Working Together to Protect Drinking Water Sources

By Kellie Garcia Bunting, BSc, PAg

Water is central to everything in BC – the survival of plants and animals, the wellbeing of humans, the health of the economy and the beauty of the natural landscapes. In the Okanagan, as in many BC communities, upland watersheds and valley lakes provide most of our drinking water. At the same time, most BC watersheds are also the site of widespread recreation, resource extraction, ranching, agriculture and land development. These activities, along with wildfires, slope failures, droughts and floods, are impacting the environment and threatening drinking water quality. Population growth, climate change and a complicated water governance framework are intensifying these threats. The Okanagan Basin Water Board (OBWB), working with many partners, has recently developed a toolkit (*www.sourcewaterprotectiontoolkit.ca*) for water suppliers and others across BC to protect their drinking water source.

Over the past 20 years, water suppliers in the Okanagan have taken steps towards improving drinking water quality by enhancing water treatment, staff training, monitoring and reporting. Best management practices to protect drinking water are used by logging, ranching and recreation interests, and governments at all levels have a variety of policies for watershed protection, but their uptake is inconsistent. Despite efforts, drinking water is still being threatened and much more action is required.

In 2019, the Okanagan Water Stewardship Council, the OBWB's technical advisory body, began discussions about how to facilitate true source water protection. The council has been in place for 16 years and includes members from all levels of governments, Interior Health, agricultural, ranching, tourism and water associations, academic institutions and conservation groups. The council recognized that many of the problems with source protection are related to a lack of planning, poor understanding of what should go into such plans and a lack of accessible information about source protection in general.

As an outcome of these discussions, the OBWB staff brought together a group of water suppliers and planners, provincial regulators, health agencies, indigenous organizations and other water experts to prepare a toolkit, website and webinar series on best practices for source protection. The toolkit gives a road map and tools for source protection and is

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intended for local government, irrigation and improvement district and First Nations staff who are responsible for providing drinking water to their communities across BC.

The toolkit provides solutions to the typical barriers to source protection. It clarifies the planning process to save water suppliers time and money and to help them satisfy regulatory requirements. It explains how communities can use their jurisdiction to protect water sources, provides ideas on how to secure long-term funding, talks about how to build awareness and gain support for source water protection activities, and describes how to best carry out water monitoring and reporting. The toolkit includes more than 30 case studies from a variety of BC watersheds, enabling communities to draw on the successes and learn from others.

The toolkit recommends a five-step process for source protection planning: Partner, Assess, Plan, Act and Evaluate (see **Figure 1**). Eight tools are included, each with a description, an explanation of how to use it for source protection and case studies. The toolkit also includes extensive information about the regulatory framework for water; the economic benefits of source water protection and ecosystem valuation approaches and methods; and common threats to drinking water and how to overcome them. Several pages of useful links are provided for those who want to dive deeper into the tools.

One of the biggest problems for water suppliers is that, though they have the responsibility to provide high-quality drinking water, they lack the authority and jurisdiction to regulate potentially polluting land uses in upland watersheds. To overcome this lack of jurisdiction, water suppliers must actively develop relationships with other agencies, companies and organizations to influence practices within and outside the water supplier's scope of authority. Strong partnerships help define the issues and point to solutions, rather than pointing fingers. Through this approach, they can establish a common understanding that all groups, despite potential competing interests, share a responsibility to protect source waters.

The toolkit recommends that water suppliers establish a technical advisory committee to provide collaborative guidance on source water assessments and help carry out response plans.

Leading a technical advisory committee and meeting watershed protection goals takes time, expertise and money. Staffing challenges and unreliable funding make it hard for water suppliers to devote efforts to source protection. The toolkit provides information

Figure 1. Roadmap to source water protection recommended in the OBWB's new source water protection toolkit.

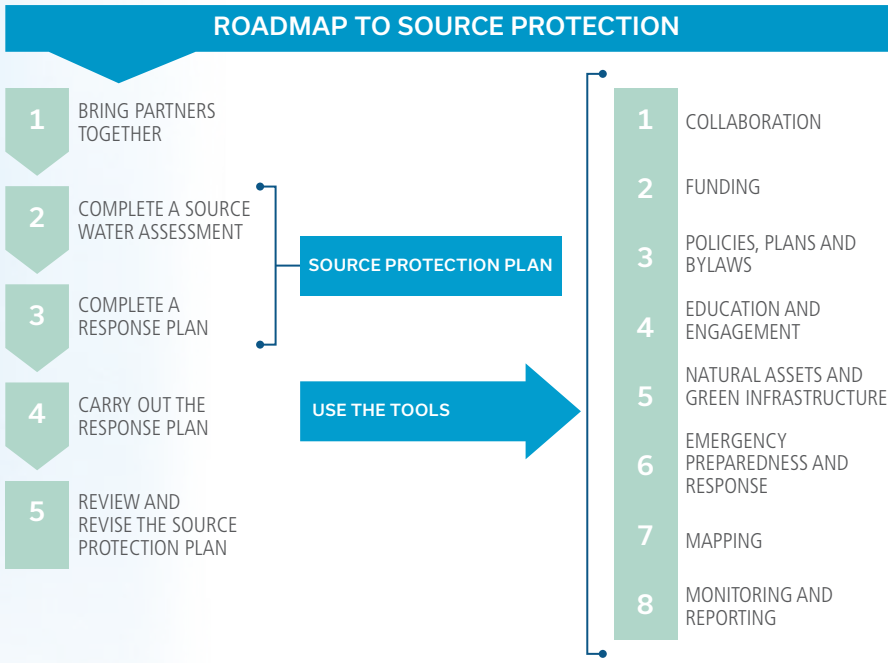
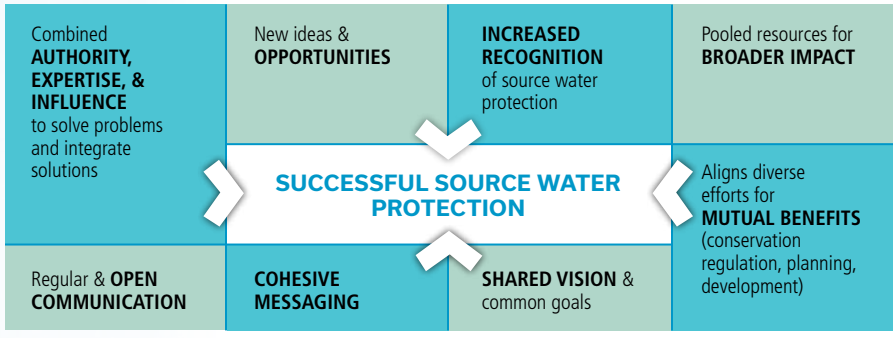


Figure 2. The benefits of collaborating to protect source waters.



and examples, giving detailed suggestions for funding sources including parcel taxes and development permit fees or water system rates, among other ideas. The toolkit also gives examples with regards to how hiring a dedicated watershed coordinator can lead to long-term benefits.

Watersheds are resilient and will provide high-quality water for present and future generations if we look after them. While we face complex challenges when it comes to water protection, we have many tools to use, examples to learn from and talented and passionate people working on the issues. No single organization has the capacity or expertise to protect source waters alone. Collaboration and sharing resources, such as ideas, information, knowledge, efforts, and funding are essential. The toolkit demonstrates that water suppliers have excellent opportunities to develop and carry out robust, watershed-scale source water protection programs. Most often, these programs are built from the ground-up through locally driven initiatives with provincial government support, not the other way around. Working together, our collective efforts will bring cumulative benefits.

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