

**Annotated, chronologically arranged, reference list of ATV and hinterland road - related information, specific to Yukon (updated version).**

Roads and wildlife don't mix well. This has been a universal observation, wherever new roads have come into being, and the Yukon is no exception. All of Yukon's highways have had severe impacts on wildlife when first constructed: the Dempster Highway on caribou, the Alaska Highway on the wildlife in Kluane, and the Nahanni Range Road on caribou in the Hyland River valley, and the Atlin Road on the goat population in the White Mountain area, being examples. The establishment of the Kluane Game Sanctuary, the Dempster corridor and the re-introduction of goats to the White Mountain, were initiatives to mitigate these highways' negative impacts on wildlife. But highways are important to the functioning of the Territory, allowing residents to travel between communities and neighbouring jurisdictions and they were essential for the transport of goods. A much larger number of roads and trails are found in Yukon's hinterland. Their lengths, age and qualities vary greatly and they serve a smaller segment of society, such as companies or individuals, and are constructed for exploration, exploitation, access to lakes, campgrounds, rural residences or for recreational purposes. Already in 1914, 1400 miles of such backcountry roads existed, primarily serving mining and exploration interests. The Wheaton River Road and a number of roads in the Klondike go back that far, and some were later incorporated into the Highway system.

The government was in support of this hinterland road building activity. For instance the "Regional Road to Resources Program", managed by the Federal Department of Indian and Northern Affairs, which was formed in 1986, had an annual budget of 2.5 million for providing funding for construction of new roads or upgrading existing ones. A Yukon-wide inventory of roads and trails at the time, indicated that there were 602 in existence, all of which available in varying degrees for use to access wildlife populations for the purpose of hunting (Mychasiw and Hoefs, 1988). However, at that time, ATVs as they are currently known, did not yet exist in the Yukon, and only the owners of 4-wheel-drive trucks and jeeps were able to benefit from the network of hinterland roads. New types of ATVs began to show up around 1985-1990, but the first versions were not very reliable or powerful and the so-called three-wheelers were dangerous to drive and were prohibited in most jurisdictions. But the ORVs improved, became faster and stronger, and their number grew rapidly. It is estimated that between 200 and 300 were purchased every year in the Yukon, and by the year 2000 their number had grown to about 4000 machines, which does not include snowmobiles.

Concerns about negative impacts by ATVs on wildlife and habitats began to be documented in the early 80's, and grew concurrently with the numbers of ATVs and the proliferation of the hinterland trail network.

This collection of references will list most of the written information devoted to this subject in the Yukon, but readers are advised that such a list can only be a tool for readers to get their hands on the original, complete documents or to contact the relevant agencies or authors for more information.

**1981:** Yukon's Department of Renewable Resources conducted its first ever public opinion poll in which hunters were asked 13 questions on a range of hunting – related

matters, including length and timing of hunting season, full-curl sheep hunts, female sheep hunts, black powder and archery hunting and fire-arm safety program for novice hunters. The questionnaire was mailed to 4677 hunters, of which 1800 (38.5%) returned the filled-in forms. All analyses were done at the University of British Columbia Computing Center.

Question #1 read as follows: The Department is concerned with the increasing use of ATVs as hunting vehicles. Are you in favour of: a) eliminating hunting from ATVs entirely (43%), b) restricting the use of ATVs to certain sub-zones (12.4%); c) restricting ATVs to transporting game after kill (27%); d) restricting the use of ATVs to specific times (3.1%), and e) no restrictions (14.4%). The majority (85.6%) of resident hunters were in favour of ATVs being restricted in some manner with 43.0% of hunters favouring eliminating their use entirely.

**1986:** Further evidence for regulation of vehicles, including conventional four-wheel-drives, is found in the Select Committee of the Legislature ( Report on Renewable Resources: Yukoners' views on managing our renewable resources). The specific recommendation called for a ban on the use of ATVs and 4 x 4s in remote areas recently made accessible by new roads and restricting them in areas of sensitive environments.

**1987:** The Yukon Fish and Wildlife Branch commissioned Dan Lindsey to do a literature search and compile an annotated bibliography about human-caused disturbances of Dall's sheep, including summaries of impacts and mitigation measures. Lindsey arranged some 120 studies reviewed under 9 causative agents of which two (linear facilities and off-highway vehicles) are relevant to this topic of ATV use and back-country trails. Thirty-five scientific papers were listed in these categories.

**1988:** Yukon Department of Renewable Resources released a report entitled: "Access-related Impacts of Backcountry Roads to Wildlife and Management and Approaches to mitigate them," compiled by L. Mychasiw and M. Hoefs. This was an important report, in that it was the first time the Yukon Government acknowledged that roads into the backcountry and their use by all-terrain vehicles can have impacts on wildlife. The report cites four Yukon-specific case studies (Nahanni Range Road, Long Lake Creek Road, Montana Mountain, Granite Lake Road), where roads into the backcountry have brought about over-hunting and displacement of wildlife. Particularly the Granite Lake Road generated much negative publicity. It was constructed from the Haines Road, south of Haines Junction, into the Dezadeash Range near Granite Lake in 1981, to access a placer mining operation. Following sub-alpine elevation for some distance where visibility is good and moose were abundant, it brought about the kill of at least 17 moose in the first season after road completion and its use by motorized hunters. Hunting depleted the moose population, with the result that the area was put on permit hunts for moose. The moose population has never fully recovered and is still on permit hunt at this time – more than 30 years after the road was pushed in.

This report reviewed impacts of motorized hunters on back-country roads on wildlife and habitats, discusses vehicle controls in four jurisdictions in Canada (Manitoba, Saskatchewan, Alberta, and British Columbia) and recommended approaches to address this issue in the Yukon, including the use of "designated trails". Government did not

implement such regulations for all-terrain vehicles, but restricted hunting instead, and this reaction was characteristic for the next 25 years to follow.

**1993:** On March 29/1993, the Umbrella Final Agreement (UFA) was signed by the Federal Government, the Yukon Government, and the Council for Yukon Indians. It settled the land claims of Yukon Indians after negotiations lasting some twenty years. This Umbrella Final Agreement was followed by First Nation-specific agreements, all but three have now been signed off and implemented.

The UFA made provisions for a land-use planning process and a development assessment process (YESAB), which have since come into being, and it also led to the devolution of many responsibilities from the federal to the Yukon governments, including control over land. All of these have some relevance for control or managing of access to the hinterland.

