

Water in Oregon – Not a Drop to Waste: Part 2: Issues and Perspectives

Executive Summary

Oregon regulates water through a complex system of laws that over time have been changed to reflect societal values and demands and to address newly identified issues. The League of Women Voters of Oregon Education Fund surveyed the current laws in Part 1 of this report, and in Part 2 it looks at the current issues facing water quality and quantity from the perspectives of stakeholder groups throughout the state. League members interviewed thirty-five stakeholders to learn their concerns.

The management of water is divided among many state agencies. Those interviewed for this study describe the management as fragmented and “siloed.” Each agency has its own priorities and responsibilities. Water quality and quantity are addressed by separate agencies. Agency goals sometimes conflict. In order to address water issues, stakeholders often work with several agencies. The process can be time consuming and frustrating.

Four general areas of concern with current management structure were identified in interviews:

1. The management structure hampers *cooperation* among agencies, organizations and the public and makes problem solving at the local level difficult. Interviewees expressed support for moving to watershed approaches that utilize a cross agency, intergovernmental approach that works with local groups to solve problems by addressing the interactive factors within specific watersheds.
2. Interviewees expressed concerns over the *tracking of information* such as stream flow, ground water levels, stream pollution and historical data on water. Gaps in data required for decision making and planning include the locations, quality and number of exempt wells and septic systems.
3. *Funding* shortages can result in inadequate staffing so that response is slow and tasks such as tracking and updating of data are not completed or are delayed. Funding needs for upgrading and replacing old infrastructure were also noted.
4. *Communication* among agencies and levels of government and the public can be limited. Currently, decisions at various levels can be made without comprehensive understanding of their impacts.



Joe Hall Creek, South Umpqua drainage

All interviewees stressed the need for data. Concerns included the need for adequate funding for testing and for maintaining consistent quality standards. The need to integrate data on a watershed basis and to use the data in planning was stressed.

A number of *specific challenges* for water were identified in the interviews with stakeholders:

- **Water rights:** Many interviewees expressed some dissatisfaction with the Oregon law based on prior appropriations, but they also indicated that change is not likely nor necessarily the solution. Senior right holders depend on established rights for planning. The inclusion of in-stream flows to protect habitat only became part of water law in the 1980s. Thus state in-stream rights are often junior yet are priorities for federal mandates for protecting water quality and the Endangered Species Act. Conflicts can occur between senior right holders and the more junior in-stream rights.
- **Future Water Demand:** A 2008 report by the Water Resources Department (WRD) suggested annual demand for water will increase from 9.1 to 10.3 million acre-feet by 2050. However this prediction of annual demand could vary within a range from 7.4 to 11.3 million acre-feet as a consequence of climate change and/or increased conservation.
- **Stream Flow:** In summer, the flow in Oregon's streams drops while the demand for water increases. Lower flows negatively impact stream quality for habitat and recreation. Watersheds in several parts of the state have organized stakeholder teams to create plans for better balancing the demands for out-of-stream water for agriculture and domestic use with in-stream requirements for protecting habitat.
- **Groundwater Contamination and Loss:** Historically, water quality and quantity regulation focused on surface water, but groundwater is also in demand for agricultural, commercial and domestic use. Complete data is lacking on its quantity and quality. WRD has identified areas of the state where groundwater levels are dropping. The Department of Environmental Quality (DEQ) has identified areas of the state where groundwater is contaminated. Significantly more data is needed to develop plans to protect this water source. The problem is further exacerbated by the over 230,000 exempt wells (wells serving up to three families) across the state. In addition individual septic systems are not regularly inspected and may contribute to groundwater pollution.
- **Water Temperature:** Drop in stream flow, lack of shade, warm runoff and point source discharges can raise the temperature of streams and stress cold-water flora and fauna including native fish.
- **Point Source Pollution:** All point source discharges of water are regulated through permits and administered by the state. Permits set limits on pollution discharge and require monitoring. Many stakeholders are concerned because the permits do not regulate all pollutants in discharges, do allow some discharge of regulated pollutants and do allow mixing zones at the point of discharge where pollutant levels may be higher than standards for the stream. Public or private wastewater treatment facilities hold about 70 percent of the permits.
- **Nonpoint Source Pollution:** Runoff from urban streets, commercial development and rural agriculture all pollute Oregon's waters. This nonpoint source pollution is challenging to address and has only been actively regulated as part of the Clean Water Act since 1987. Construction sites, municipalities and counties with larger populations, some types of industry and large animal feedlots must now have permits for stormwater. But runoff is a universal problem that is difficult to regulate. One challenge is convincing the public that they play a role.

