

## 12.0 IMPLEMENTATION COSTS

The improved management approaches presented in Alternatives II and III of the basin plan, in conjunction with the regional management program, provide the local jurisdictions with the ability to correct existing and prevent future flooding problems and protect the Percival Creek system from additional degradation. These alternatives represent a marked improvement in the way the local jurisdictions manage surface water concerns.

Because Alternatives II and III offer a proactive approach to problem solving, the municipal costs associated with the implementation of these alternatives are higher than the current funding levels. Many of these costs are associated with capital or constructed improvements aimed at correcting historical problems. Unfortunately, the construction of stormwater management facilities is typically land intensive. The rapid development of Percival basin in conjunction with the high density land use zoning classifications common to many of the remaining undeveloped areas continually reduces the availability of affordable land. With this development scenario in mind, the costs of capital improvement solutions can be expected to increase dramatically in future years. Capital solutions to the problems of the basin are most cost-effectively addressed by acting expediently. Other costs of the plan offer a multifaceted approach to problem prevention and, when feasible, emphasize less costly noncapital improvement techniques.

Components of the noncapital improvement aspects of the plan include effective operations and maintenance, improved enforcement and complaint response, cluster development zoning, creek monitoring, and public involvement and education. The need for these activities is not limited to the Percival basin, nor could the activities be cost-effectively implemented for only the basin. These activities necessitate specialized staff responsible for the implementation of a program or policy throughout the region or jurisdiction. The Percival Creek basin plan as well as the Woodland/Woodard Creek and Indian/Moxlie Creek plans include a consistent regional management program described in Chapter 11 that is suggested for adoption throughout the North Thurston County area.

Because Alternatives II and III encompass basin-specific as well as the regional management program, the funding needs for both aspects of the basin plan are presented in the cost analysis. The Indian/Moxlie Creeks and Woodard/Woodland Creeks plans will contain identical recommendations and associated costs for the regional management program.

## **12.1 Existing Basin Revenues**

The combined stormwater utility rate revenues from the three jurisdictions within the Percival Creek basin total approximately \$490,000/year. These revenues were calculated by determining the number of single family residences, and the quantity of impervious surfaces associated with nonresidential utility accounts and public streets. Nonresidential accounts provide approximately \$310,000 of these funds. The distribution of the revenue for the jurisdictions of Olympia, Tumwater, and Thurston County is approximately 81 percent, 16 percent, and 2 percent, respectively.

General facilities charges (GFCs) provide stormwater funding in addition to the utility rates. GFCs are a one-time fee charged at the time of development that help sponsor continued improvements to the municipal stormwater infrastructure. In 1991, Olympia and Tumwater collected approximately \$30,000 and \$145,000, respectively, in GFCs from new developments in the basin. The City of Tumwater limits GFCs to new development on Tumwater Hill; Olympia's charge is city-wide.

Utility revenues provide for the existing level of management within the basin and contribute to the local jurisdictions' stormwater programs of policy development, regulatory oversight, enforcement, operations and maintenance, public involvement and education, and capital improvements. Several capital improvement projects are currently underway in the basin.

The revenue generated by utility payers in the basin compared to the entire stormwater management budget for the City of Olympia is roughly proportional to the land area within the basin compared to the entire land area within Olympia's jurisdiction. Although not feasible to calculate, this comparison indicates that revenues generated within the basin are most likely utilized within the basin. Similar relationships are expected for Tumwater and Thurston County. Additional funding from several planning and public education grants is currently providing appreciable program budget supplements.

## **12.2 Rate of Growth in Basin Revenues**

Assuming that future development growth rates within the basin approximate present levels of growth, new development will provide a six percent yearly revenue increase. Annual increases in utility revenues for Olympia, Tumwater, and Thurston County may be as high as \$19,000, \$9,000, and \$1,500, respectively. At full development of the basin,

total revenues under the existing utility structure could approach \$1,300,000/year. Inflation can be expected to approximate this growth rate. Given this scenario, growth is expected to negate inflationary pressures but not to provide additional revenues.

### **12.3 Implementation Costs for Alternative II and III**

The implementation costs associated with Alternatives II and III have been delineated based on whether the cost is basin-specific or regional in nature. Additional cost delineations segregate existing and future problems. The costs applicable to each of the three jurisdictions are also presented.

#### **12.3.1 Basin-Specific Costs**

Based on the recommendations presented in Chapter 9, the one-time public capital costs of Alternative II exceed the current level of basin-generated funding by \$2,338,000. The capital costs would be targeted for the construction of improved stormwater retention/detention, conveyance, and treatment facilities. Approximately 90 percent of the capital costs are associated with the correction of historical deficiencies. The noncapital costs associated with implementation of the alternative are addressed in the regional management program.

The public capital costs for Alternative III are \$200,000 higher than for Alternative II. Annual costs would not increase. Future private costs associated with upgrading downstream stormwater systems would be \$159,000 for both alternatives. Table A-16 in Appendix 2 summarizes these costs and presents potential funding sources.

#### **12.3.2 Nonstructural Surface Water Management Program Costs**

The nonstructural management program (Chapter 11) needed for the implementation of Alternatives II and III includes increased regulatory oversight, additional operations and maintenance services, improved enforcement, and enhanced public involvement and education. The annual cost of the program to the entire jurisdictions of Olympia, Lacey, Tumwater, and Thurston County is approximately \$1,264,000. A one-time cost of \$696,000 would be necessary. A delineation of the costs of the nonstructural recommendations and jurisdictional needs is presented in Table 6 in the previous chapter.

