

## **CHAPTER 10. SUMMARY OF BASIN PLAN RECOMMENDATIONS**

This chapter summarizes the solutions recommended for implementation in the Clover Creek Basin. These recommendations include regulatory and programmatic measures as well as a prioritized list of capital projects to reduce existing flooding problems, improve water quality, improve fish habitat and accommodate projected future development while complying with federal and state regulations.

### **10.1 BASIN PLAN RECOMMENDATIONS**

Tables 10-1 through 10-4 summarize the recommended actions. Basin-wide measures are described separately from the subbasin specific measures. Capital improvements, recommended studies, and inter-related projects are prioritized as high, medium, or low priority to indicate the relative significance of projects and the order in which they should be implemented. Chapters 6, 7, 8, and 9 provide background information about each recommendation and the problems and issues they address.

The plan has been designed with a broad range of solutions to ensure flexibility and resilience in meeting its goals and objectives. The plan should be updated periodically as projects are implemented and with changes in the regulatory and political climate. Most capital improvement projects, such as construction of infiltration facilities or culvert replacements, will require additional planning and design before implementation. The cost estimates presented for projects in this plan will aid the County in planning future projects and in allocating sufficient funds.

### **10.2 RECOMMENDATIONS FOR MONITORING AND ADAPTIVE MANAGEMENT**

Adaptive management is a conservative experimental approach to watershed management. The key components of this approach are to apply measures based on the best available information or science known at the time and to adjust the application of these measures over time based on knowledge gained from the measures' implementation. This approach allows for flexibility in management policies as science and technology advance. Key areas in which adaptive management techniques can be applied in this basin plan include the following:

- Use of low-impact development standards
- Restoration of streams and wetlands
- Restoration of riparian corridors
- Use of BMPs to enhance surface water quality
- Flood hazard reduction.

A monitoring program should be set up to gather data and analyze the outcomes of these categories of projects after they are implemented. Knowledge gained from the outcomes of these projects, as well as improvements in applied science, can be used to make adjustments to watershed management policy in the County.

### **10.3 COMPARISON TO 1991 PLAN**

The 2002 Clover Creek Basin Plan has a much broader range and scope than the chapter that applied to the Clover Creek basin in the 1991 Plan. This basin plan includes environmental components that were not previously addressed, including surface water quality and stream and riparian habitat. These added components reflect the significant changes in environmental policy that have occurred in Western Washington over the past decade. These policy changes have come about due to changes in environmental legislation, as well as the value society has placed on the preservation and protection of natural resources. The current emphasis of watershed policy is on the reduction of development and land use impacts on natural resources. Therefore, the 2002 Clover Creek Basin Plan was crafted to balance the public's need for drainage infrastructure with the protection and enhancement of natural resources.

The 1991 Plan focused primarily on reducing flooding problems and improving water quality entering the sole source aquifer. The goals and objectives of the 2002 Clover Creek Basin Plan were crafted to protect surface water quality and habitat in lakes, wetlands and streams in addition to flood hazard reduction. Solutions to identified problems, which include regulatory and land use measures, were analyzed based on their potential impact on flooding, water quality and habitat. A greater emphasis was placed on selecting non-structural recommendations and on solutions with multiple uses, such as performing stream restoration to reduce flooding in nearby developments. This plan provides a greater level of flexibility that can be used during the adaptive management process to incorporate new knowledge and advances in applied science and technology.

### **10.4 IMPLEMENTATION STRATEGY**

Implementation of the recommended actions will generally follow the prioritization groupings of high, medium, and low. However, implementation will not follow the exact sequence of the first project to the last project in the High category, followed by the first action in the Medium category, and so forth. Several factors exist that will result in implementation of actions that are not in the exact sequence as depicted in Tables 10-1, 10-2, and 10-3. These factors include the following:

- **Available funds.** Adoption of the Basin Plan will occur with a pre-existing approved Capital Facilities Element. Under the Growth Management Act, Counties annually update this Element which includes surface water management capital projects. While the County has taken into consideration projects identified in the basin planning effort, funding decisions have already been made for other projects which reduces available funds for year one of basin plan implementation.
- **Contingent projects.** Some of the projects are contingent on other projects being implemented first. For example, several culvert replacements to reduce flood hazard and open up habitat are contingent on sequencing with other culvert projects within the same watershed and/or on the same stream.
- **Available staff and professional service needs.** Various types of projects and programs have specific expertise needs. For example, developing a public education program requires a different skill set than designing a retention pond. Aligning the needed skill sets with the recommendations will result in projects selected out of the sequence suggested in the tables.

- **The best implementer may be someone other than Pierce County Public Works and Utilities.** Some of the recommended actions may be more appropriately conducted by other parties. For example, stream fencing could be better implemented by conservation corps or Conservation District personnel. In these cases, the sequence of action implementation needs to be coordinated with other priorities and work loads of those non-Public Works and Utilities Department entities.
- **New information or emerging issues.** These factors will influence the annual capital and work plans designed to implement the Basin Plan.

In light of these and other factors, following action on the Basin Plan, Pierce County will develop an implementation strategy designed to sequence, schedule and assign resources for the various recommended actions. This implementation strategy will be developed in collaboration and coordination with other potential implementers and in consideration with available financial and staff resources. The implementation strategy will include performance measurements and provide for periodic evaluation of progress.





























