



Cottongrass Consulting Group

Business and Economic Development Consulting

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**WildWise Yukon
Market Feasibility Study**

2014



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Background

The Centre for Human-Wildlife Conflict Solutions' (WildWise Yukon's) mission is to reduce the number of negative human-wildlife encounters in the Yukon through research, education, and public outreach programs. WildWise has identified that municipal governments, territorial governments, and resource development projects have a need for consulting services on how to reduce negative human-wildlife encounters and that the revenues from these services could be used to help implement other organizational initiatives.

The services identified by WildWise include:

1. Attractant Management Plan Services

Attractant Management Plan services include the development and/or review of Attractant Management Plans (AMPs). Communities and industry use AMPs to identify and mitigate attractants to wildlife, resulting in a lower likelihood of human-wildlife conflicts. AMPs may or may not be a condition for regulatory permitting.

2. Attractant Management Site Auditing

Attractant management site auditing involves traveling to a work site (typically a wilderness-based industrial or exploration camp), identifying potential attractants, and recommending mitigation measures. On-site staff training is usually involved.

3. Human-Wildlife Conflict Training

Human-wildlife conflict training may occur on-site or off-site. Beyond standard bear safety training, human-wildlife conflict training may include lessons on how to identify and mitigate attractants, the installation of mitigation measures, and steps to ensure human-wildlife safety for a number of species.

To better-understand the market demand for human-wildlife conflict management services and to gauge the potential revenues for such services, WildWise commissioned a market feasibility study. Understanding the market demand will help with the design and pricing of the human-wildlife conflict management consulting services.

Methodology

To assess the market demand for human-wildlife conflict services, the consultant used a combination of:

1. Targeted stakeholder interviews
2. Online/telephone surveys
3. Research on competitors and comparable service offerings



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WildWise Yukon provided the consultant with a list of stakeholders for the targeted phone interviews. Stakeholders included employees from various government departments who have an interest in or are involved in the intersection of wildlife and resource development, environmental engineering company representatives, and practicing human-wildlife conflict specialists. In total, 15 phone interviews were completed.

Using the Yukon Chamber of Mines directory as a resource, as well as a working knowledge of other operators in the industry, a list of companies involved in resource development was compiled, consisting primarily of mineral exploration companies and operating mining/reclamation companies (those responsible for resource development camps). A logic-based online survey was developed and tested, with a draft of the survey provided to WildWise and two government employees for feedback and testing.

28 resource development companies were contacted by phone and invited to complete the survey, either over the phone or using a link to the online survey, if preferred. The Yukon Chamber of Mines was asked to distribute the survey to its membership. Attempts to distribute the survey through Klondike Placer Miners' Association proved fruitless.

One hardrock mine, one environmental engineering company, and seven mineral exploration companies completed the industry survey. Two additional respondents were disqualified from the survey because they are not responsible for camp operations or management. Of the nine company representatives, only six use or operate a camp or camps in Yukon wilderness areas. Because of the small number of responses, the survey responses cannot be considered statistically valid, however the responses are still useful for shedding a light on perceptions and perspectives from within the industry.

One telephone interview with an employee of a placer mine was completed.

Additionally, a survey was developed for and distributed to targeted municipalities and Yukon First Nations with municipal responsibilities. 18 contacts were made by phone or e-mail and three surveys were completed.

Online research into human-wildlife conflict-related services provided by businesses and not-for-profit organizations in other jurisdictions was conducted, with some stakeholders being contacted for clarification on their services. Best practices, rates, and services have been incorporated in this report.



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Client Profiles

The market research for this project primarily targeted mining and exploration companies responsible for wilderness-based camps in the Yukon. During the course of research, however, potential clients in other industries were identified. These potential clients include communities with municipal responsibilities, the agricultural industry, highway maintenance and construction camps, and wilderness tourism operators. To better understand the level of activity happening in the territory with respect to land-based development activities, a year-to-year comparison of Yukon Socio-Economic Assessment Board applications was compiled from the Board's annual assessment statistics.

