CHAPTER 4

Ongoing Elements of Watershed Management

As explained in Chapter 1, the citizens and government of Portland have a vision for the City that involves a thriving natural river system with clean, healthy urban waterways and uplands. Such a system would benefit fish, wildlife, plant communities, and—by enhancing Portland's livability, environmental health and economic vitality—people, too.

Applying the scientific principles and guidelines in the *Framework* and following the watershed process it describes will necessitate many more ongoing efforts.

Although the *Framework for Integrated Management of Watershed Health* represents an important step in making this vision a reality, applying the scientific principles and guidelines in the *Framework* and following the watershed process it describes is iterative and will necessitate many more ongoing efforts. For the *Framework* approach to be successful over the coming decades, the City will need to address existing uncertainties about species and conditions in the City's watersheds, and the extent to which watershed and habitat conditions can be protected or restored in the urban environment. The City also will need to develop more detailed guidance on implementing the technical steps and tools described in the *Framework*, develop a monitoring program to track progress, provide appropriate funding, involve stakeholders and the public in the *Framework* processes, and provide regional coordination and leadership on issues related to watershed health. In addition, the City will need to have communitywide discussions regarding the broad-scale implications of the *Framework*, to determine how urban growth and development in Portland and the metropolitan area can best occur while the City strives to achieve its watershed health goals and meet its statutory obligations.

Addressing Uncertainties

The City of Portland has a great deal of information about its watersheds, but it does not have all the information it needs about current conditions, the species that use its watersheds and how certain aspects of the ecosystem function, especially in an urban setting. If the *Framework* approach is to be effective, these data gaps will need to be filled through surveys, studies and monitoring, as well as by reviewing the most current scientific literature.

At a species level, the City of Portland should monitor the distribution of salmonids and their seasonal use of habitat in the City's watersheds; continue ongoing research on juvenile salmonid use of banks and near-shore areas in the lower Willamette River; evaluate how hatchery programs are affecting the City's ability to reach its goals; and study the distribution and habitat use of key riparian and terrestrial wildlife species. At the ecosystem level, data gaps to be filled include identifying how particular elements of the urban ecosystem contribute to the system's healthy functioning (such as the role of tributaries, riparian areas and floodplains in large, low-gradient river systems), how conditions in the

City's upland areas affect watershed health, and the extent to which urban watersheds can achieve the "normative" structure and function of healthy, well-functioning ecosystems.

Delineating Elements of the *Framework*

The *Framework* presents a general outline of the steps the City of Portland intends to follow to improve the health of its watersheds, rather than detailed "how-to" instructions. Consequently, certain elements of the *Framework* will need to be delineated in more detail before the *Framework* can be implemented fully. This will involve clarifying roles and responsibilities for *Framework*-related activities; refining models and other analytical tools; establishing protocols for storing, managing and sharing accumulated data, both within the City and externally; developing specific criteria and processes for evaluating and selecting actions; identifying techniques for applying adaptive management; and providing guidance and training on the *Framework* to City staff.

Developing Monitoring Programs

The City already conducts certain monitoring activities that may be useful in the *Framework's* watershed management process (see Table 3-6). However, the City will need to develop a coordinated, integrated monitoring program that can be used specifically for adaptive watershed management, as described in Chapter 3. This monitoring program should specify protocols and methodologies; include the hydrology, water quality, physical habitat and biological community indicators that are selected for each watershed; build on existing monitoring activities as much as possible; and be consistent with regional monitoring and evaluation efforts. The City also should assign monitoring responsibilities among bureaus and develop mechanisms for using monitoring data in decision making.

Providing Appropriate Funding

Funds will need to be allocated to City bureaus that are leading the effort to develop watershed management plans, as well as to others who must implement, monitor and evaluate the results of selected actions. Funding will also be needed to ensure proper operation and maintenance of projects, and to ensure meaningful public involvement. In addition, City bureaus that are planning major new projects will need funding to assist those projects in undergoing the compatibility process described in Chapter 3. This will ensure that new projects are completed in a manner that is consistent with the City's goals for watershed health.

Involving Stakeholders and Others

Because the success of any public project rests in part on involving the public, it will be necessary for the City to effectively communicate watershed health information to multiple stakeholders and engage them in both policy-level and project-level decisions. Information on current watershed conditions, the City's approach to watershed management and implications for the future all will be important parts of an open dialogue on watershed

health in Portland. The City also will need to garner public, agency and stakeholder support for its watershed-related efforts.

To ensure the ongoing scientific soundness of the City's watershed health activities, the City has established a science advisory group that can be called upon to advise the City on technical issues and review watershed-related documents the City generates. From time to time, there may be documents that should be reviewed by a team of independent scientists, much the way the Independent Science Team provided an independent peer review of this *Framework* document.

Providing Regional Coordination and Leadership

Because Portland's watersheds exist within the context of a large, ecologically connected region, the City cannot achieve all of its goals for healthy watersheds by acting unilaterally. In other words, what happens in Portland's watersheds is affected by the decisions of other jurisdictions and agencies in the Willamette and Columbia basins. For the *Framework* to be successful, the City must continue to build relationships with other entities in the region and—to the extent possible—influence those entities' decisions such that they support watershed health throughout the region. The City also must coordinate with Metro, and with federal and state agencies to ensure that its watershed management approach is in step with work being done by them. Lastly, forging strong public and private partnerships at the local and state levels will help build support for achieving healthy watersheds and foster coordinated action at a variety of scales.

Addressing the Tough Issues

Applying the processes in the *Framework* will bring to light accurate, scientifically sound information regarding what is needed, from an ecological standpoint, to achieve healthy watersheds. However, it is likely that this information also will raise fundamental questions about Portland's future and how competing demands on limited resources within the City will be addressed.

For example, it is reasonable to expect that issues will arise such as how to do the following:

- Reconcile the demand for riverside industrial and residential land with efforts to comply with regional, state and federal laws that require improved habitat in the lower Willamette.
- Protect off-channel and shallow water habitat while respecting the public's desire for recreational opportunities.
- Preserve the autonomy of private landowners while encouraging actions on private property that enhance watershed health.
- Maintain the City's ability to provide services in the face of a growing population, without jeopardizing important ecological functions that, once lost, may never be regained.

- Take a long-term view when calculating the true costs and benefits of watershed management activities.
- Guide new development such that it improves rather than degrades watershed conditions.
- Share the responsibility for improving watershed conditions in the context of a growing population. For example, to what degree should the City rely on infrastructure, such as CSO abatement facilities, to solve watershed problems? To what degree (and how) should the City address new and existing development to moderate its ecological impact?

In addressing these and other implications of the *Framework*, the City should seek solutions that integrate seemingly competing values and provide the best possible outcome for as many parties involved as possible. This will entail engaging the public in constructive dialogue about how urban growth and development in Portland and the metropolitan area can best occur while still allowing the City to achieve its watershed health goals and meet its regulatory obligations.