The First Nations have control over land and land-use in areas transferred to them as part of this settlement.

The land-use planning process can zone the lands in a given planning region and establish zones with controlled access or even limit access entirely in areas sensitive to disturbance or with high ecological values. The Minister has veto power and does not have to accept a land-use plan developed for a specific planning region by a land-use planning commission. This has happened recently with the much publicized land-use plan for the Peel Watershed.

The YESAB process of assessing land-use application and recommending acceptance, modifications or rejections has been a great step forward in making this process transparent and open to public input and scrutiny, but it has limitations when it comes to access development into the hinterland and controlling the impacts of all-terrain-vehicles. To qualify for a YESAB assessment a given activity will have to meet certain criteria to be considered an acceptable “project”. An ATV driver pushing a trail into the backcountry does not qualify, even though the dozens of other drivers using the trail and widening it and creating a network may bring about severe cumulative impacts. Certain projects are also exempt from YESAB assessments, such as activities on areas staked by mining and exploration companies. Lastly, YESAB is an advisory body; it has no power to reject proposals or to impose conditions, nor can it enforce conditions imposed. It makes its recommendations to government, which the Minister can accept, modify or reject, and any enforcement of a permit’s conditions is also done by government.

**1997:** The YTG Department of Renewable Resources ( now called Environment) conducted a survey of sheep hunters residing in Whitehorse and Haines Junction to assess their attitude towards the sheep permit hunt system. The permit hunt for sheep had come into being in 1979 in parts of Game Management Zone 7, after government had bought out the outfitter of that area, D. Callison, as the combined sheep harvests of outfitter, resident and subsistence hunters exceeded a sustainable level. The survey was done by Carey and Tousignant, with the results published in 1997 under the title: “Views from the Mountain – what resident Yukon Sheep hunters have to say.” Questionnaires were sent to 187 sheep hunters residing in Whitehorse and Haines Junction, of which 105 returned the completed questionnaire. The questions asked all dealt with aspects of the permit hunt system, but in this context we will focus solely on the ATV/access- related matters.

Even though in 1997 the numbers of ATVs was much lower than at present and the trail system less elaborate, the authors write: “ The use of ATVs for sheep hunting, and access in general, were the topics that respondents brought up most.” Two of the hunters’ quotes cited were as follows: “I don’t like to see four-wheelers or four-wheel drives allowed in sheep country because of potential terrain disturbance and wildlife harassment. Also, to me, it detracts from my ideal of a desirable hunting experience..” . “The use of ATVs for sheep hunting is # 1 complaint I currently hear from traditional , ethical sheep hunters. At the same time, I see ATVs as the fastest growing sheep hunting tool. It is time to address ATV use! They are both popular and unpopular, depending on who you talk to. The authors write under “Highlights” of their analyses:” Twenty-six percent of the hunters responding to the questionnaire thought that an outright ban of ATVs would be appropriate under some conditions, and a further 39 percent suggested that ATVs be restricted to designated routes or limited below tree-line.”

**1997:** YTG Department of Renewable Resources commissioned a background report about ATV management elsewhere in Canada and contracted D. Loeks to do this review. Loeks’ (1997) report, entitled “Off-road vehicle use in the Yukon: Issue scoping study for the Department of Renewable Resources”, TransNorthern Consulting Ltd., 48 pp plus appendices, compared policies and legislation from other selected jurisdictions in Canada with those in the Yukon, discussed salient issues, problems, and opportunities concerning off-road vehicle use in the Yukon, estimated the extent, location, and significance of the problems identified, and analyzed whether problems associated with off-road vehicle use should be further addressed by government, considering the risks over medium and long-term of no action, and taking into account the experiences of the other jurisdictions studied in this review. Loeks’ study documented impacts consisting of damage to soil and vegetation; stressed, displaced , and/or killed wildlife; conflicts with other backcountry users; and uncontrolled spread of trail networks in various areas of the Yukon. Loeks also estimated the numbers of ATVs in the Yukon at 3000 to 4000 and that of snow-machines at 9 000 to 10 000. He recommended a range of actions for Government to take, before this problem grows to become serious and much more difficult to manage.

**1988:** Yukon Fish and Wildlife Branch passed regulations to restrict the use of ATVs in the southern parts of the Ruby Range to “designated trails”. The effected areas, located along the southeast shore of Kluane Lake, include GMZ 5-34, and 5-36 to 5-39. At the time this was a progressive step, which had no precedent in the Yukon, and it was successful, in that the sheep populations in the area remained open to hunting and did not have to put on permit hunts as in other areas, where sheep ranges were made accessible to ATV use by trail development. The designated trails in this area follow valleys and do not accent to alpine elevations.

**2000:** Loeks’ report was instrumental in the Yukon Fish and Wildlife Management Board’s establishing an “Access Management Working Group” which contracted Loeks to do a follow-up study , which was released in 200 under the title: ”Off-Road Vehicle Use and Issues in the Yukon.” This study was more Yukon-specific, focusing on the impacts of ATVs on this Territory’s wildlife, fish, and their habitats, providing case-

studies, and recommending measures to address the problem. Loeks used the Miner's Range (GMZ 5-50) as example of trail proliferation and ATV impacts on sheep, the Mayo community's attempt to manage wildlife for sustainability, and the moose decline and restoration attempts in GMZ 7 (Whitehorse South). Loeks' study did not include field work to generate new information, but was based on reviews of literature and government reports and statistics, polls, and numerous interviews of knowledgeable, informed individuals. Besides these local studies, Loeks documented many examples of ATV impacts from many areas of the Yukon, and finally, he described five approaches to handle this topic, ranging from one extreme: "Do nothing" to the opposite one of "dealing with ATV management in the context of an all-encompassing land-use plan, but he warned that "the most important lesson from other jurisdiction was that it is too late once off-road vehicle impacts have been allowed to become serious."