YESAB Applications (2009-2013)

Source: YESAB Project Statistics, 2009-2013

	2009	2010	2011	2012	2013	Average
Agriculture/Aquaculture	11	10	10	12	9	10
Camps	6	4	1	3	7	4
Energy - Petroleum	1	1	0	0	1	1
Energy - Power Generation	6	7	3	13	8	7
Energy - Transmission (Gas, Electric)	8	4	14	13	8	9
Forestry	7	7	6	5	5	6
Military	0	0	0	0	0	0
Mining - Other (coal, aggregate, etc.)	0	0	0	0	0	0
Mining - Placer	44	59	50	63	42	52
Mining - Quartz	25	37	42	58	20	36
Other Industrial Activities	9	14	17	8	22	14
Recreation and Tourism	5	6	21	22	6	12
Residential, Commercial & Industrial Land Development	66	61	47	65	32	54
Scientific Research/Wildlife Management	6	1	1	3	1	2
Transportation - Rail, Marine and Air	1	1	0	2	0	1
Transportation - Roads and Trails	20	25	28	16	22	22
Utilities - Telecommunications	0	1	0	1	1	1
Utilities - Water and Wastewater	2	2	8	5	7	5
Waste Management - Contaminated Sites	9	14	5	4	6	8
Waste Management - Solid Waste	36	3	2	29	0	14
Waste Management - Special and Hazardous Waste	2	0	0	2	0	1
Other	3	4	0	0	0	1
	267	261	255	324	197	260.8
Active or Assessed	234	228	217	268	167	222.8
Percentage Active or Assessed	88%	87%	85%	83%	85%	86%



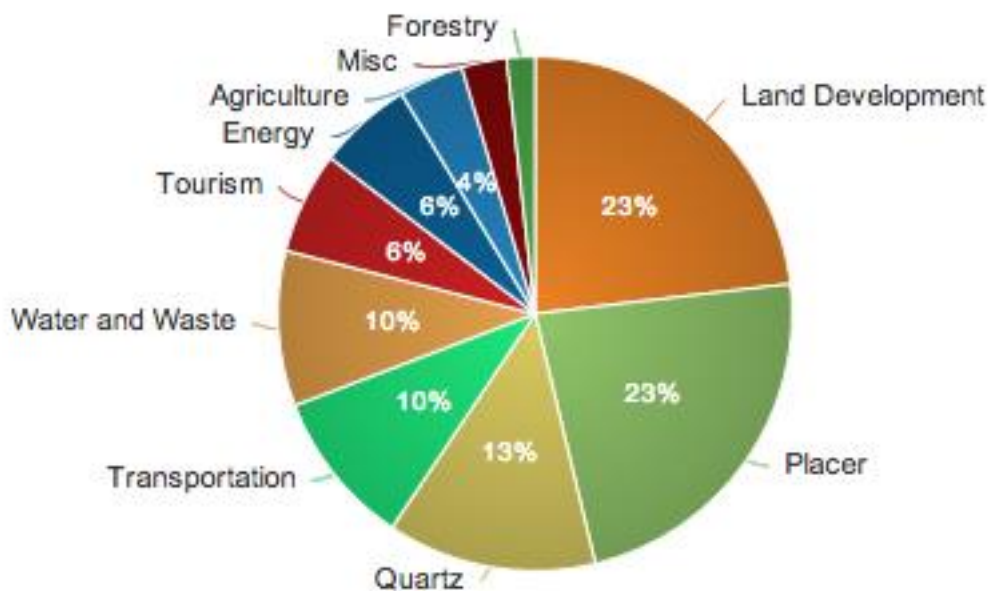
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YESAB received, on average, 261 applications per year from 2009 to 2013. On average, 14% of all applications were cancelled or withdrawn, resulting in an annual average of 223 applications that were either active or assessed. While impressive, this does not mean that there are 223 new projects every year, nor does it mean that there are 223 development projects currently underway, as some projects submit multiple applications and other applications involve more than one fiscal year. The statistics do, however, highlight the relative size of particular sectors and provide a general guide as to the relative market potential within each of those industries.