- **Total Maximum Daily Loads (TMDLs):** The federal Clean Water Act requires the establishment of TMDLS that set specific standards for the maximum amount of specific pollutants that can be discharged into identified impaired waters without impacting beneficial uses. In Oregon, DEQ has the responsibility for developing TMDLS. With over 1000 identified impaired waters in Oregon, the process of developing TMDLS is challenging and time consuming. Interviewees noted that the process has good intentions but does not always work well, in part, because the initial standards are often generic and not adapted to the specific watershed characteristics.
- **Trace Pollutants:** A large number of trace pollutants have been found in Oregon’s water. Pollutants can include small amounts of prescription drugs, chemical residuals from household products or pesticides, and petroleum products in urban, commercial and agricultural runoff. In many instances, an understanding of the implication of these small amounts of chemicals in water is lacking.
- **Land Use Planning:** Counties and cities are the principal land use planning governmental bodies for many areas, but they have limited authority and little expertise with either water quantity or quality planning. Frequently, the public only gets involved at the local level and thus does not communicate with actual water regulators (the state agencies).
- **Climate Change:** Interviewees stressed that at present there is no one answer for how climate change may affect the quality and quantity of water available for Oregonians.



Pervious pavers

With the recognition that water is a finite resource, conservation and pollution prevention efforts are underway throughout Oregon. Agriculture, industry, municipalities and forestry are all taking steps to conserve and protect water.

- **Agriculture:** In Oregon approximately 87 percent of water use is for irrigation. Over 40 percent of Oregon’s farms use irrigation. Some interviewees felt that current law did not encourage conservation of water in agriculture; however, other interviewees pointed out that irrigation is a cost in farming, and farmers work to control cost by using modern irrigation techniques that maximize effectiveness of watering and reduce evaporation. Modern agricultural water strategies include: conservation, reuse, aquifer recharge and recovery systems, water transfer between willing parties, off main stem multipurpose storage and use of groundwater wells. Farmers are also reducing the use of fertilizer and pesticides by controlled application techniques.
- **Industry and Commerce:** Since water can be a significant cost of production, conservation increasingly has become a priority for industry. Reducing pollution and developing new conservation technologies are industrial goals. Additionally, permitting for point source

discharges and stormwater have made reduction of pollutants a priority. Industry remains concerned that the costs of pollution control may affect their survival.

- **Municipalities:** Municipalities are educating their residents and upgrading their practices in order to conserve and to protect water. Larger municipalities and population areas are required to have stormwater permits with components that include community outreach, education and involvement, removal of illicit connections to the stormwater systems, internal use of Best Management Practices and better regulation of construction and post construction practices. Monitoring may be required. Public drinking water systems are also developing plans and education programs to encourage water conservation. However, many drinking water and wastewater treatment systems face additional problems in repair and maintenance of aging infrastructure.
- **Forestry:** Many past forestry practices allowed erosion and failed to protect riparian area along streams. Practices have been improving with controls for riparian areas, requirements for replanting, upgrading of logging roads and control of pesticide use.

For successful conservation and protection of water, the public must become knowledgeable and involved in water issues. Some interviewees noted that most of the public never becomes involved unless issues directly affect them. Traditional public meeting approaches often do not work. Alternatives suggested include introducing practices that reward conservation through financial incentives and/or other social marketing techniques. Other interviewees also stressed the need to reach children through schools at an early age.

The state of Oregon is currently examining approaches to better address water issues. In 2009, the state initiated the development of an Integrated Water Resources Strategy. Many opportunities will be provided for public participation.

By understanding the perspective of the stakeholders involved with water issues and the status of water resources in Oregon, citizens can develop plans to better meet Oregon's water quantity and quality needs.