## 12.4 Cost Share Approaches

Regardless of the funding mechanisms implemented by the three jurisdictions, costs for capital and noncapital activities would have to be allocated between the jurisdictions. Three approaches to capital improvement project and noncapital program cost sharing are available. These are discussed below:

### 12.4.1 Cost Share Option A

Under cost share option A, necessary funding for the correction of existing and potential future problems would be tied to the current level of development within each jurisdiction that contributes to the problem. The area contributing to a specific problem would be defined topographically. Funding for water quality and stormwater detention for the purpose of improving conditions in the Percival creek system would be similarly distributed among the jurisdictions after determining the most effective location for the facility. Projects aimed at correcting an existing problem and/or providing the capacity to prevent future problems would be funded by evaluating existing and/or potential jurisdictional contributions.

The calculation of a jurisdiction's contributing area for any one project would be based on effective impervious surfaces. These surfaces are those impervious areas that generate runoff which leaves developed sites and reaches a downstream stormwater conveyance system. Conversely, many impervious surfaces generate runoff that is promptly infiltrated by adjacent permeable soils. For example, an office building and a single family residence may contain the same quantity of impervious surfaces, but due to the presence of a yard capable of infiltrating roof runoff the residential site would have less effective impervious surfaces than the office building. The calculation of effective impervious surfaces within each jurisdiction for existing and build-out conditions has been completed (Thurston Geographic Information Facility, 1990). Approximate cost shares for each basin-specific project based on Option A are presented in Table 7.

The broad-based nature of the noncapital components of the basin plan do not lend themselves well to a funding approach based on a topographic delineation of the source problem as is common for capital improvements. Cost sharing of noncapital programs is better addressed by cost share options B and C.

**Table 7: Implications of Cost Share Options  
Alternative II Capital Improvements  
Percival Creek Basin**

Recommendation	Cost Share Option A			Cost Share Option B			Cost Share Option C			
	Olympia	Tumwater	Thurston Co	Olympia	Tumwater	Thurston Co	Olympia	Tumwater	Thurston Co	Lacey
9.1.1 Construct North Percival Stormwater Management Facility	1,532,000	168,000	0	1,241,100	357,000	102,000	496,000	133,000	799,000	272,000
9.1.2 Upgrade Cooper Point/Black Lake Boulevard Conveyance System	199,000	0	0	145,000	42,000	12,000	58,000	16,000	93,000	32,000
9.1.3 Retrofit Mottman Industrial Park Drainage System	0	87,000	0	64,000	18,000	5,000	25,000	7,000	41,000	14,000
9.1.4 Upgrade North Basin conveyance System	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9.1.5 Increase the Flood Control Capacity of Yauger Park	110,000	0	13,000	49,000	54,000	20,000	36,000	10,000	58,000	20,000
9.1.6 Improve Capital Mall Drive Conveyance System	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9.1.7 Improve Conveyance System to Regional Detention Pond at Cooper Point Bridge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9.1.8 Upgrade Existing Private Stormwater Storage Facilities	54,000	6,000	0	44,000	13,000	3,000	18,000	5,000	27,000	10,000
9.2.2 Remove Fish Barriers in Percival Creek	17,000	118,000	30,000	120,000	35,000	10,000	48,000	13,000	78,000	26,000
9.2.3 Improve Fish Passage in the Black Lake Drainage Ditch	0	4,000	0	3,000	1,000	0	1,200	600	1,800	400
<b>Total Financial Responsibilities</b>	<b>1,912,000</b>	<b>383,000</b>	<b>43,000</b>	<b>1,666,100</b>	<b>520,000</b>	<b>152,000</b>	<b>682,200</b>	<b>184,600</b>	<b>1,097,800</b>	<b>374,400</b>

### 12.4.2 Cost Share Option B

Cost share option B proposes that the distribution of a specific project or program cost would be based on a jurisdiction's total quantity of effective impervious surfaces within the entire basin. This approach would utilize funding from all three jurisdictions regardless of a specific project's location within the basin.

The option provides a readily acceptable approach to the funding of noncapital improvement programs such as creek monitoring. For capital improvement projects, the option represents a departure from current cost share determinations. While not a regional approach to funding, the option takes the step of distributing the funding needs for projects among the jurisdictions sharing responsibility for the basin. By funding projects based on the total impervious surfaces within the basin, the option recognizes the interconnectedness of the basin's, and to a lesser extent the region's different land uses.

For this option, the financial responsibility of each jurisdiction in the basin has been evaluated based on the total acres of effective impervious surfaces located within each jurisdiction. The evaluation involved counting the number of single family residential homes in each basin using 1991 aerial photographs, measuring the surface area of public roads, and using HSPF computer model input data to tabulate commercial acres. Empirical values developed during the calibration of the HSPF model were necessary to convert impervious surface areas to effective impervious surface areas. Future contributions were estimated using current zoning and site coverage regulations.

The analysis provides an overview of existing and potential jurisdictional responsibilities. The percentage of existing and potential future acres of effective impervious surfaces within the basin are divided between jurisdictions as presented in the following table.