YESAB Applicant Sectors (by % for all years of operations and all outcomes)¹



Based on the relative size of each sector, the volume of applications suggest that land development (residential, commercial, and industrial), placer mining, quartz mining, roads and trails (construction and maintenance), and water and waste (solid waste in particular) warrant the greatest attention. This focus does not consider actual need within each market nor the ability for these sectors to pay for the services, only the level of activity indicated through the permitting process.

High-level narratives for the top five sectors are outlined below.

¹ <http://www.yesab.ca/about-yesab/assessment-statistics/>, October 7, 2014



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Residential, Commercial, and Industrial Property Developers/Owners/Users

Targeted interviews for residential, commercial, and industrial land developers, owners, and users were beyond the research scope of this study. However, research into other human-wildlife conflict mitigation services suggests that mitigating human-wildlife conflict in residential and commercial/industrial areas is generally the focus of their work.

The clients in this sector are typically reactive, calling in “pest control” services after or during an incident. Orkin Canada is an example of a service that the property-focused client market may use for the removal of insects, small mammals, and birds. No-fee government Conservation Officers may be called upon to address conflicts with larger mammals.

Depending on the community, the services available (if any) may or may not be humane. Prevention measures may or may not be implemented once the wildlife is no longer on the property.

The Alberta Institute for Wildlife Conservation (AIWC) provides a fee-based service for property owners that is focused on mitigation. AIWC does not remove wildlife, but waits for the wildlife to vacate the property and then AIWC implements the mitigation measures. The fees for this service vary depending on the extent of the mitigation required and desired by the client. A for-profit operator providing a similar service also operates in Calgary and is reportedly much busier than AIWC because of an investment in marketing.

WildSafeBC primarily serves this market through partnerships between governments and, sometimes, businesses. Through the hiring and training of part-time, community-based educators and service providers the program is focused on prevention, although the service is typically called upon in response to an existing conflict.

In Yukon communities, the removal of large wildlife is typically performed by conservation officers, which may or may not be lethal for the animal depending on the situation. In some cases, property owners take matters into their own hands. On occasion, municipalities or First Nations will provide education or implement physical measures to prevent human-wildlife conflict within community boundaries.

Because of their ability to affect wider-spread change, and because they may have challenges of their own with respect to waste management, communities with municipal



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or municipal-like responsibilities have been identified as a target market and are profiled below.

Waste Management (Organizations with Municipal Responsibilities)

First Nations and municipalities with municipal responsibilities encounter situations where human-wildlife conflict occurs, particularly with respect to solid waste management. Although solid waste management is a territorial responsibility in many communities, the territorial government is attempting to devolve this responsibility to communities who sometimes receive pressure from the community to address human-wildlife conflicts.

The three respondents from the First Nation/Municipal Survey indicated that human-wildlife conflicts are taken seriously, equally because of risks to human comfort and safety and because of risks to wildlife safety. These reasons are followed closely by regulatory, licensing, or permitting requirements. Because of the structured nature of the survey, the respondents did not have an opportunity to elaborate on the requirements to which they must adhere.

Reason	Average Municipal Rating (where 1 is “Not at all important and 5 is “Extremely important”) n=3
Risks to human comfort and safety	4.3
Worker/contractor sentiment about camp safety	N/A
Following regulatory, licensing, or permitting requirements	4
Risks to wildlife safety	4.3
Damaged facilities and equipment	2.3
Public sentiment about camp safety	N/A
Public sentiment about community safety	3.7
Public sentiment about wildlife destroyed on site	2.7
Lost time (for cleaning, wildlife observation/monitoring, or other)	2.7

Two out of the three interviews in this category resulted in leads, which will be shared with the WildWise Yukon Executive Director outside of this report.

