

Plain Language Document – No

Wapiti Watershed Source Water Protection Plan

Plan Vision: A Wapiti Watershed where proactive watershed management ensures a stable and reliable water resource for the many uses of water in the Wapiti Watershed.

Everyone in the Wapiti Watershed uses water for many different things, including drinking and washing. Yet water is also essential for other parts of our lives such as recreation and industry like Agriculture, Forestry, Oil & Gas and Transportation. There are two parts to having enough water: quantity and quality. A Water Management Plan (November 2020) has been completed for the Wapiti River to understand how much water is available for use and to set guidelines for using this water. The Water Management Plan deals with how much water. This Source Water Protection Plan will look at water quality - how good is the water.

Aquatera Utilities Inc., the Canadian Association of Petroleum Producers, the County of Grande Prairie, the Mighty Peace Watershed Alliance, the Municipal District of Greenview and Sturgeon Lake Cree Nation formed a project team to create the Wapiti Watershed Source Water Protection Plan. Many thanks go to all those in government, industry and not-for-profits that provided input, data, and comments.

The focus of this work is to set out a plan before water quality declines drastically. Taking steps and actions now to prevent water quality decline is key so that we can all continue to enjoy use of the water.

Process:

First, a list of all the hazards was created. Hazards are simply anything that could pollute the water, however for this plan we focused on non-point source pollution and not point sources such as wastewater coming out of pipe.

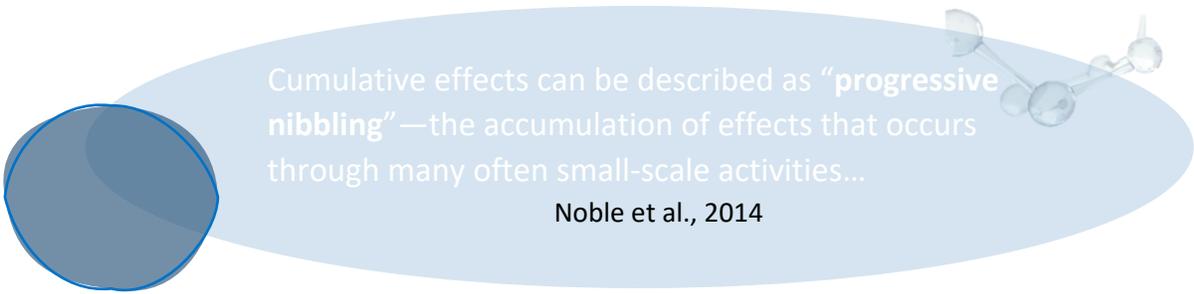
Second, these hazards were ranked according to their risk. Risk is the combination of how bad it would be and how likely it is to occur.

Third, we identified the hazards and examined options of ways to prevent their occurrence. These actions are called mitigative strategies because they will help to prevent decreases in water quality.

For each hazard that had a risk assigned to it there is an accompanying mitigative strategy or strategies. These are actions that we can undertake to maintain our water. Everyone who lives, works or plays in the watershed will have action(s) that they can do to help in proactive management. It ranges from how we maintain our lawns, to road construction, to cutblocks, to wastewater management, to pipelines, to fields and to how we build neighbourhoods.

As we looked at each hazard and how industry, a common theme emerged. Almost everyone is trying hard to do better - to farm better, to produce oil better, to log better, to build streets better or to garden better. But there are some long-term trends that have been documented that raise concerns. So even though how we do things and improving how we do things – called Beneficial Management Practices - is really important and really good, it is not enough to ensure good water quality in the Wapiti Watershed into the future.

Enter Cumulative Effects. Cumulative effects looks at how all the pollution produced by all the different activities adds up and how that can dirty the water. A good way to think of cumulative effects is death by a thousand cuts. It is very unlikely that any single cut, any single activity in the Wapiti Watershed, is going to destroy water quality for everyone. But adding up the all the activities of all the people in the watershed may.



Cumulative effects can be described as “**progressive nibbling**” —the accumulation of effects that occurs through many often small-scale activities...

Noble et al., 2014

So what is to be done? Our plan lists many recommendations but there are 4 main strategies that we have identified. The first is called **cumulative effects management**. We recommend that water quality is measured and monitored carefully so that we start to notice decreases in the quality we can track it back to the source and address it. At this point, activities are more evaluated on whether they follow the rules, under cumulative effects management the focus is water quality and so when it decreases we need to make changes.

Looking at the whole watershed we can see that there are three general recommendations to be made. One, we need to have better **riparian zones**. This is the area between lakes, rivers, sloughs, swamps and the upland or dry ground. This area needs to be vegetated and kept in a way that it can filter water. Second, not all roads are equal and some produce a lot dirt which ends up in streams. We need focus on **slowing down the dirt going into streams**. Third, **wetlands** are called nature’s kidneys for their ability to purify water. We need to keep wetlands on the landscape and keep them healthy.

For more info, go to:

<https://www.mightypeacewatershedalliance.org/projects/wapiti-watershed-source-water-protection-plan/>