<u>Jurisdiction</u>	<u>Effective Impervious Surfaces, %</u>	
	<u>Existing</u>	<u>Potential Future</u>
Olympia	73	40
Tumwater	21	44
Thurston County	6	16

Based on these percentages, Olympia would be responsible for 73 percent of the existing stormwater management problems and 40 percent of all future management needs. As indicated by these values, Tumwater and Thurston County could be expected to be responsible for increasing percentages of the management needs as the urban area continues to expand in these jurisdictions. For example, growth in Tumwater is expected

to continue to increase and, with full development of the basin, contain slightly more effective impervious surfaces than Olympia. Tumwater's financial responsibility for preventing future problems is therefore greater than is Olympia's. These jurisdictional responsibilities for existing and potential needs are reflected by the cost evaluation of the proposed basin-specific projects presented in Table 7.

#### 12.4.3 Cost Share Option C

Cost share option C is a regional approach to funding surface water management programs within the Urban Growth Management Area (UGMA). The 84-acre UGMA is the core of the region's urbanizing area as formally delineated by the four local jurisdictions. High density development is encouraged within the area to prevent urban sprawl and cost effectively provide municipal services.

The option expands the responsibility for funding basin management needs beyond the jurisdictions encompassing the basin. Historical problems within the urban core could be funded regionally, while rural problems could be addressed with the recognition that these areas may be more heavily urbanized in the future. The cost sharing option acknowledges that the successful management of surface water provides a critical element in the region's high quality of life, and is therefore a broad-based benefit and concern. Such management may also offer increased operational and managerial efficiencies.

Several levels of regionalization are available under this option. These levels could allow gradual and directed implementation of the option. Potential levels of regional consolidation are as follows:

- Public education and involvement activities could be funded at the regional level.
- Regulations addressing drainage requirements and sensitive areas could be consistent within the jurisdictions.
- Activities such as operations and maintenance and enforcement could utilize common staff and equipment.
- Utility rate surcharges for the funding of basin-specific projects could be imposed throughout the UGMA.
- Major capital improvement projects could be funded by a regional mechanism.
- The full scope of jurisdictional management responsibilities could be shifted to a single entity.

Depending upon the degree of consolidation, the implementation of cost share option C would represent a marked departure from existing jurisdictional policies. A cursory analysis of the financial implications of this option on basin-specific capital projects is presented in Table 7. Jurisdictional responsibilities under cost share option C have been estimated based on the respective current populations of the jurisdiction.

### 12.5 Proposed Cost Share Approach

The determination of an appropriate cost share option must consider equity, effectiveness, and feasibility. With these considerations in mind, different cost share approaches can be used for different types of projects and programs. Preferred approaches should accommodate implementation within a reasonable time frame.

All three cost share options are currently being utilized on a limited basis by the four local jurisdictions. The following assignment of cost share responsibilities is proposed given already existing cost share mechanisms.

<u>Management Components</u>	<u>Cost Share Option</u>
Stormwater Facilities	A
Habitat Enhancement/Sensitive Area Protection	A, B, or C
Regulations/Development Controls	B or C
Enforcement/Complaint Response	B
Pollution Source Control Programs	B or C
System Monitoring	B or C
Public Involvement and Education	B or C
Cooperative Program Management	C

The recommended cost share approach accepts the current governmental necessity of funding stormwater facilities based on the drainage area contribution of each jurisdiction (Table 7, cost share option A). Steps to increase the degree of cooperative management should be embodied in the preferred option for the remaining noncapital management components. Higher degrees of cost sharing can be readily implemented for specific activities within, for instance, the public involvement and education program. The nonstructural management program (Chapter 11) presents the proposed degree of noncapital projects considered appropriate for the short term. The basin-specific recommendations (Alternatives II and III), as well as the nonstructural management program support ongoing long-term efforts to increase the degree of cooperation among the local jurisdictions.



### **13.0 FUNDING ALTERNATIVES**

The implementation of either Alternative II or III necessitates increased revenues for basin-specific capital projects and noncapital programs as well as the regional management program. Although the strengths and weaknesses of the jurisdictions' water resource management programs are different, all the jurisdictions are under funded compared to implementation funding needs.

Specific recommendations for enhanced funding mechanisms for the local jurisdictions are beyond the intent of the planning process. However, information generated during the planning process has provided numerous insights into the potential for different mechanisms to generate additional funding. This information has been evaluated and the feasibility of existing and potential funding mechanisms investigated.

Establishing an equitable funding approach for Alternative II and III is the primary concern of the funding analysis. Numerous funding options are conceptually possible. The mechanism of revenue generation could encompass administratively simple changes in the existing utility rate structure or the adoption of a fundamentally new approach. The different approaches to funding are associated with varying levels of implementation feasibility, certainty, and equity. Several of these options may be appropriate, or at least provide the basis for comparison and further evaluation. The funding approaches have been evaluated in varying degrees of detail.

#### **13.1 Existing Funding Mechanisms**

The local jurisdictions have several existing mechanisms for the funding of stormwater projects and programs. These include historical methods as well as the more recently established stormwater utilities.

##### **13.1.1 Stormwater Utility Fees**

The use of stormwater utilities and the associated collection of charges for management services has become an accepted method of revenue generation in the Puget Sound area. The local jurisdictions have unique charges for differing land use types as well as different methods for calculating charges. Charges are based on one of three basic approaches: flat fees, density of development, and amount of impervious surfaces. These calculations are based on the concept that charges be based on the level of contribution

to the management problem. The utility charges help fund comprehensive stormwater management programs and to some extent capital improvement projects.