Mining and Exploration (Quartz and Placer)

The mining and exploration industry can be segmented into several categories, each having different needs and characteristics:



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1. Exploration
2. Quartz mining (hard rock mining)
3. Placer mining
4. Care and maintenance
5. Reclamation/Recovery
6. Mining service providers

The mining industry is highly variable, subject to global metal prices and the availability of investment capital. Some mining companies are extremely small operations, while others are heavily financed. Exploration companies, as a rule, do not earn income and are dependent on acquiring investment to finance their operations. At present, the territory's mining sector is being negatively affected by lower and uncertain global metal prices and very limited access to investment capital. Most companies are taking measures to preserve their working capital until conditions are for mining investment improve.

All but one of the respondents from the exploration and mining surveys recognize that human-wildlife conflicts are a concern for their organizations, and rated their reasons for saying so as follows:

Reason	Average Industry Rating (where 1 is "Not at all important" and 5 is "Extremely important") n=6	Average Municipal Rating (where 1 is "Not at all important" and 5 is "Extremely important") n=3
Risks to human comfort and safety	5	4.3
Worker/contractor sentiment about camp safety	5	N/A
Following regulatory, licensing, or permitting requirements	5	4
Risks to wildlife safety	4.7	4.3
Damaged facilities and equipment	4.5	2.3
Public sentiment about camp safety	4.3	N/A
Public sentiment about community safety	N/A	3.7
Public sentiment about wildlife destroyed on site	4.2	2.7
Lost time (for cleaning, wildlife observation/monitoring, or other)	4	2.7

Based on the responses, it's clear that industry is motivated by regulatory/permitting requirements, employee safety, and employee perceptions about camp safety. It is interesting to note that overall the responses were weighted closer to "extremely important" for industry than they were for the community respondents. The reasons for this are not clear, as it may be related to an industry culture that places an emphasis on safety, concerns about how the survey results might be perceived, or some other factor.



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Promisingly from a market-demand perspective, the results show that human-wildlife conflict is an issue that is taken seriously by the quartz mining and exploration industry.

Numerous stakeholder interviews, including the interview with the placer employee, indicated that many human-wildlife conflicts happen around placer operations, partially because of attitudes toward human-wildlife interactions, but also because placer operations tend to be based in wildlife travel corridors for extended periods of time, increasing the likelihood that a conflict will occur suggested it.

Unfortunately, although attempts were made, more-detailed input was not received from participants in the placer mining industry. The industry was described by many stakeholders as “mom and pop operations that don’t have the financial means of the larger mining companies that are more likely to shoot and bury an animal than report it or implement measures to prevent them from being attracted to the site.” This may not be representative of all placer miners, but it appears to be the prevailing view of the industry with respect to human-wildlife conflict. If this is, indeed, the prevailing view on the industry, it is not surprising that human-wildlife conflict would be a sensitive matter for placer miners who would view regulatory measures regarding human-wildlife mitigation as “making it harder for small operations to survive”.

Some stakeholders suggested that changes in the placer sector will only happen if there is increased enforcement, while others have suggested that changing attitudes and perceptions through education would be a more-productive approach, recognizing that this is difficult to do, due to the number, distribution, and seasonality of placer mining.

Affiliated with the mining industry are environmental engineers/consultants who provide environmental monitoring and permitting services to industry. Environmental engineers/consultants are addressed in further detail in the Services section of this report.

Transportation and Other

Several other industries were identified that may provide opportunities for service delivery, including the tourism sector, energy, agriculture, and road construction and maintenance.

Stakeholders, in particular, mentioned road construction and maintenance as an area where human-wildlife conflict occurs. There are twenty year-round Government of Yukon road maintenance camps (including Fraser in BC), and three seasonal camps. Camps affiliated with energy and road projects may be operated by a government department or crown corporation, or by a contractor bound by a government contract (ex.