**2000:** The Yukon Fish and Wildlife Management Board's "Access Management Working Group" also commissioned Clayton White to do a survey of five other jurisdictions (Alaska, British Columbia, Alberta, Saskatchewan and Manitoba), and describe their ATV-related experiences and regulations. These were published under the title "Report on ORV Management Strategies, Activities, Successes and Failures in other jurisdictions" by C. White. All jurisdictions had similar experiences in that ATV-related problems came into being quickly and had to be reacted to without a pro-active management strategy being in place. Alberta faced more difficulties than the other jurisdictions, as much of Alberta was already carved up by trail development for oil and gas exploration and production. The provinces used different tools and different legislation to address this issue. In Alberta the Forestry Act was the primary legislation applied, in B. C. it was the Wildlife Act. Zoning, buffer strips, restricted areas, registration of vehicles, prohibition of some types of vehicles, designated trails were some of the methods imposed, and all jurisdictions stressed the need for public consultation.

C. White made some recommendations about regulation development in the Yukon. He was of the opinion that the Wildlife Act could be used, particularly as it was under review at the time, and he felt that it could be amended to better address habitat concerns and the access management issue.

**2000:** YTG Fish and Wildlife Branch, Southern Lakes Regional Program contracted K.A. Hayes in 1999 to interview long-time, local residents of the Southern Lakes region to assess their opinions about the status of Moose. Hayes' report, entitled: "Moose in Yukon's Coast Mountains: Observations and local knowledge from long-time area residents" was released in 2000. Twelve individuals with various backgrounds were identified and interviewed between June and September 1999. They ranged in age from 40 to about 90 years. They included native elders as well as non-native residents that had a minimum of 30 years experience in observing moose in the study area, which was bordered by Kusawa Lake in the west and Marsh Lake in the east, with the Alaska Highway and the B.C. border being the northern and southern limits, respectively.

There was agreement among all interviewees that moose were plentiful in the area till about 1980, when their decline began, which was still continuing at the time of the interviews. The interviews brought up many different potential reasons for the decline,

among them, over-hunting, predators, habitat fragmentation, human population growth, new types of all-terrain vehicles such as ATVs and snow-machines and the trail network they created, which led to increased hunting pressure, greater kill rates, disturbance, and habitats impacts. While there was no agreement which of these factors were the primary causes of the population declines, increased access and all-terrain vehicles were the factors most frequently brought up by all interviewees.

**2000:** The Champagne-Aishihik First Nation contracted N. Barichello (Nature Services North) to develop a discussion paper on “Snowmobiles and Ungulates in the Tatshenshini-Alsek Provincial Park” (T A Park). The Park is located on the west side of the Haines Highway, between the Yukon - B.C. border in the north and the B.C. - Alaska border in the south. The question posed was: “does winter activity of humans, particularly the use of snowmobiles, impact on Dall’s sheep and moose in the park?” This question was precipitated because a preliminary Draft Management Direction Statement (June 2000) called for zoning, which would result in the prohibition of motorized vehicles in the Wilderness Zone, which made up 94% of the Park. The contractor therefore, had to deal with the issue – does the available data on ungulate distribution in T A Park, and studies of disturbance of ungulates by snowmobiles, justify the prohibition of these machines in the Wilderness Zone of the T A Park?. There was no opportunity for field work to generate site-specific information, and the contractor depended on a survey of relevant literature, park surveys and plans and interviews of people familiar with the area, such as the local trapper and outfitter, Parks staff and biologists. The Park had two features in addition to tourists, which were important in this assessment: a) it receives a high amount of precipitation, most of it falling as snow, and b) it allows hunting and trapping to be carried out.

The heavy snow places severe constrain on ungulates, in particular Dall’s sheep, which are restricted in this Park to relatively few snow-free pastures and accessible escape terrain. The result was a very small population of sheep (counted in 1996 to be 233) confined to scattered wind-blown slopes in winter, connected by potentially high risk migration corridors. The July 1996 survey also documents that the sheep – at least at that time – were confined to three areas of the Park. Moose, on the other hand, are more tolerant to snow and can handle fairly deep snow. A survey done in 1997, documented that they are more widely distributed, had an average density of 290/1000 km<sup>2</sup> and a twinning rate of 20%. These population parameters are considered high by Yukon standards.

The contractor reviewed a number of studies dealing with the impact of humans, with and without dogs, hiking, skiing and driving on snowmobiles, on ungulates and the animals’ reactions to these disturbances. These reactions are well-known and include avoidance behaviour, reduced feed intake and weight loss, flight, range abandonment, increased winter mortality, increased susceptibility to predation and accidents, reduced productivity, all of which are positively correlated with the amount or frequency of disturbances. Deep snow worsens some of these impacts, as ungulates – even without disturbance - have to spend more energy to move about and the procure food. The trails created by snowmobiles are used by predators such as wolves and coyotes and increase their chance of locating prey.

Important is, that animals such as sheep can habituate to these disturbances, if they have learnt that humans and their toys are harmless and don't pose a threat to them. This in the case in National Parks and other areas where hunting is restricted, where sheep, elk, and deer have become very tame, causing traffic problems and depredations in gardens and orchards.

The contractor pointed out that snowmobiles can also have an impact on vegetation. When driving over the snow, they compact it. Repeated passes worsen this impact. The results are delayed snow melt and green-up of the vegetation, shortening of growing season, physical damage to shrubs, changes in soil temperatures, and reduction in soil bacteria. Over time, plant productivity will be reduced, and vegetation diversity and composition will change.

The contractor's recommendations for T. A. Park management contain provisions for zoning, regulations, education and monitoring. The zoning should reflect protection of core ungulate winter ranges and movement corridors, as well as stipulating which areas to be accessible to snowmobiles. These should avoid exposed ridges and riparian areas, and as much as possible follow cover, such as conifer stands. Dogs should be restricted and no hunting allowed during winter.

**2003:** A letter by the Hon. J. Kenyon, Minister of Environment, dated Jan. 29/2003, to the Yukon Fish and Wildlife management Board (YFWMB) dealt with comments on the Yukon Fish and Wildlife Management Board Recommendations on Proposed Hunting, Fishing and Trapping Regulation Changes, but it also included the following paragraph: "The Department is prepared to continue to work together with the Yukon Fish and Wildlife Management Board and in cooperation with stakeholders on the development of a territorial policy or approach for the management of off-road vehicle use in the Yukon."