In the Olympia area, residences are charged a flat fee while nonresidential customers pay a rate based on the amount of impervious surface on their parcel. In addition to charges based on the volume of runoff generated by a development, the City of Olympia uses a charge on nonresidential accounts to address water quality concerns. Additionally, a system of credits and surcharges is incorporated into Olympia's utility. The City of Tumwater uses a utility structure similar to Olympia's. In Thurston County, stormwater utility charges are assessed to residents and businesses in the northern portion of the county. County rates are typically less than the cities' rates for similar land uses. The current utility rate structures of the local jurisdictions are as follows:

**Table 8: Existing Stormwater Utility Rates**

Land Use Type	Olympia	Tumwater	Lacey	Thurston County
Single-Family Residential	\$4.50/month	\$4.50/month	\$3.90/month	\$20.00/year
Duplex	\$9.00/month	\$9.00/month	\$7.80/month	\$26.00/year
Multi-Family Residential	8.44 + 1.49 (Total Impervious Area) 2528 sf + 4.13 (Non-building Imp. Area) 2528 sf	0.75 + 3.75 (Total Impervious Area) 3250 sf	\$5.97 to \$38.38/gross acre	\$6.00/unit/year
Commercial, Industrial, and Schools	8.44 + 1.49 (Total Impervious Area) 2528 sf + 4.13 (Non-building Imp. Area) 2528 sf	0.75 + 3.75 (Total Impervious Area) 3250 sf	\$5.97 to \$38.38/gross acre	\$5.56/1,000 impervious sf/year
Streets, Roads, and State Government	30% of commercial charge	30% of commercial charge	30% of commercial charge	30% of commercial charge

Accurate information has been generated on the existing level of development for each jurisdiction in the basin. This information provides the basis for analyzing of potential changes in utility rates. These changes are not presented as recommendations, but rather illustrate the structure and potential funding capabilities of the utilities. The results of the evaluation are presented in Table A-17 of Appendix 2. Highlights of the analysis for the Percival Creek basin are as follows:

- A utility rate increase of \$18/year/single family residence in the portions of the basin in Olympia and Tumwater would generate \$18,800 and \$3,600/year, respectively.
- A utility rate increase from \$20/year to \$54/year for single family residences in the portion of the basin in Thurston County would generate \$15,200/year.
- Increasing the nonresidential charges in the portions of the basin in Olympia and Tumwater on a basis proportional to increases in the single family residence increases would generate \$107,300 and \$20,700/year, respectively. These revenues do not include public street and road charges.
- Increasing the utility rate for local streets and roads in the basin from 30 percent of the private nonresidential rate to 40 percent or 50 percent of the private nonresidential rate would increase revenues by \$32,900 or \$65,800/year, respectively. Since the rate charged for state roads can not be increased beyond the 30 percent level, those roads have not been included in the analysis.
- An enhanced system of surcharges for residential and nonresidential accounts without onsite stormwater storage facilities could generate between \$34,000 and \$104,000/year. The funds generated would be dependent upon the amount of the surcharge. A range of \$1.00 to \$3.00/month/single-family equivalent was used for the analysis. This analysis was limited to developments which provided no storage. Higher revenues would be generated if a specified level of facility performance was expected of existing facilities.

### 13.1.2 General Facilities Charge (GFCs)

General facilities charges are a one-time fee charged at the time of development to buy into the existing utility system. These charges acknowledge the past development of regional infrastructure and the need for continued construction activities. A fee of \$1,700/acre is charged to new development in the City of Olympia. Tumwater imposes a variable charge of approximately \$4,000/acre for new development located on Tumwater Hill. The fee is aimed at providing regional stormwater management for the area. Thurston County does not impose these charges. Imposing GFCs basin-wide at the Olympia level would generate an additional \$68,000/year for Tumwater and Thurston County.

### 13.1.3 Street and Road Funds

Funding for drainage improvement and maintenance in Thurston County is largely the responsibility of the Street and Road Department. Improvements, such as culverts and ditches, are seen as necessary to accommodate transportation needs. Street and road funds currently support only minor capital improvements. Thurston County's stormwater system is largely comprised of ditches and culverts. Minimal additional funds can be expected from this source.

### 13.1.4 General Funds

A jurisdiction's general funds can be used for a variety of projects and programs including stormwater management. Historically, these funds have provided capital funding for drainage improvements. With the imposition of stormwater utilities, the expected reliance on general funds for stormwater projects has been eliminated. Currently, general funds are not a readily available funding source.

### 13.1.5 Plan Review and Inspection Fees

The jurisdictional costs of plan review and construction inspection aimed at ensuring development compliance with codes, regulations, and policies is lessened by the imposition of one-time fees. All aspects of stormwater and environmental design are subject to review and inspection. These fees vary from fixed rates for small

developments to variable rates for larger developments. The amount of money generated from permits does not typically cover the cost of program operation. Potential increase in the fee structure would generate minimal additional revenues.

#### 13.1.6 State and Federal Grants

Although competition for grant funds is high, the adoption of a basin plan enhances a jurisdiction's ability to obtain funding. Historical problems causing property damage, presenting a public safety hazard, or impairing water quality are especially appropriate for grant funding. Public education and involvement programs are also eligible for grant funding. Utilizing these funds for historical problems would allow the expenditure of stormwater utility funds for the prevention of potential problems and the remediation of environmental damage.

Due to high competition for grants, the likelihood of receiving a high level of funding is minimal. While financially helpful, a reliance on grant funding generates a high level of management uncertainty. The local jurisdictions are currently utilizing grant funding for planning, construction, and PIE activities.

