

CHAPTER 9

Wildlife and Water Management

Wildlife is an integral part of the land character of the Okanagan Basin. The variety of land birds and mammals in the Okanagan is extremely diverse. In terms of numbers of species occurring it may be considered one of the richest in the Province. Upland birds, song birds, ungulates and furred small game are present in varying quantity, usually as a direct result of the land use pattern of a particular area. Water dependent wildlife including waterfowl and fur-bearers, have a very limited distribution in the basin. This is in part due to the inherent water limitations in the basin, the generally oligotrophic nature of the larger lakes and the lack of established habitat for wildlife along the shoreline because of natural and man induced "drying" of waterbodies through the summer months.

The headwater areas of the basin support a few waterfowl through nesting to migration, however, water dependent wildlife resources in the upper area are at best described as poor. Due to time and money constraints plus the low water dependent wildlife potential, the headwater and upland areas were not examined as part of the study. Instead, available resources were channeled into an examination of Okanagan Lake and the Okanagan River system downstream from the lake.

9.1 OKANAGAN LAKE

The general Oligotrophic nature of Okanagan Lake, as well as its predominantly rocky littoral shelf limits its capacity for water dependent wildlife. The North Arm, some limited shoreline areas and the mouth of Vernon and Deep Creeks have broad clay and sand littoral shelves which support vegetative cover conducive to wildlife.

Waterfowl nesting on the lake is extremely limited, presumably due to the exposed nature of the shoreline. Only a few nesting pairs are seen throughout the summer. Field notes from the beginning of the Twentieth Century to the present indicate nesting has always been minimal. Ducks are less abundant now than in the early part of the century. Numbers of nesting geese have increased since the beginning of the century, in part due to the creation of artificial nesting facilities.

The more eutrophic areas of Okanagan Lake, particularly the North Arm near Vernon, play host to large numbers of migrating and wintering waterfowl. Practically every species of waterfowl common to Western Canada is found on the lake as a migrant. Of these, coots use the lake extensively for wintering. Pond-weed

provides a food source for migrant waterfowl while other plants provide cover and protection. Numbers of ducks using the lake during migration and wintering have decreased since the turn of the century, principally due to the fluctuation of water levels and the negative effect carp have had on the littoral plants of the lake since the introduction of that fish species in about 1917. Numbers of migrant geese have increased since the turn of the century.

Muskrats, the only aquatic mammals of any consequence utilizing the lake have similar habitat requirements to waterfowl, and thus occur in the same areas. The only notable concentration of muskrats observed in 1971 was in the vicinity of the mouth of Deep Creek. The number of muskrats have declined in recent years possibly due in large part to shoreline development and alteration.

9.2 THE OKANAGAN RIVER

The Okanagan River from Okanagan Falls to Oliver is generally unsuitable for water dependent wildlife. The "oxbows" (portions of the original river prior to its "development" as a flood control channel) are not conducive to waterfowl rearing.

Vaseux Lake, due to its eutrophic nature, provides some excellent habitat for nesting Canada Geese. To this end the lake has been declared a wildlife refuge. Large mats of weed and plant growth provide an abundance of food which attracts large numbers of coots and other waterfowl during the fall months.

The oxbows between Oliver and Osoyoos Lake and the marshes at the north end of Osoyoos Lake provide habitat for waterfowl (Figure 9.1). The large oxbows south of vertical drop structure 4 provide good waterfowl habitat. However, since the water level of these oxbows fluctuates with those of the river, the variation is extreme and the effect detrimental to wildlife. Muskrats also exist in the larger oxbows. Limitations to wildlife use of the oxbows include the gravelly substrate in the more northerly oxbows (formerly a portion of the river with a steeper gradient), fluctuating water levels and destruction of habitat adjacent to oxbows.

Oxbows were of two categories; seepage and charged. Seepage oxbows are completely sealed off from the river and dependent upon seepage from the adjacent river channel for water. Flows in excess of 500 c.f.s. in the main channel are required to maintain a reasonable level in these oxbows. Charged oxbows are open to the river channel and are used for irrigation withdrawal, thus water is maintained in them during the irrigation seasons when they are attractive to wildlife. After the irrigation season they become shallow ponds and puddles, essentially useless to wildlife.

(enlarged from 1:50,000 scale map)



OLIVER V.D.S. 12 and Oliver Bridge

V.D.S. 11 S₁
"Oliver Dairy" C₂ S₁

V.D.S. 10 S₂

S₃ S₂
"Fry Oxbow" C₂
V.D.S. 9 and Road Bridge

"Beckett Head Oxbow" C₁
V.D.S. 8 S₁

S₂ C₂
V.D.S. 7 V.D.S. 6 and Road Bridge
C₁ "Black Sage Oxbow"

C₂ "Richards Oxbow" (or Snake) S₁

S₂ S₂
V.D.S. 5 "Gray Sage Oxbow"

S₃ S₃ C₁
V.D.S. 4 "Brown Oxbow" C₁
V.D.S. 3 and Road Bridge

S₂ S₁
V.D.S. 2 S₁

"Popoff-Welmann-Jenson Oxbow" C₁

S₁ "Haynes Oxbow" C₁
King Truss Road Bridge
marshes and wild hay meadows
V.D.S. 1 pm pm

OSOYOOS LAKE

A SKETCH MAP OF THE OKANAGAN RIVER CHANNEL AND OXBOWS SOUTH OF OLIVER

-Legend-

- == Canal
- Vertical Drop Structure (V.D.S)
- ≡ Bridge
- C₁ Good wildlife habitat ∞ with controlled water inlet.
- C₂ Poor " " " " " " " " " " " "
- S₁ Good " " with seepage charge.
- S₂ Poor " " " " " " " " " " " "
- S₃ Dry when c.f.s in canal is less than 500.
- pm Excellent wildlife habitat, permanent water ∞ marsh.

Figure 9.1

The marshes from Oliver bridge to Osoyoos Lake provide nesting and migration habitat for waterfowl. Canada geese, three species of grebes and several duck species can be observed regularly. Although a smaller area, it is roughly comparable in quality to the north end of Okanagan Lake.

9.3 SUMMARY

Okanagan Lake and its shoreline and the Okanagan River and its environs, harbour one of the richest faunas in terms of numbers of species, to be found anywhere in British Columbia.

In terms of wildlife productivity, however, Okanagan Lake is low and it is evident that those mammals and birds dependent upon the lake have decreased in numbers since the turn of the century. This decrease is considered to be due to a number of factors, principally the development of the lake shore by man, the introduction of carp to the system in 1917, and the control of the water levels of the lake. It is considered that abnormally low water levels might have a severe effect on wildlife, but this effect would be only temporary provided normal water levels were resumed.

The Okanagan River system and its oxbows, with the exception of Vaseux Lake, the marshes at the north end of Osoyoos Lake and to a lesser extent, Tugulnuit Lake, are not productive in terms of wildlife. The greatest threat to existing wildlife in the area is the loss of natural habitat by the manner in which land in the vicinity of the channel is used and the manner in which water levels in the oxbows are controlled.