The Board followed up on this commitment with the development of "A Proposal to Develop a Legislative Framework for Managing Access in the Yukon's Wilderness Areas," released in April 2003. Its justification was that increased oil, gas and forestry development in this territory had resulted in accelerated hinterland- road and trail development with negative impact on wildlife and habitats, and that these concerns were shared by a number of communities. The proposal contains the suggestion that a contract person be taken on for a 60-day period, for which the Board had secured funding. This position would coordinate meetings of an "YFWMB access management steering committee", to be established for this program, carry out actions identified by this committee, ensure the timely and coordinated development of draft management policy and legislation, ensure their public review and assist the YFWMB in providing formal recommendation to the Minister. The Proposal also contains suggested Terms of Reference for this Access Management Steering Committee. It was envisioned as a committee of four members, two from the YFWMB and two from YTG, but other options, such as including stakeholders, were also contemplated.

**2003:** The Yukon Fish and Wildlife Management Board released a booklet with the title: "Down the Road: The Effects of Roads and Trails on Wildlife", compiled by Meagan Christie. It is a well-illustrated document, written in non-scientific language for use by the general public and it addresses the impact of vehicles on wildlife and their habitats,

both in a road and trail setting, as well as making recommendations on mitigation steps to reduce these impacts. Also discussed is the de-commissioning of road and trails, if they are no longer needed for their intended purpose or if they are particularly damaging to the environment.

**2004:** The Yukon Fish and Wildlife Management Board's "Working Group on Off-Road Vehicles" released a short report (**What We Heard**) about their discussions with organizations, First Nations, territorial and local governments, Renewable Resources Councils and the public, whose positions were assessed through a questionnaire. Over 400 filled-in questionnaire forms were returned. The overall conclusion of the Working groups was that "opinion was split between those who have no concerns about off-road vehicles use and those who have concerns." Unfortunately, the Group did not release a quantitative analysis of the questionnaire returns, leaving the public in the dark about what percentage of the responding people rejected or supported the various questions.

The Group listed a number of positive aspects of ATVs, which included getting older or disabled people out on the land, hauling firewood, retrieving meat and trophies, distributing hunting pressure. These proponents of continuing, unrestricted use of ATVs claim that the damage done by ATVs can be attributed to a few "bad apples". They don't want restrictions, as the Yukon has too many of them already; the numbers of ATVs is small in relation to the size of the Yukon Territory; other types of land-uses cause more damage than ATVs; it is primarily young people who may cause problems, and this could be addressed by education; if restriction are imposed they should apply across the board and not exempt certain groups or businesses. The suspicion was also raised that this ATV hype, was raised by outfitters, as they like to keep resident hunters out of their areas. Communities, ORV-related businesses, and ORV users and user groups need all to be involved in coming up with educational programs and participate in discussions about managing ORVs.

People and groups concerned about unregulated use of ORVs, which included First Nations, RRCs, businesses and organisations as well as individuals brought up the usual, well-known and documented negative impacts, such as terrain damage, particularly, in soft and steep areas; disturbance and displacement of wildlife, over-harvesting of wildlife; pollution of water at stream crossings, damage of vegetation, possible impacts on rare and endangered species, and assisting the dispersal of invasive plants. Many areas of the Yukon were cited, in which damage to terrain and vegetation, erosion and wildlife depletion had been witnessed, such as the vicinity of greater Whitehorse, Sifton Range, Miners Range, Southern Lakes, Dempster Highway and White Pass. These concerned groups and individuals are worried about long-term and cumulative impacts, if the present, unregulated use of ATVs continues. Identified concerns focused on sensitive wildlife areas, alpine ranges, stream crossings, muskegs, permafrost areas, wetlands and sandy soils (dunes), and numerous locations were brought up, where these problems had come into being.

Suggested solutions from participating groups and individuals were as varied and opposing as their acceptance or rejections of the impacts of ATVs. Some felt that this whole issue can be dealt with by an education program, which could start already in school. Many people felt that ORVs should stay on existing trails. A common suggestion was that ATVs should not be used above tree-line. Licensing and registration of ATVs

was brought up. It was suggested that licensing should be connected to training. The licence plates should be very visible. The use of ATVs in certain areas sensitive to wildlife should be restricted, at least during times when the animals are using that area. ATV owners should switch to quieter, 4-stroke-engine machines to reduce their disturbance impact. Already existing regulations should be enforced. Bridges should be built at stream crossings. Helmets and minimum age restriction should be imposed. Lastly, provide good quality trails in areas where they will have no impacts on wildlife. These trails could either be offered as a trade for not using trails in sensitive areas or just to encourage people to use less sensitive areas.

The Working Group came to the conclusion after this consultation process that any problems at this time appear to be limited to specific areas, and the focus dealing with these problems, should be specific to such areas and not be territory-wide in scope. The Yukon Fish and Wildlife Management Board decided not to make any recommendations to the Minister at this time, but to instruct the Working Groups to continue to look at this issue and to develop a work plan based on the premises already brought up: make region-specific recommendations, involve local people and interest groups in the development of management strategies for specific areas; emphasize the importance of education and voluntary ORV limitation in preference to legislated restrictions; and, other methods of access (horses, hikers, canoeists, and planes) may need to be considered along with ORVs in some areas.

**2007:** A joint investigation, with the Laberge Renewable Resources Council, the Yukon Fish and Wildlife Branch, and the Ta'an Kwach'an Council participating, was started in the Miners Range with the title: "Assessing the impacts of increasing use by off-road vehicles on the Dall's sheep population and their habitat on Pilot Mountain (Miners Range, GMZ 5-50)". The project consisted of ground – and aerial surveys of wildlife, conducting public workshops and interviewing local residents by door-to-door contacts, estimating the use of the area by ATVs during the hunting season by means of remote cameras, and locating and mapping key wildlife habitats. The study was precipitated by frequent complaints by residents that the local wildlife was over-harvested and displaced by the high number of ATVs using this area, a concerns shared by the Ta'an Kwa ch'an Council. The study verified these concerns. Of relevance to the issue of ATV use and backcountry trail proliferation are the following findings. 1) The history of trail development was ascertained by interviewing local people, who lived in the areas for a long time, a literature search of hunting stories, and inspections of old maps. Around 1950 there was only one trail in the area ascending to alpine elevation, It was probably started by native people walking with dogs and then improved by local people using horses. The so-called Little-River trail and the one at the Sod farm came into being in the 80's also initially for use by horsemen. In 1989 the first ATVs were observed in that area and their number grew rapidly over the next decade, because of the close proximity of this area to Whitehorse. ATV riders developed their trail network by improving horse trails and added new trail in the alpine. Additional trails were developed at the north end of the Miners Range just south of Fox Lake, and in the area west of the Hotsprings, where firewood was cut and wood cutting trails were improved and extended up-hill. When this study was conducted in 2007-2008, there were five trails which ATV drivers

could use to get into alpine elevation, as well as an unknown number at alpine elevation, which are difficult to count because of their meandering nature and varying quality.