The major grant funding sources applicable to surface water management are as follows:

##### *Centennial Clean Water Fund*

The Centennial Clean Water Fund is administered through the Washington Department of Ecology. The fund was established in 1986 to provide a source of financial assistance for the funding of planning, design, acquisition, construction, and improvement of water pollution control facilities including nonpoint source projects. These projects are supported to meet state and federal pollution control requirements for the protection of the state's waters. Grant recipients are required to provide a portion of the project cost through a local match of 25 to 50 percent. The fund has \$45 million available per year through 1995.

##### *Flood Control Assistance Account Program*

The Floodplain Management Section of the Department of Ecology administers the Flood Control Assistance Account Program (FCAAP). FCAAP is a grant program that assists cities, counties and local districts with flood control emergency and non-emergency

maintenance and capital improvement projects. The maximum funding possible per County per biennium is \$500,000 for non-emergency grants and \$150,000 for emergency grants. A local match of 50 and 20 percent is required for maintenance and emergency maintenance projects, respectively.

*Puget Sound Water Quality Authority Public Involvement and Education Fund*

Grants are available to local governments and other organizations to initiate and continue public involvement and education activities in the Puget Sound region. A wide variety of public education projects are potentially supportable by the grants. The funding for these grants originates from the Washington State Centennial Clean Water Fund. Approximately \$1 million per year are available.

*Washington State Ecosystems Conservation Project*

The Washington Department of Wildlife in cooperation with the U.S. Fish and Wildlife Service, has established two programs aimed at the protection of valuable upland, riparian, and wetland habitats within the state. Approximately \$300,000 annually has been allocated to support the programs.

One of these program, the Washington State Upland Wildlife Program addresses the loss of upland habitat and associated decreasing wildlife diversity. The current focus of the program is on the acquisition of upland habitat in eastern Washington. The second program is the Washington Wetlands and Riparian Initiative. The goal of this program is to protect wetlands and riparian resources. Public ownership, incentives, easements, cooperative agreements, land trusts, and other innovative approaches are encouraged.

*Olympia Environmentally Sensitive Areas Fund*

Every year the City Council of Olympia allocates \$50,000 from the capital improvement projects budget for the acquisition of environmentally sensitive areas. These funds have been earmarked for the purchase of the Grass Lakes wetland area which lies partially within the Percival Creek basin.

Table A-18 in Appendix 2 provides additional information on grant programs.

## **13.2 Potential Funding Mechanisms**

Many different combinations of rate changes in the existing stormwater utility mechanisms are conceptually possible. Several potential funding mechanisms have also been investigated.

### **13.2.1 Development Impact Fees**

Impact fees are paid by new development to fund infrastructure improvements occasioned by the development. These fees are charged to offset the public costs associated with growth. Engrossed Substitute House Bill 2929 (Growth Management Act) supports the use of impact fees for certain services in regions, such as the Olympia area, that are experiencing rapid growth rates.

Under the current legislative mandate, impact fees cannot be imposed to address stormwater management concerns. However, road improvements and open space preservation are eligible for the imposition of impact fees. Such fees could assist in the upgrading of culverts, constructing stormwater management facilities for roads, and preserving the streamside habitat.

### **13.2.2 Street Utility**

Local jurisdictions have the authority to impose street utilities to pay for street and street related improvements. The utility can be assessed at \$2/month/single-family residence and charged to employers at \$2/month/employee. State offices are exempt from paying the utility on their employees. In the north Thurston County area the state employs approximately 35 percent of the work force. With respect to water resources concerns, the utility revenues could be used only for stormwater projects associated with streets and culvert improvements. Numerous such projects exist within the basin and region.

Imposing the utility would generate approximately \$45,000/year in the Percival Creek basin.

### 13.2.3 Fee-in-Lieu of Construction

This approach encourages a developer to contribute financially to the development of regional stormwater management facilities rather than construct onsite facilities. In certain instances, a regional facility could be a cost effective, environmentally beneficial alternative to onsite systems. Costs savings to both private and public entities could be appreciable for certain projects.

### 13.2.4 Local Improvement Districts (LIDs)

Local improvement districts (LIDs) are a common funding source for infrastructure installation or improvement when the beneficiaries of the project are readily identifiable. These districts are established by residents for the purpose of funding neighborhood improvements. Once the district is established and recognized by the local jurisdiction, the jurisdiction sells bonds to finance the project and supervises the completion of the project. The district residents are responsible for reimbursing the jurisdiction for project costs.

Due to the difficulties associated with identification of the specific group benefiting from stormwater projects, LIDs are an untried mechanism for funding stormwater projects. LIDs are also relatively costly to establish and administer.

### 13.2.5 Flood Control Zone Districts

Counties may establish areas for the purpose of managing stormwater projects benefiting the specific area or watershed. Funds to support the district can be obtained by tax levies, special assessments, and LIDs.

## 13.3 Debt Financing

Capital improvement projects can be undertaken expediently by incorporating long-term financing with loans and/or bonds into the funding approach. This approach necessitates confirmation of the ability of the jurisdiction to service the debt.



### 13.3.1 Loans

Several low interest, long-term loans are available to municipalities. Additional information on loan programs is presented in Table A-18 of Appendix 2.

