



Where Are We?

Current Health Status & Future Goals




Riparian areas change naturally over time. What we do in them and in the watersheds that surround them can speed up many of those changes. Sometimes the speed and degree of change is greater than the natural resiliency and healing rate of riparian areas. Development can cause streams to erode their banks faster, flows may fluctuate more and downcutting can dry up productive riparian areas. These changes are compounded in lakes and wetlands with accumulations of sediments and nutrients, water level fluctuations and a speeding up of the ageing process. If we acknowledge that riparian areas change and that we are responsible for some of these changes, it is a step towards setting goals for tomorrow's riparian areas. Sometimes looking back gives us a vision of where we need to go. Goal setting begins by asking three questions:

Where were we?

Where are we today?

Where do we want to be?

Riparian health is described in the following categories:

	HEALTHY; all riparian functions are being performed
	HEALTHY, WITH PROBLEMS; many functions are being performed but signs of stress are apparent
	UNHEALTHY; most functions are severely impaired or have been lost

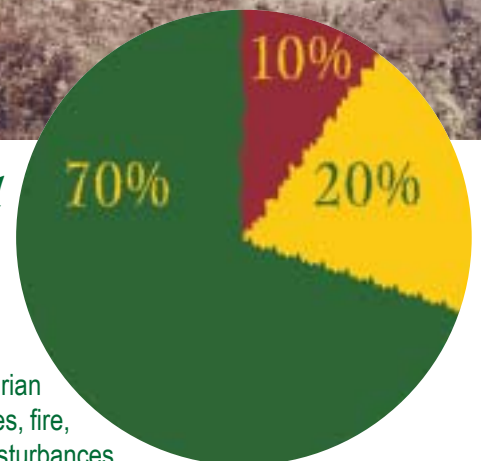


Where We Were

There is no simple answer to the question "how healthy were riparian areas in the past?". What is available to help us includes the written accounts of the observations by explorers, surveyors, fur traders, naturalists and the Northwest Mounted Police. Some early artwork exists and early photographs of the last part of the 1800s provide another visual window. We know from historical accounts that there were disturbances like buffalo grazing, fire, drought and floods affecting riparian health. From those same records we understand that beaver populations were much higher historically than now. The effect of beavers on riparian health was probably positive, especially through the maintenance of higher water tables that would have enhanced the amount of woody vegetation. By looking at riparian sites today we can also gain insight into vegetation potential - what could have existed on the site.



Past - 1801

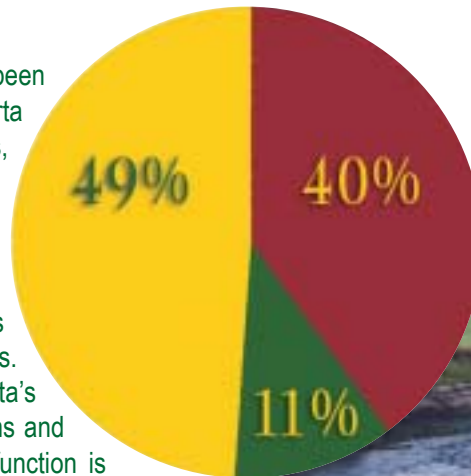


Based on all of these bits of evidence we can speculate that prior to settlement riparian areas were mostly healthy. Natural events such as floods, grazing from native ungulates, fire, drought, beavers and landslides did affect riparian condition and the results of these disturbances meant health could vary over time and from reach to reach. Because of the natural resiliency of these systems and the long return intervals between use or disturbance, it is likely that ecological function was restored relatively quickly.



Where We Are

Information on riparian health has been collected in the settled portion of Alberta since 1995, on over 150 streams, rivers, lakes and wetlands. Measurements have been done randomly, so as not to bias the results and reaches are selected that are representative of much larger portions of the riparian landscape. More than 1000 reaches have been inventoried, representing over 2000 km of riparian areas along streams and rivers and around wetlands and lakes. The measurements indicate that about 11% of Alberta's riparian areas are healthy, 49% are healthy, with problems and 40% are unhealthy. Those figures tell us that riparian function is compromised in many of our watersheds. The results for Alberta are mirrored by the measurements for Saskatchewan and numerous states including Montana and Idaho. Lights are flashing; these results suggest we have issues to deal with that go well beyond what could be expected in the natural variation of riparian health.



Present - 2002

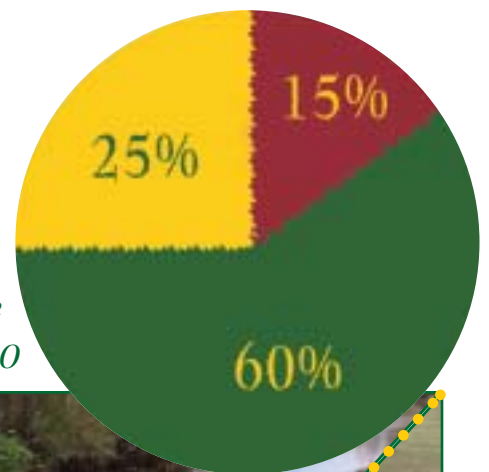


Where We Need to Be

Healthy riparian areas sustain us, especially their ability to store, filter and buffer water, combined with their agricultural and biodiversity values. Sustaining ourselves will require maintaining healthy riparian areas and restoring many that have declined in health.

What should our goals be for riparian health? Clearly we all want these landscapes to be resilient, stable and provide us a long list of ecological services, whether we are livestock producers, farmers, anglers, bird watchers, cottage owners, hikers or downstream water drinkers. Riparian health can vary across the province, from stream to stream and around a lake, ranging from healthy to unhealthy. Some of this variation relates to how riparian areas evolved. However, our use of these landscapes represents an additive and cumulative effect which has often compromised resiliency. That effect could be a consequence of what has happened on the reach or what has happened upstream or downstream. Additional variation in riparian health is due to our use of these areas. In some cases, that use has led to a decline in condition.

Our goals need to reflect that agriculture, urban development, transportation networks, recreational use, industrial uses and water management will have impacts and we cannot return to presettlement conditions. However, we should see progressively better riparian health as we adopt better land use practices, phase out some land uses and restore function to riparian landscapes. We will find that maintaining and restoring riparian health will have significant benefits.



*Future
2011-2030*



*We will either get the future we planned for. . .
or . . . the one we didn't plan for.*