant Program funds on behalf of the King County Community Development Block Grant Program Consortium, established under an interlocal agreement among King County and 32 suburban cities. Community Development Block Grant Program funds may be awarded to individuals for home improvement projects such as residential elevations or to local jurisdiction for projects that benefit a community or a subset of a community.

The following is an example of an activity using this program in King County:

- The Community Development Block Grant Program has provided financial assistance to homeowners for home elevation projects and funded the construction of the Meadowbrook bank stabilization project on the upper Snoqualmie River to provide enhanced flood protection to residents of an adjacent mobile home park, residential homes and a public park. The total cost of the Meadowbrook project was \$780,000.

The Natural Resources Conservation Service

The Natural Resources Conservation Service, formerly known as the Soil Conservation Service, has two programs that can provide funding for hazard mitigation projects:

- **Small Watershed Program and Flood Prevention Program**—The Small Watershed Program helps federal, state, and local agencies, local government sponsors, Native American tribal governments, and program participants to:
 - Protect watersheds from damage caused by erosion, floodwater and sediment
 - Conserve and develop water and land resources
 - Solve natural resource and related economic problems on a watershed basis

The program empowers local people or decision-makers, builds partnerships, and requires local and state funding contribution. Types of surveys and plans include watershed plans, river basin surveys and studies, flood hazard analyses, and floodplain management assistance. The focus of these plans is to identify solutions that use land treatment and nonstructural measures to solve resource problems.

Construction of the Black River Pump Station in the lower Green River basin between 1970 and 1972 was funded through the Small Watershed Program and the Flood Prevention Program.

- **Emergency Watershed Protection Program**—The Emergency Watershed Protection Program undertakes emergency measures to reduce runoff and prevent soil erosion in order to safeguard lives and property from floods, drought and the products of erosion. These measures may be taken whenever fire, flood, or any other natural occurrence is causing or has caused a sudden impairment of a watershed. The objective is to assist sponsors and

individuals in implementing emergency measures to relieve imminent hazards to life and property created by a natural disaster. Activities include financial and technical assistance to remove debris from streams, protect destabilized stream banks, establish cover on critically eroding lands, repair conservation practices, and purchase floodplain easements. The program is designed for installation of recovery measures.

7.5 CONCLUSION AND RECOMMENDATION

King County's current funding level and pay-as-you-go approach does not provide sufficient funding to address current flood protection facility maintenance, repair and reconstruction needs. Most of these facilities were constructed in the early 1960s to design standards that are no longer consistent with federal levee certification standards and have, over time, become less effective in reducing significant risks to public safety and regionally important economic centers and transportation corridors. Proactively addressing these deficiencies will reduce the overall risks from flooding.

Current funding limitations significantly jeopardize the ability for King County to provide basic flood protection facility management and risk reduction services, including the implementation of high priority flood risk reduction projects and programs. Under current funding levels, the River and Floodplain Management Program can only construct two or three flood risk reduction projects per year. Existing dedicated funding sources must be significantly increased in order for King County to provide adequate flood hazard management services and implement preventive projects and programs, and reverse the trend of declining levels of protection.

The current backlog of flood protection facilities needing repair, in addition to other high priority projects and program recommendations, such as acquisitions and floodplain mapping, cannot be completed under current funding, particularly with the limits on revenues described in this chapter. Provision for the associated benefits of endangered and threatened salmon recovery also needs to be considered. Providing public safety together with land stewardship will require enhanced funding and financial commitments.

Any revenue increases should provide the lowest feasible cost to rate payers for a specified level of service and ensure an equal allocation of costs between current and future rate payers. The revenue enhancement also should be justifiable and efficient, be dedicated, be readily understood by the public, be straightforward to administer and collect, and provide an opportunity for rate payer review and comment.

As such, it is the recommendation as set forth in this Plan for King County to establish and enact a countywide flood control zone district that would incorporate the boundaries of all watersheds within the County and be funded at a level to ensure long-term funding of flood risk reduction actions to protect lives, public and private properties, regional economic centers and transportation corridors, natural resources, and prime agricultural soils.