#### *The State of Washington Public Works Trust Fund*

The Public Works Trust Fund offers low interest loans for the repair, replacement, rehabilitation, reconstruction, or improvement of public works systems through the State Department of Community Development. Loans are available for repair, replacement, reconstruction, rehabilitation, and improvement of existing facilities. Emergency loans are also available. Eligible projects include a wide range of drainage facilities. Projects to enhance or protect wetlands from stormwater impacts are also eligible. The program is not intended to finance growth-related projects. Approximately \$43 million per year is available.

#### *Department of Ecology Centennial Clean Water Fund—Loans*

The Centennial Program offers grants and loans to local governments and Indian tribes for both activities and facilities that protect and enhance water quality. Loans are available for up to 100 percent of the total eligible project costs. Terms of loans are interest free for 0 to 5 year loans, 4 percent for 6 to 14 year loans, and 5 percent for 15 to 20 year loans. Funds are available for planning, design, construction, or implementation of water related projects.

#### *Washington State Revolving Fund for Water Pollution Control*

The State Revolving Fund (SRF) was established in 1988 to provide financial assistance in the form of low-interest loans to public bodies to deal with high priority water quality needs. These may include wastewater treatment facilities, nonpoint source water pollution projects, and conservation and management projects in estuaries. The fund is self-sustaining through capitalization by federal grants. Projects may be 100 percent eligible and repayable over 20 years. In fiscal years 1990 and 1991 approximately \$20 million was made available to fund projects. Funding may increase to \$30 million in 1993.

Eighty percent of the SRF is directed towards the planning, design, and construction of water pollution control facilities. The remainder is targeted towards nonpoint source pollution projects and estuary conservation and management.

### **13.3.2 Municipal Bonding**

Municipal bonds are an agreement to pay specified sums of money in the future. The sale of utility bonds can raise capital to fund the construction of needed projects, with the costs being repaid over time. Two basic types of bonds can be utilized: general obligation bonds and revenue bonds. The use of stormwater utility revenue for bond servicing would prompt the use of revenue bonds. State law does not limit the amount of revenue debt for local jurisdictions, but assurances that utility rates capable of servicing the debt are necessary.

Bonding has commonly been used by municipalities for the financing of major improvements. Due to the relatively small expenditures needed for past stormwater improvements, bonding has not played a role in financing local stormwater projects.

## **13.4 Potential Intrajurisdictional Funding Approaches**

Several changes in the funding structure of municipalities potentially offer increased stormwater revenues or efficiencies.

### **13.4.1 Combined Funding and Prioritization of Stormwater, Sewer, Water, and Solid Waste Projects**

Conceptually, capital improvement revenues from the stormwater, sewer, water, and solid waste utilities could be combined and potential projects prioritization and undertaken based on the combined funding level. This approach could potentially lead to a more effective use of funds by the utilities. It would represent a major change in the structure of the utilities.

#### 13.4.2 Joint Public Works and Parks Project Proposals

Public works and parks departments within the local jurisdictions commonly coordinate the development of stormwater management facilities with the goal of creating multiple use amenities. These efforts could potentially be enhanced by additional coordination, planning, and funding of natural resource preservation projects and programs.

### 13.5 Regional Funding Approaches

#### 13.5.1 Regional Management

While not a funding approach, regional management of water resources may present cost savings to the local jurisdictions. These potential savings could range from staffing needs to capital equipment. The basin plan has not quantified the potential savings, but recognizes the likelihood of increased efficiencies.

#### 13.5.2 Sales Tax Levy

Local jurisdictions are allowed to utilize 0.5 percent of the 7.9 percent Washington state sales tax. An additional 0.5 percent of the tax is available if jurisdictions choose not to utilize a real estate excise tax. The local jurisdictions are currently collecting the optional sales tax instead of imposing the real estate tax. Thurston County, Olympia, and Tumwater are collecting the maximum allowable amount. Sales tax revenues collected by the local jurisdictions are classified as general funds and can be utilized at the jurisdiction's discretion. The sales tax is distributed as follows: 6.5 percent to the State, 0.5 to 1.0 percent to the local jurisdictions, 0.1 percent to the state criminal system, and 0.3 percent to mass transit.

#### 13.5.3 Real Estate Levy

Local jurisdictions can utilize two 0.25 percents in real estate excise taxes, and have an option to collect an extra 0.5 percent. Jurisdictions can choose to utilize the 0.5 percent real estate tax or the 0.5 percent sales tax.

The City of Olympia is collecting both of the 0.25 percent real estate taxes and the 0.5 percent retail sales tax. Lacey, Tumwater, and Thurston County collect only one of the 0.25 percent real estate taxes. These jurisdictions also are collecting the 0.5 cent sales tax.

#### 13.5.4 Fuel Tax

Currently, only cities or towns within ten miles of an international border have the legal authority to impose a one cent-per-gallon fuel tax for street maintenance and improvement. In order for Thurston County to gain the authority to impose a fuel tax for watershed protection, a bill would have to be submitted for approval by the Washington State Legislature with subsequent ballot approval by Thurston County residents. Appreciable revenues could potentially be generated by such a tax.

Potential revenue sources are summarized in Table A-19 of Appendix 2.

### 13.6 Potential Funding Approach

Equity is the primary concern of establishing a feasible funding approach. With this in mind, an appropriate funding approach should focus on generating revenues from the contributors to the problems. In some cases a contributor to a problem can be identified (e.g., runoff generated by a impervious property). In other cases such as nonpoint water pollution, the problem stems from small contributions from the many residents of the region. A variety of revenue generating mechanisms are therefore suggested to equitably address the problems. Additionally, the utilization of state grant funds should be maximized whenever possible to fund capital projects.