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road construction, in some cases). Rarely are road or energy projects driven entirely by the private sector, although it does happen.

Human-wildlife conflict initiatives abound in jurisdictions around the world in agricultural areas. Approaches vary widely, from insurance systems to physical deterrents to legislated and enforced measures.

Additional research into these opportunities (i.e. interviews/surveys) was beyond the scope of this project.

Lead Generation

The industrial survey respondents indicated that they would not like to be contacted regarding the services described in the survey. This indicates that while there may be a degree of interest, there is not enough interest to act.

Two of the community respondents indicated an interest in the services mentioned in the survey and their contact information will be provided to WildWise outside of this report.

Services

At the initiation of the Market Feasibility Study project, three services were identified by WildWise Yukon:

1. Attractant Management Plan Services
2. Site Auditing
3. Human-wildlife Conflict Training

Using the findings from the market research survey, this section focuses exclusively on these services as they would be provided to either the mining sector or to organizations with municipal responsibilities.

Attractant Management Plan Services

Attractant Management Plan services include assistance with the development of Attractant Management Plans (AMPs). At present, some project permit applicants are requested to have Attractant Management Plans, while others are not – although there has been movement to make the development of AMPs a mandatory requirement, including the development of application forms that prompt the applicants to answer questions that effectively develop an AMP.

The exploration companies all indicated that they currently have Attractant Management Plans. Interestingly, the operating mine indicated that it does not. Three out of five of



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the mining sector respondents indicated that they are required to have an Attractant Management Plan as part of their regulatory permit, with one of the companies having developed their plan voluntarily.

The environmental consulting/engineering company indicated that it does not have an Attractant Management Plan but is interested in developing one internally, using an environmental consulting/engineering company, and by using a consultant that specializes in human-wildlife conflict mitigation.

AMPs may be developed by the applicants themselves, or by environmental engineering/consulting companies. By-and large, the four Attractant Management Plans that are currently in place were developed internally, with only one accessing the services of an environmental consulting/engineering company.

The importance of impartiality with respect to human-wildlife conflict was noted by human-wildlife conflict service providers, explaining that industry will be reluctant to access services from “save the wildlife”-style organizations. The same stakeholders emphasized that a focus on safety will lead to positive outcomes for both humans and wildlife.

Non-industry stakeholders noted a range in the quality of the plans and the need for a “benchmark” or “standard”. From the company perspective, none of the companies indicated that they encountered any challenges developing or implementing their Attractant Management Plans. This may be because of a lack of a benchmark standard, because of a perceived ease in developing an AMP, or because of other factors.

During the stakeholder interviews, representatives of environmental engineering/consulting companies indicated that they would like more training in the development of AMPs for inclusion in the work they currently do for their clients.

Organizations with municipal responsibilities either do not have or do not know if their community has an Attractant Management Plan, but at least one is interested in developing a plan internally, with the other two indicating they not sure if they are interested in developing an attractant management plan.

Attractant Management Plan Services Conclusions

While many of the companies are required to have AMPs, there appears to be little demand from industry for a service to help develop them and, where assistance may be required, the companies are most likely to turn to an environmental engineering/consulting company to do so, in part because of a perceived impartiality and



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in part because attractant management may be viewed as part of a larger environmental permitting or safety program.

The establishment of a benchmark standard for Attractant Management Plans will not necessarily result in an increase opportunities to develop AMPs for WildWise Yukon as companies will be able to refer to the standard for the development of their own plans.

There is an interest from environmental engineering/consulting companies to learn more about attractant management plan services and how they can add them to their own suite of services.

There may be an interest amongst organizations with municipal responsibilities, although the overall number of organizations limits the size market.

At this time, there does not seem to be a market demand sufficient enough to pursue AMP services as a revenue generating service.

Attractant Management Site Audits

Attractant Management Site Audits involve sending an expert in attractant management to a location to identify wildlife attractants, propose mitigation measures, and provide training to on-site staff.