Concurrently with trail development and increasing numbers of ATVs there was an increase in hunting pressure on sheep, and for the duration of one decade (1989-1999) the harvest exceeded the maximum level of 4%, as stipulated in the Sheep Management Plan. To estimate the number of hunters and ATVs ascending the mountain, the government installed remote cameras at two access routes during the hunting season. Instrument problems prevented continuous records over the entire hunting season, but the cameras worked for about 7 weeks. During that time some 95 ATVs entered the area with close to 200 people. The other access routes were not monitored, but it is known that at least four pack-trains with local horse owners were also hunting in the area.

A regulation proposal to limit ATV use to areas below tree-line was rejected by government, but government did put this sheep population on a permit hunt.

**2007:** G. Wuerthner edited a collection of some thirty ATV impact assessments, published in the book “Thrillcraft – the environmental Consequences of motorized Recreation.” The book is of interest as it provides recent information and is well illustrated. Most studies described come from the United States, but two, one from Alberta and one from Alaska are relevant to the Yukon, as the habitat and animals dealt with also occur in the Yukon.

B. L Horejsi investigated the impacts of motorized encroachment on grizzly bears in central Alberta. He concluded: “Grizzly bear populations and the habitat they’d relied on for centuries are now endangered by motorized access and industrialization. Bears are vulnerable to disturbance, harassment, and displacement by noise, odour, and movements associated with humans, vehicles, and industrial machines. Roads and trails open to motor vehicles, particularly off-road vehicles, have proliferated in bear habitat and act as the primary conduit for this growing invasion of destructive activities.”

R. Bane assessed the proliferation of trails and the spread of ATV use in Alaska. He concludes: ‘Despite its reputation for having vast expanses of wild country, Alaska’s wilderness is increasingly overrun by off-road vehicles. Even National Parks and wilderness areas suffer from their impacts due to lack of supervision and enforcement. Off-road vehicles (including snow mobiles) have facilitated human penetration into formerly remote areas, posing threats to the State’s wildlife and wild lands.’

**2009:** In the fall of 2008, the Yukon Fish and Wildlife Management Board launched an initiative titled “Yukon Fish and Wildlife – A 20-20 Vision”, which was created as part of their mandate “to act in the public interest” for the benefit of Yukon fish and wildlife and their habitat. The Board, in partnership with the RRC’s and the Yukon Salmon Sub Committee, wanted to provide long-range strategic advice and recommendations to the responsible governments on the management of Yukon’s fish and wildlife resources. Over a three-months period Yukon-wide public meetings were held and questionnaires were distributed dealing with a great range of issues relating to fish and wildlife management as it is currently carried out and how people envision its status and management will be 12 years from now, in 2020. Of the questionnaires circulated a total of 311 were returned in completed form and were used in the analyses.

Of relevance to this review of ATV – related initiatives, question 14 of the questionnaire was important, It read “Should there be controlled access routes and /or elevation restrictions for ATVs to protect habitats. 163 people answered this question, 88% of which said there should be some restrictions or controlled access for ATV use in order to protect habitats.

**2009:** TOYA (Trails Only Yukon Association) was formed late in 2009. It now has a membership of around 400 and is led by a steering committee of six. TOYA’s efforts are based on values of responsibility, wise stewardship, an desire to leave a legacy for the next generation of a pristine wilderness environment, Its concerns about the unregulated use of ATVs in Yukon’s hinterland are: 1) Damage to fragile alpine and wetlands, 2) harassment, disturbance, and displacement of wildlife, 3) over-harvest in accessed areas, and 4) cutting of new trails, and 5) the quality of the wilderness experience. TOYA has consistently advocated for four specific initiatives regarding the issue of ATVs in the Yukon: 1) ATVs should be restricted to designated trails in the Yukon wilderness, 2) off-road vehicle legislation and regulations need to be created, 3) effective enforcement is essential, including identification of ATVs, and 4) education.

**2009:** The Canadian Off- Highway-Vehicle Distributors Council annually publishes the sale of all-terrain vehicles in Canada for each province and territory. In 2009, 59 797 ATVs were sold in Canada, with the sale in Quebec being highest with 15 792 units. The sale in the Yukon in 2009 was 241 ATVs., but the average for the past seven years was higher, being 310 vehicles per year.

**2009:** On November 18, 2009 the Yukon Legislative Assembly made the commitment to establish an all-party “Select Committee on the Safe Operation and Use of Off-road Vehicles”, thereby adopting a motion by Steve Nordick, MLA for Klondike Riding. The motion followed an ATV – related accident and injury in the Dawson area. Members of the Committee included the Hon. J. Edzerza (Chairman), D. Inveraty, S. Cardiff, and B. Cathers. Initially, the work of the committee was mean to address safety concerns, but public expectation and ambiguity in the wording of the motion made it necessary for the Committee to consider the broader issue of ATV use, including their environmental impacts.

The Order to the Committee include the conducting of public consultation for the purpose of receiving the views and opinions of Yukon residents and prepare a report making recommendations on the safe operation and use of all-terrain vehicles and snowmobiles in the Territory, to seek background information from experts, and to report back to the Legislative Assembly at its 2011 Spring Sitting.

The Committee’s approach to assess public opinion consisted of community meeting in 6 locations, special meetings with four groups (City of Whitehorse, Trails Only Yukon Association, Yukon Off-Road Riders Association, and Yukon Fish and Game Association), public appeals to make written submission, which resulted in 25 letters received (9 from interest groups and 16 from individuals), letters sent to all 14 Yukon First Nations, requesting their input, and - most importantly - the development of a detailed questionnaire, which in addition to the online version was mailed to each Yukon household. The formal consultation period extended from mid August to October 31,

2010, but meetings continued after that date, and the Committee received letters and e-mails till early March 2011. After that data analyses and report preparation began.