Another equity issue is the need to promote consistent revenue generating mechanisms as well as development regulations among the three jurisdictions. If not guarded against, the funding and implementation of the plan could potentially promote financial inequities among the residents of the local jurisdictions.

The ongoing basin plans (Percival Creek, Indian/Moxlie Creek, Woodard/Woodland Creek, and Chambers Creek) consistently indicate that additional public funds will be necessary for effective surface water management throughout the north Thurston County region. A regional analysis of capital improvement costs is therefore necessary before an appropriate funding mechanism for a specific basin can be supported by staff and the public.

The Woodard/Woodland Creek basin plan will be completed in 1993. Work on the Chambers Creek basin plan has already begun. Additionally, a basin reconnaissance project conducted by the City of Olympia has provided an overview of problems in the other drainage basins in the urban area.

The information available from these various projects will be used to provide an overview of regional funding needs.

Compilation and refinement of cost information for the region will be completed in March/April of 1992. Continuing discussions of funding alternatives for projects and programs in the Percival Creek basin can subsequently occur in the context of regional problems and needs.

## **14.0 IMPLEMENTATION STRATEGY**

### **14.1 Plan Development Process**

In June 1990 the Stormwater Technical Advisory Committee (TAC), comprised of stormwater managers from the four local jurisdictions, adopted a set of goals and objectives to direct the development of all basin plans in the Thurston County area. These goals and objectives are presented in Chapter 2 of the plan and are used to evaluate management alternatives in Chapter 8.

Citizen Ad-Hoc Advisory Committees for the basin plans were established by the City of Olympia in April 1991. The five-member committees represent business, environmental, neighborhoods, and unaffiliated residents of the basin. The committees have met approximately eight times to discuss plan development and implementation. The Thurston County Storm and Surface Water Advisory Board (SSWAB) has also provided input and support to the plan.

In the later stages of plan development, the two ad-hoc committees and the basin planning subcommittee of SSWAB met an additional three times to discuss implementation and regional concerns.

A preliminary draft plan was issued in August 1991 and distributed to local and state staff and interested public. Based on resultant input, agreement on the scope and nature of the preferred management alternatives was established.

The draft plan was completed in January 1992. Approximately 175 copies of the plan have been distributed to local staff, neighborhood associations, business organizations, and the interested public. In general, comments regarding the recommendations have been supportive, and revisions minimal.

Three public workshops have been hosted over the two-year planning process by Olympia staff to solicit input to the planning process. The workshops were attended by generally supportive audiences.

## **14.2 Environmental Review**

On April 9, 1992, an environmental checklist was submitted to the City of Olympia Planning Department for the Percival Creek drainage basin plan. On June 12, 1992, a nonproject Determination of Nonsignificance (DNS) was issued for the plan with no mitigating conditions (see Appendix 11).

## **14.3 Concurrence With the Plan**

The process of concurrence formally establishes a jurisdiction's support of plan recommendations. If in concurrence with the basin plan, a jurisdiction indicates its commitment to pursue plan implementation. Letters of concurrence from the City of Tumwater and Thurston County have been solicited and are included in Appendix 12 of the basin plan.

## **14.4 Plan Adoption**

Adoption of the basin plan requires the approval of a jurisdiction's elected officials. Following adoption, local staffs would develop implementation strategies for the plan recommendations. Implementation would require changes in several related plans and regulations including capital improvement programs, comprehensive land use plans, critical area ordinances, the *Drainage Design and Erosion Control Manual for the Thurston Region*. Revisions to building codes and land clearing ordinances could also result from further investigations recommended by the plans. Additionally, increases in local stormwater utilities could be sought with the support of local elected officials.

On August 4, 1992, the Olympia City Council acted to adopt the Percival Creek drainage basin plan. On September 23, 1992, the Thurston Board of County Commissioners passed a resolution adopting the plan, as did the Tumwater City Council on November 3, 1992.

## **14.5 Roles and Responsibilities**

The basin plan will necessitate close coordination among the jurisdictions within the basin. As has been discussed, enhanced capital improvement as well as noncapital programs will require additional funding and staff. The lead agencies for basin-specific projects and programs included in Alternative II are discussed in the recommendations of

Chapter 9. Nonstructural surface water management program recommendations are presented in Chapter 11. The proposed roles and responsibilities of Olympia, Tumwater, and Thurston County in implementing the final plan will include the following:

- Encourage public support of the plan.
- Initiate and implement necessary funding strategies.
- Providing adequate staff to fulfill plan recommendations.
- Heighten multi-jurisdictional cooperation in basin management.
- Evaluate compliance with and success of the implementation strategy.
- Respond to potential difficulties with plan implementation.

#### **14.6 Schedule for Implementing Recommendations**

The majority of the recommendations provided in the plan rely upon the existing regulatory framework of the jurisdictions. Programs utilizing this framework could, with adequate funding, begin to be implemented in 1993. Capital improvement projects typically require considerable lead time. In all likelihood capital projects could not be implemented prior to 1994.

A possible implementation schedule for the various programs and projects is presented in Tables 9A, B, C, and D. This schedule is highly dependent upon the type of cost share and funding mechanisms utilized to generate additional revenues. Implementation schedules are expected to be altered following review of regional cost and funding information.