Only one of the six industrial respondents conducts site audits, which are performed by a staff member once per camp. The frequency of stated reasons for not doing site audits are as follows:

Reason	Frequency of response
I was not aware that this was an option.	2
We're not required to do it.	2
I don't see the benefit.	1
Camp inactive.	1
Too time consuming.	1

When asked if the companies not currently conducting site audits would be interested in the service at a rate of \$1,000/day plus associated travel costs (with the average site audit lasting two days), three out of the six respondents indicated that they don't think the service is worth that much, with the other three saying that they're not interested in the service. Those that aren't interested in the service are not interested because the function is performed internally or because they feel that the service should be "incorporated into



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a broader scope environmental management audit with the same benefit and no incremental cost.”

Overall, it appears the industrial respondents do not see a value in conducting site audits, or, if they do, are not prepared to pay up to \$2,000 for the service plus travel-related costs. One of the respondents felt that a rate of \$400/day was fair and would be interested in conducting the site audits twice per year. Another didn't indicate what they thought would be a fair rate, but that they would look at conducting a site audit less than once per year. Site audits in other jurisdictions cost \$900/day plus travel, although some clients in other jurisdictions have indicated they would be willing to pay up to \$1,500/day. It must be noted that these rates are charged in an established market. It was suggested through multiple stakeholder interviews that the rates that clients are willing to pay vary according to the skill/experience of the person providing the service and the severity of the human-wildlife conflict threat to human safety.

Of the community survey respondents, two conduct site audits, while the third (which is interested in developing an Attractant Management Plan) does not conduct audits, but is planning to do so. The community site audits are conducted either by staff members or by Yukon Government. The two communities already conducting site audits are not interested in another site audit service, while the community not already conducting site audits feels the price is fair and would want to conduct a site audit once per year.

Attractant Management Site Audit Service Conclusions

The interest in a contracted site audit service appears to be low, although the demand for this service in other jurisdictions suggests that consumer education may increase demand.

Because the demand is unlikely to warrant a full-time service provider in the near future, it is recommended that WildWise Yukon partner with existing, experienced service providers to facilitate attractant management site audit bookings. Acting as a broker, subject to the agreement of the service provider(s), WildWise Yukon can take a commission for facilitating the audits. The fees charged for site audits would need to be discussed and negotiated with the service provider(s).

Human-Wildlife Conflict Training

Training for the prevention of human-wildlife conflict prevention was included in the survey in two formats: on-site (camp-based) and off-site.

Five out of the six industry respondents indicated that they have an employee or contractor on site, trained in preventing human-wildlife conflicts, but only two out of the six respondents require their employees or contractors to take specialized training in attractant management. All three organizations with municipal responsibilities indicated



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they have employees or contractors trained in preventing human-wildlife conflicts and that their employees or contractors are required to take specialized training in attractant management.

Four of the six industrial respondents indicated that their camp-based employees or contractors are required to take bear safety training similar to BearAWARE, and two of the three community respondents indicated the same. Three of the industrial respondents indicated that this training is done online, through conservation officers, industry-specific training schools, internal training, or St. John Ambulance. The community respondents indicated that their training is done in-house or through the Northern Safety Network of the Yukon. The training focus appears to be primarily focused on bears, as opposed to bears and other wildlife.

When asked for additional comments with respect to human-wildlife conflict training, one respondent indicated that the subject matter is “small (but important)” and “part of a much broader and comprehensive camp safety program”. Service-providing stakeholders indicated that offering a premium course to industry in human-wildlife conflict (marketing the course as an enhanced safety course) might be welcomed. Such a course could include training in electric fencing, practice with bear spray, attractant management for multiple species, attractant management plans, site audits, and more.