The questionnaire, which was the primary information source on which the Committee's recommendation are based, posed 20 questions, 8 dealing with ATV- safe operations, 8 with comparable questions for snowmobile safe operation, and the remaining 4 questions dealt with off-road vehicle use and focused on topics such as regulations, restrictions on certain types of vehicles, area-specific restrictions and relation to rules already in effect in communities. There was also space in the questionnaire for "other comments".

**2010:** TOYA organized a public meeting on the ATV issue on May 6<sup>th</sup>, with over 200 citizens in attendance. Also in early May, 2010 YOYA circulated a petition in Whitehorse and vicinity for residents to sign, appealing to Government to bring about control of the unregulated use of ATVs to stop their impact on wildlife and wilderness, through relevant legislation, effective enforcement and education. Following accepted statistical procedures all subdivisions of Whitehorse as well as the Takhini Hotsprings Road were polled. In total 731 residents were contacted and asked to sign the petition, or provide reason for opposing it or for remaining "neutral" in this position assessment. The results were that 71% of the residents contacted supported the petition, 16% were opposed to it, and 13 remained undecided. Many of these "neutral" residents were government employees, who did not want to get involved into a conflict of interest controversy. The petition was submitted to the Legislative Assembly by the Liberal Party on May 17/2010. However, it was not discussed in the House, since A. Lang, on behalf of government stated that this topic will soon be dealt with by the recently established Select Committee on the Safe Operation and Use of Off-road Vehicles. Detailed discussion of the public opinion poll is found in The Whitehorse Star, May 21<sup>st</sup> Issue, under the title: "Help us reduce ATVs' negative impacts".

**2010:** In May 2010, the Yukon Off-Road Riders Association was formed to represent the riders' needs and interests and to examine the feasibility of creating summer riding infrastructure in the Yukon. The Association claimed to have 1200 members and that there are 4000 to 5000 ATVs in the Yukon as well as some 20 000 to 50 000 km of trails. The source for this information is not provided in their submission to the Government's Select Committee on the Safe Operation and Use of Off-Road vehicles. The Association is opposed to ATV regulations and registration and advocates voluntary education instead.

**2010.** The Yukon Outfitters Association dealt with the ATV issue. The outfitters have a wide range of interests and backgrounds. Some of them do use ATVs, some of them hunt in a traditional manner by using horses. Therefore it was difficult to arrive at a unified position regarding ATV use. However, there were some points that all could agree on, and it was tried to reflect these common grounds in an official position on ATV use. The Yukon Outfitters Association's official position on ATV use is as follows:

“ We believe that it is everyone’s responsibility to look after the wildlife and the environment first. We further believe that there are regions of the Yukon that have legitimate concerns with ATVs and access must be addressed.”

**2010:** YTG Fish and Wildlife Branch, Habitat Programs, released a report entitled: “Off-Road Vehicle Access Management Strategies: an inter-jurisdictional review. The review was authored by Oliver Barker. The author contacted six jurisdictions (Alaska, British Columbia, Alberta, Saskatchewan, Manitoba, and Ontario) and reviewed their programs. He also asked the following specific questions in telephone interviews: 1) What motivated your government to begin managing ORV use? 2) What are the components of your ORV access management strategy? 3) How is your current ORV management strategy working? 4) What costs were associated with creation and implementation of your access management strategy? And 5) Looking back, how would you have done things differently? Barker’s report is essentially a follow-up or updated version of C. White’s study done in 2000 for the Yukon Fish and Wildlife Management Board. Barker contacted the same jurisdictions and his specific questions also include the ones brought by White. Barker’s report is therefore valuable for determining how much progress has been made in the jurisdictions contacted over the past decade in managing ATV and hinterland trail issues, and can be a useful tool for Yukon Government in learning from their mistakes and experiences and in avoiding these in the development of a Yukon program. Barker reviews in considerable details the work of these jurisdictions, touching on aspects such as, legislation, regulations, enforcement, costs, compliance and effectiveness among others. Barker concludes that broadly speaking, ORV access is managed in five ways and a given jurisdiction may choose one of several of these possibilities: A) Restricting ATV use for hunting purposes, which could be legislated under Wildlife Acts. B) Recreational access management could be dealt with in a land-use plan. This is also possible in Yukon, when a land-use plan under the UFA is developed for a given planning region. C) Environmental impact guidelines for responsible off-road travel. Currently, the Yukon’s environmental impact assessments under YESAB, do not recognize ATV use by single individuals or even groups of them as a ”project”, and does not assess their impacts, even though their cumulative impact over time is significant. D) Species - specific area closures. There are sub-zones in the Yukon, where for instance caribou or sheep can’t be hunted, but if such areas are open for other species the negative impacts of ATVs will continue. E) Recreational access management laid out under an Off- Road Vehicle Act. While such as “stand-alone” legislation has potential, there is a strong feeling in Yukon’s public that any restrictions on ATV use will have to have general application for all ATV uses. Barker does not make any recommendation for the development of a Yukon program, but sees his summary useful as an overview of some ORV management strategies for interested parties, boards, councils, and/or interest groups.

**2011:** The website of Yukon’s Department of Environment contained the following information: “Respect Mother Earth and discipline yourself by using existing ATV trails”. This quote by former Environment Minister, the late John Edzerza, continued ..

”All-terrain vehicles are a popular way to access backcountry Yukon. Whether you are hunting, viewing wildlife, or simply enjoying the great outdoors, be sure to respect our environment by using existing trails. Fragile alpine and sub-alpine landscapes damage easily and take years to heal. Damaged habitat can threaten the well-being of plant, animal and insect species. ATV noise can also adversely affect animals, especially during sensitive times of the year such as lambing/calving or the rut.”

Most Yukoners will agree with this statement, but since it has been removed from the YTG Environment website after the last election, it probably reflected John Edzerza’s personal opinion and devotion to nature, and was not a formal YTG position.

**2011:** In March 2011 the “Report of the Select Committee on the Safe Operation and Use of Off-Road Vehicles” was submitted to the 32nd Yukon Legislative Assembly. The report described briefly the process followed and the consultations carried out, provides a copy of the questionnaire, the results of the questionnaire analyses, and the Committee’s recommendations. The questionnaire analyses was based on 2489 completed survey forms, 1191 online and 1298 in hard copy. The committee makes the following statement under the topic “What we heard” : “One thing is clear; Yukoners are passionate about this issue. Comments tend to be emotionally charged and closely tied to what Yukon means to each individual. For example, some view Yukon as the last frontier and want it to remain that way. For them it’s about protecting their personal rights and freedoms and having the ability to choose. Others see it as a pristine, untouched wilderness experience. For them it’s more about respect and the principle that Yukon belongs to all of us and must be protected for future generations”.