#### **14.7 Evaluation of Plan Effectiveness**

A mechanism to evaluating the long-term success of plan implementation is incorporated into the recommendations of Alternative II and III. A brief review of basin conditions and implementation successes and problems would be provided to the public, staff, and elected officials on a yearly basis. Methods to evaluate the success of the plan include:

- Water quality, flow, habitat, and wetland monitoring results.
- Achievement of anticipated creek flood flow levels.
- Compliance with state and potential federal water quality regulations.
- Preservation and enhancement of fish populations.
- Number of established conservation easements.
- Adherence to the implementation schedule.



## Implementation Strategy

- Increased public participation, knowledge, and awareness.
- Reduction of citizen complaints.
- Number of remedial and emergency responses necessary.
- Ability to respond to unforeseen management problems.

Elected officials would be notified of any failure to meet the level of service associated with the implemented plan and the extent of the inadequacies.

**Table 9a: Capital Improvement Costs and Scheduling**  
**Summary Table: Cost Share Option A**  
**Percival Creek Basin**

	Recommendation	Eng'r's Cost Est	1992	1993	1994	1995	1996	1997	1998	1999	2000
9.1.1	Construct North Percival stormwater management facility			190,000 <sup>1</sup>	190,000	190,000	190,000	190,000	190,000	190,000	190,000
9.1.2	Upgrade Cooper Point/Black Lake Blvd conveyance system		5,000			194,000					
9.1.3	Retrofit Mottman Industrial Park drainage system						87,000				
9.1.4	Upgrade North Basin conveyance system										
9.1.5	Increase the flood control capacity of Yaeger Park							123,000			
9.1.6	Improve Capital Mall Drive conveyance system										
9.1.7	Improve conveyance system to regional detention pond at Cooper Point Bridge										
9.1.8	Upgrade existing private stormwater storage facilities			15,000	15,000	15,000	15,000				
9.2.2	Remove fish barriers in Percival Creek									121,000	39,000
9.2.3	Improve fish passage in the Black Lake Drainage Ditch			4,000							
	<b>Total Expenditures</b>		5,000	209,000	205,000	394,000	292,000	313,000	190,000	311,000	229,000

<sup>1</sup> Assumes long-term financing.

**Table 9b: Capital Improvement Costs and Scheduling  
Olympia's Responsibilities With Cost Share Option A  
Percival Creek Basin**

Recommendation		Engrs Cost Est	1992	1993	1994	1995	1996	1997	1998	1999	2000
9.1.1	Construct North Percival stormwater management facility			171,000	171,000	171,000	171,000	171,000	171,000	171,000	171,000
9.1.2	Upgrade Cooper Point/Black Lake Blvd conveyance system		5,000			194,000					
9.1.3	Retrofit Mottman Industrial Park drainage system										
9.1.4	Upgrade North Basin conveyance system										
9.1.5	Increase the flood control capacity of Yauger Park							123,000			
9.1.6	Improve Capital Mall Drive conveyance system										
9.1.7	Improve conveyance system to regional detention pond at Cooper Point Bridge										
9.1.8	Upgrade existing private stormwater storage facilities			13,500	13,500	13,500	13,500				
9.2.2	Remove fish barriers in Percival Creek									12,000	
9.2.3	Improve fish passage in the Black Lake Drainage Ditch			4,000							
Total Expenditures			5,000	184,500	184,500	378,500	184,500	294,000	171,000	183,000	171,000

**Table 9c: Capital Improvement Costs and Scheduling  
Tumwater's Responsibilities With Cost Share Option A  
Percival Creek Basin**

Recommendation		Engrs Cost Est	1992	1993	1994	1995	1996	1997	1998	1999	2000
9.1.1	Construct North Percival stormwater management facility			19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000
9.1.2	Upgrade Cooper Point/Black Lake Blvd conveyance system										
9.1.3	Retrofit Mottman Industrial Park drainage system						87,000				
9.1.4	Upgrade North Basin conveyance system										
9.1.5	Increase the flood control capacity of Yaeger Park										
9.1.6	Improve Capital Mall Drive conveyance system										
9.1.7	Improve conveyance system to regional detention pond at Cooper Point Bridge										
9.1.8	Upgrade existing private stormwater storage facilities			1,500	1,500	1,500	1,500				
9.2.2	Remove fish barriers in Percival Creek									90,000	28,000
9.2.3	Improve fish passage in the Black Lake Drainage Ditch			4,000							
Total Expenditures				24,500	20,500	20,500	107,500	19,000	19,000	109,000	37,000

33  
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1999  
1998  
1997  
1996  
1995  
1994  
1993  
1992

**Table 9d: Capital Improvement Costs and Scheduling  
Thurston County's Responsibilities with Cost Share Option A  
Percival Creek Basin**

Recommendation		Engrs Cost Est	1992	1993	1994	1995	1996	1997	1998	1999	2000
9.1.1	Construct North Percival stormwater management facility										
9.1.2	Upgrade Cooper Point/Black Lake Blvd conveyance system										
9.1.3	Retrofit Mottman Industrial Park drainage system										
9.1.4	Upgrade North Basin conveyance system										
9.1.5	Increase the flood control capacity of Yaeger Park										
9.1.6	Improve Capital Mall Drive conveyance system										
9.1.7	Improve conveyance system to regional detention pond at Cooper Point Bridge										
9.1.8	Upgrade existing private stormwater storage facilities										
9.2.2	Remove fish barriers in Percival Creek									19,000	11,000
9.2.3	Improve fish passage in the Black Lake Drainage Ditch										
Total Expenditures										19,000	11,000

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