With respect to training methods, the industrial respondents had the following opinions:

Training Method	Like	Neither Like nor Dislike	Dislike	Weighted Score
Online (video and text-based)	4	2	0	4
Online (video conference-style)	3	1	2	1
In-person workshops/courses (small groups)	3	3	0	3
In-person workshops/courses (large groups)	2	4	0	2
Workbooks/Text-based	2	3	1	1

The community respondents had the following opinions:

Training Method	Like	Neither Like nor Dislike	Dislike	Weighted Score
Online (video and text-based)	0	2	1	-1
Online (video conference-style)	0	3	0	0



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In-person workshops/courses (small groups)	3	0	0	3
In-person workshops/courses (large groups)	1	2	0	1
Workbooks/Text-based	0	1	2	-2

Online instruction using a self-guided video and text-based instruction method is the preferred approach with industrial respondents, followed by in-person workshops/courses. The community respondents clearly preferred small group workshops/courses. To satisfy the greatest number of respondents, a workshop/course format should be used.

Two of the industrial respondents indicated that they would pay \$40 and \$90 (respectively) for a Wildlife Safety and Attractant Management workshop, and one community respondent felt that \$150 is a fair price. NSNY offers a half-day bear safety workshop for \$50. Online workshops are offered for as low as \$20 through St. John Ambulance and \$25 through ENFORM (the oil and gas industry's safety association).

When asked what rate they thought was fair for customized on-site staff training, two industrial respondents thought that a rate of \$1,000/day plus travel-related expenses was fair, three indicated they aren't interested in the service, and one indicated that they didn't feel the service is worth that much, but that \$500/day is a fair rate. Two of the community respondents felt the \$1,000 rate was fair, but would hold the training less than once per year, with the third indicating a disinterest in the service.

Two industrial respondents indicated that they would use the training service once per year, while the other respondents did not indicate a frequency. The two community respondents who felt the rate was fair would use the service less than once per year.

The number of industrial employees/contractors who would require this type of training from year-to-year varies from a couple of employees (in most cases) to up to 40 employees/contractors. Similarly, there was a large variation in the communities with the number of staff requiring training ranging from 6 to 25. The variability in need and the small sample size makes it difficult to estimate the size of the market demand for this service, although there is clearly a demand.

Human-Wildlife Conflict Training Conclusions

A mix of in-camp and workshop-based training through an "Advanced Wildlife Safety Course", offered either through WildWise Yukon or in partnership with an industry-trusted service provider like Northern Safety Network Yukon, Yukon College, or the Yukon Mine Training Association shows potential. The course should be developed so it



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can be delivered either in camp (applied to a specific situation) or in a classroom/field environment. It will be essential that the course focuses on the *safety* aspects of attractant management.

It will be important to differentiate the “Advanced Wildlife Safety Course” from the standard BearAWARE-style course. To offer a higher-standard course, WildWise should incorporate into the workshop lessons on Attractant Management Plans, site audits, electric fencing, animal behaviour for “bears and beyond” and other components not otherwise offered in standard bear safety training. If possible, the course should be one day (two days at the most), and priced between \$100 for a one-day course and \$160 for a two-day course which is directly comparable to a Standard First Aid course. The training should result in certification and “expire” after three years, similar to most safety training certificates.

Having buy-in from industry will lend credibility to the course, resulting in increased uptake. To achieve this buy-in, it is recommended that WildWise Yukon consider collaborating with the Yukon Chamber of Mines to establish the course as a new standard in wildlife safety training. This may include giving industry opportunities to provide input on the workshop’s development, and letting industry take the lead on the course’s promotion. A partnership with the Government of Yukon’s Department of Community Services or the Association of Yukon Communities can be considered to help promote the course amongst municipalities and First Nations with municipal responsibilities.

In addition to the Advanced Wildlife Safety Course, WildWise should offer customized training to environmental engineering/consulting companies and government stakeholders (regulators and inspection officers, especially) specifically on the development of Attractant Management Plans and Attractant Management Site Audits (and mitigation). Interest has been expressed by both stakeholder groups. This training need not be limited to the Yukon, as the local market is quite small. As this is highly-customized training not readily available elsewhere, the fees for the course can be set higher than those for a course designed for the working public (either a fixed daily rate regardless of the number of participants if providing the service to one company, or between \$350 and \$850 per participant for one-day or multi-day, workshop-style courses. These prices are based on similar specialized training offered in other sectors.