These diverging views are well-known, but did the Committee succeed in quantifying them? Opinions differ. The Yukon Off-Road Riders Association has expressed concerns about the possibility of a biased sample, since people submitting the filled-in questionnaire did not have to sign it, leaving the door open to multiple submissions by the same person. On the other hand, others have argued that the format of the questionnaire, starting up front with such topics as wearing helmets, getting insurance, minimum age to drive such a machine, driver training and vehicle registration, left the impression that this exercise was meant for ATV/snow machine owners and not for the general public.

In this context, the following demographic statistics are of interest. According to Statistics Canada (2011), the Yukon population has a size of 33 897 people. The questionnaire was sent to all Yukon households, which the Post Office estimates at about 11 460. 2489 filled-in surveys were returned, translating into a return rate of about 22%. According to Statistics Canada, the sex ratio of Yukon’s population is about 55 % male to 45 % female. The sex ratio in the polled sample was 70 % males and 30% females. The Off-Road Riders Association claims there are 4000 to 5000 ATVs in the Yukon , which would translate into perhaps 20 % of Yukon families owning ATVs. However, in the polled sample almost 70% of the respondents were motorized. Lastly, Statistics Canada claims that about 16% of Yukon’s population are First Nation members. As already pointed out, First Nations did not participate in this survey. These numbers cast some doubt on this survey being representative of the Yukon population as a whole, and this concern is acknowledged by the Select Committee itself on page 17 of their report which reads: “ The results presented here are not representative of the population as a whole..”

The Committee made 14 recommendations, mostly addressing administrative, safety, educational, insurance and registration matters, but the last recommendation, Number 14, deals with environmental matters and reads as follows: “. that, off-road vehicle legislation and regulations provide for the ability to mitigate environmental damage and cumulative negative impacts to sensitive wildlife and fish habitats. Ensure that legislation and/or regulations provide for the ability to restrict the growth of trail networks in sensitive areas, to close trails in overused areas as necessary, to exclude off-road vehicles from specific types of land or habitats, and to have certain areas designated as access routes only”.

**2011:** TOYA presented a report to the Select Committee on the safe Use and Operations of ORVs in spring of 2011, which can be read at : [www.trailsonly.ca](http://www.trailsonly.ca).

**2011:** In the spring of 2011, the Yukon Conservation Society (YCS) received funding from the Yukon Fish and Wildlife Enhancement Trust and the Yukon Environmental Awareness Fund to coordinate a project to contribute to the protection of Yukon fish and wildlife through the management of Off-Road Vehicle (ORV) activity. As one component of this project, YCS brought together a working group of stakeholders interested in environmentally responsible ORV use. This ORV working Group consists of representatives from seven organizations: Klondike Snowmobile Association (KSA), Trail Only Yukon Association (TOYA), Wilderness Tourism Association of Yukon (WTAY), Yukon Conservation Society (YCS), Yukon Fish and Game Association (YFGA), and Yukon Off-Road Riders Association (YORRA). The Yukon Fish and Wildlife Management Board was involved under “observer” status.

Between the spring of 2011 and the winter of 2012, this ORV Working Group met three times to discuss ORV management recommendations. A central document in these discussions was the 2011 report of the Select Committee on the Safe Operation and Use of Off-Road Vehicles. Recommendations #3, #4, #10, and # 14 in this report deal specifically with minimizing impacts of ORV use on the Yukon natural environment through education, driver training, research and legislation. All stake holders in the Working group supported these four recommendations. In addition, the Working Group came to a consensus to further develop these recommendations and these additions became part of their submission to the Yukon Legislature.

Besides coordinating the work of this Working Group, the Yukon Conservation Society was also active in ATV-related education efforts. Their submission to the Yukon Legislature, responding to the recommendation of the Select Committee on the safe Operation and Use of Off-Road vehicles, has an attached appendix dealing in considerable detail with a proposed education program for ORV operators. YCS also developed a School Presentation Program for Grades 7 and 8, with a strong ATV focus; and they published and distributed three well-illustrated pamphlets entitled: ORVs and Yukon Wetlands, ORVs and the Alpine, and ATVs and the Yukon Outdoors. These pamphlets describe these ecosystems, their susceptibility to damage by ATVs and make recommendation for the drivers on how to mitigate these impacts.

**2011:** On October 11/2011, a Yukon Territorial election was held, which provided YOYA (Trails Only Yukon Association) an opportunity to make the ATV issue an election issue.

Letters were sent to all candidates running, asking them four ATV- specific question and informing them that their answers would be published in the papers. The four questions were the following; 1) Should ATV use be managed in order to protect Yukon wilderness? 2) Should new legislation/regulations be put in place to manage ATV use in Yukon wilderness? 3) Will you make new legislation and/or regulations to manage ATVs in Yukon wilderness a priority if elected? And 4) If elected, will you bring forward legislative and/or regulatory changes to manage ATV use in the Yukon Wilderness within your first mandate? It is of interest to note, that all candidates from all four parties answered “yes” to all four questions.

Before the polling of candidates, YOYA also commissioned a public opinion poll, which was conducted by DATAPATH Systems in August 2011, in which 275 households, randomly selected, were contacted. Relevant to this topic was the following question: Do you support the creation of legislation and/or regulations for any of the following areas: 1) To exclude off-road vehicles from specific types of land or habitats? 2) to restrict the growth of trail networks in sensitive areas ? 3) to have certain areas designated as access routes only? and 4) to close trails or overused areas as necessary? These four questions were supported by the following percentages of respondents : 87%, 84%, 82% , and 69%, respectively.

**2011:** An option paper on Off-Road Vehicles was produced jointly by YTG Departments of Environment, Highways and Public Works and Community Services. It was a follow-up to the Select Committee on the safe Operation and Use of Off-Road Vehicles report tabled in the House in March 2011. It had the purpose to present the key safety and environmental issues related to off-road vehicle (ORV) operation in the Yukon. It also explores options for addressing the issues and recommends a course of action for consideration by decision makers.