Although industry-focused safety training will help WildWise achieve its mandate at a number of levels, it is unlikely the training programs will result in a significant source of revenue for the Society. Unless WildWise Yukon has the course instructor already on staff, instructor fees for each course can range from \$150 to over \$1,800 (depending on the experience and fees commanded by the instructor and the length of the workshop). Workshops/courses can cost upwards of \$3,000 to develop, depending on the course



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developer. The cost of course delivery will need serious consideration when deciding whether or not to move forward with an Advanced Wildlife Safety Course.

Using \$100/participant for a one-day workshop and \$160/participant for a two-day workshop, assuming that the number of participants for each workshop is capped at 15 (a common workshop size), WildWise could earn revenues for the workshop as follows:

# of Courses Offered	Revenues (\$) for...	
	1-day course at \$100/participant	2-day course at \$160/participant
1	1,500	2,400
2	3,000	4,800
3	4,500	7,200
4	6,000	9,600
5	7,500	12,000
6	9,000	14,400
7	10,500	16,800
8	12,000	19,200
9	13,500	21,600
10	15,000	24,000

Realistically, the number of course offerings in the first couple of years will be small until the course is accepted as the new industry standard for wildlife safety. When factoring in the costs associated with delivering the course (course instructor fees, commissions paid to partners, if any, facility rental fees, the cost of materials, etc.), it will be critical to ensure that the margins for each course are sufficient enough to justify developing and delivering the workshops.

Best Practices

Other service providers shared a number of best practices with respect to offering human-wildlife conflict services.

1. **Marketing matters.** Service uptake requires constantly getting the word out in the right way to the right audience.
2. **Impartiality matters.** A “save the animals” approach will work against the Society’s objectives. A focus on safety for both humans and wildlife will engender trust with industry and result in more-positive outcomes.



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3. **Relationships matter.** The mining industry is most likely to use services providers with whom they have an existing relationship. Leveraging relationships through trusted service providers is more effective than “cold calling”.
4. **Partnerships matter.** When it comes to education, changing perceptions, and raising standards, the involvement of government, communities, and industry stakeholders is essential.
5. **Pick your battles.** Start with the big players to change the standard and the standard will “trickle down” to the smaller players.
6. **Experience matters.** Industry favours on-the-ground experience over academic training.
7. **Vertical integration is valued.** The easier it is for clients, the more they like it. A one-stop service provider who can offer site auditing services *and* implement mitigation measures (ex. electric fencing) is preferred over one that just tells people what to do and leaves. Vertical integration also offers additional opportunities to earn revenues for the Society.
8. **Flexibility matters.** Industry standards, needs, and levels of activity (and, subsequently, market demand) can change very quickly – and it is essential that individuals and organizations offering services are able to identify these trends and respond quickly.

Recommendations

It is recommended that WildWise:

1. Explore partnerships with Community Services, the Association of Yukon Communities, and the Yukon Chamber of Mines to develop a new safety training course focused on “Advanced Wildlife Safety” and promote the program in partnership with these stakeholders as the new industry standard for wildlife safety training for all industries in the Yukon.
2. Develop and offer a hands-on, customized Attractant Management Plan and Attractant Management Site Audit and Mitigation professional training program for government regulators and inspectors, and environmental engineering/consulting companies.
3. Negotiate arrangements with experienced attractant management site auditors to offer site audit services on a commission basis. Integrate mitigation services into the site auditing services as a value-added service to clients.
4. Pending a successful partnership developing the Advanced Wildlife Safety Course, work in partnership with the Yukon Chamber of Mines, the Government of Yukon and, if possible, the Klondike Placer Miners Association to establish a benchmark standard for Attractant Management Plans.



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