After reviewing the issue and background information, the goal is stated as follows: Responsible operation of ORVs is key to addressing safety issues and reducing environmental impacts. Simply stated, ORVs should be operated in manner that is safe and minimizes damage to sensitive fish and wildlife habitats. Under this goal a number of objectives are listed, ranging from education and training, registration and licensing, age-restrictions for drivers and wearing of helmets, minimizing impacts to environmental and heritage resources, to maintaining quality of life and rural lifestyles.

The authors claim that the fatal ATV- related accident at Teslin and the City of Whitehorse forming a task force to develop ATV regulations related to safety and the environment have been factors in making a Yukon program a priority.

A combination of regulations and education regarding the operation of ORVs could reduce injuries and deaths from unsafe operations and could protect fish and wildlife habitats. The Committee proposed three options that could be pursued: 1) Develop ORV legislation, 2) Amend existing legislation, and 3) use ORV Education. The Committee discusses these three options and lists the Pros and Cons for each.

Their recommendation suggest a compromise by using aspects of all three options and says: “

Yukon Government is determines to address ORV safety and environmental concerns. Therefore, Yukon must implement a combination of regulatory developments ,operational procedures, and education. Regulatory development presents to opportunity to provide better management of off-road vehicles, filling a large gap in existing legislation. The key question is whether existing or new legislation should be applied. The answer is that a combination of the options should be applied to addressing the distinct issues of safety and the environment. Safe ORV operation can be addressed through amendments to the Motor Vehicle Act and Occupational Health and Safety Act. Stand-alone legislation to address the environmental issues of ORV operation appears the most appropriate, as protection of the environment within existing legislation would present a more comprehensive series of regulatory amendments and limited ability to achieve the objectives. In order for effective implementation of these regulatory changes , education, monitoring, and enforcement would be necessary. Regardless of approach, ensuring safe and environmentally responsible ORV operation will require the cooperation of Highways & Public Works, Community Services, Environment Yukon, Justice, Energy, Mines & Resources and other affected departments.”

**2012:** On March 21/2012 the Board of Directors of the Yukon Fish and Game Association approved revisions of their 1994 - ATV/Off-Road Vehicle Policy, after consultation with their membership.

The Policy appeals to the membership to use their machines with due considerations to environmental concerns and to show respect and courtesy to other, non-motorized-backcountry users. The Association believes that education is the key to creating public commitment to environmental responsibility, safety and the ethical use of Yukon’s environment. The Association will develop a Code of Ethics for the use of All-Terrain-Vehicles in cooperation with its membership, which will address such subjects as use of alpine areas, elevation restrictions, wetland avoidance and creation of new trails. The Association will work cooperatively with Yukon Government in representing the positions of its membership in the development of ATV regulations ,which should apply to all uses of ATVs, including subsistence hunting or fishing, tourism, outfitting, industrial and exploratory, and will cover registration and licensing of all ATVs, while insurance should be left to the discretions of the owners. Lastly, the Association supports the restrictions of ATVs in areas with a demonstrated need of protection is support of fish, wildlife, their habitats and environmental sensitivity.

**2013:** Early in January 2013 a letter signed by Ministers B. Cathers and C. Dixon and send to relevant organisations and individuals announced that a Government Committee has been established, consisting of the Departments of Environment, Highways and Public Works, and Energy, Mines and Resources, to follow up on the recommendations of the Select Committee on Safe Operation and Use of Off-road Vehicles. The letter also named contact staff in the Departments of Environment and Energy, Mines and Resources, who can be approached for questions or comments. While the letter announced the formation of this working group, its terms of reference and timelines have not been made public.

### **ATV restrictions in protected areas:**

Yukon has a number of "special" areas that have been established, or are in the planning stages, under federal or Yukon jurisdiction or resulting from First Nation Settlement Agreements. These areas show varying degrees of protection and restrictions for ATVs..

1) There are three National Parks in the Yukon, Kluane in the southwest corner of the Yukon with a size of 21 980 km<sup>2</sup>, and Ivvavik and Vuntut National Parks in the northern Yukon, with sizes of 9750 and 4345 km<sup>2</sup>, respectively. National Parks are under federal jurisdiction and are managed under provisions of the National Parks Act. In general, ATV use is not allowed in national parks, but can be allowed as stipulated in the Umbrella Final Agreement for subsistence purposes, if provided for in First Nation-specific Settlement Agreements.

The Nisutlin Delta National Wildlife Area is also under federal jurisdiction and is managed jointly by the Canadian Wildlife Service and the Teslin Tlingit Council. ATVs are not allowed to be used in this National Wildlife Area

2) A number of Territorial Parks have been established or are in the planning stages. These are under the jurisdiction of the Yukon Government and are managed by the Yukon Parks Branch.

Four parks have been established with Cabinet-approved management plans: Herschel Island (Qikiqtaruk), Coal River Springs, Tombstone and Ni'iinlii Njik (Fishing Branch). For Territorial Parks, management plans are developed by the Parks Branch in conjunction with respective First Nations, as approved in Final Agreements, and they are subjected to public consultation. The final plan is approved by Cabinet before implementation. The provisions of these management plans can include restrictions of ATVs. A number of other Territorial Parks are in various stages of planning, including Kusawa, Agay Mene along the Atlin Road, and Asi Keyi north of Kluane National Park, between the Alaska Highway and the Yukon/Alaska border.

The Kluane Wildlife Sanctuary has only one restriction; it does not permit hunting by non-native people, ATV use is allowed.

3) A number of Habitat Protection Areas have been established under Settlement Agreements of First Nations. These include Ddhaw Ghro (MacArthur Wildlife Sanctuary), Tslnjik Chu (Nordenskold River), Horseshoe Slough (Stewart River), and Ni'iinlii Njik (Fishing Branch). This latter area consists of a Wilderness Preserve, an Ecological Reserve (under the Parks and Land Certainty Act, Vuntut Gwichin First Nation Settlement Land Parcel R-05A), and a Habitat Protection Area (under the Wildlife Act). Management plans for these areas stipulate what kind of uses are permissible.

The Dempster Highway development corridor extends to 8 km on either side of the centre line of the Dempster Highway from km 68 to the NWT border. Off-road use of vehicles, including all-terrain vehicles and motorized trail bikes, is prohibited within the Dempster Highway development corridor.

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