



Medicine Lodge
Ski Hill Masterplan
and Asset
Utilization Study

March 31, 2023

Submitted To: Marc Fortais Chief Administration Officer, The
Town of Bentley
Prepared by McElhanney

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Our File: 2431-60099-00

Our File: ML Project 2431-60099-00

March 31, 2023

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Attention: Marc Fortais, CAO Town of Bentley

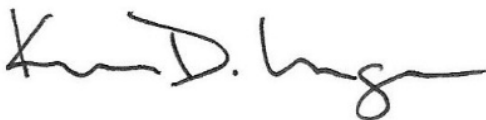
Medicine Lodge Ski Hill
Masterplan / Asset Utilization Study

Attention: Marc Fortais

Thank you for the opportunity to work on the Medicine Lodge Ski Hill Asset Management and Utilization study. Please do not hesitate to contact the undersigned if you have any questions or concerns regarding the content of this document.

Sincerely,

Prepared by:



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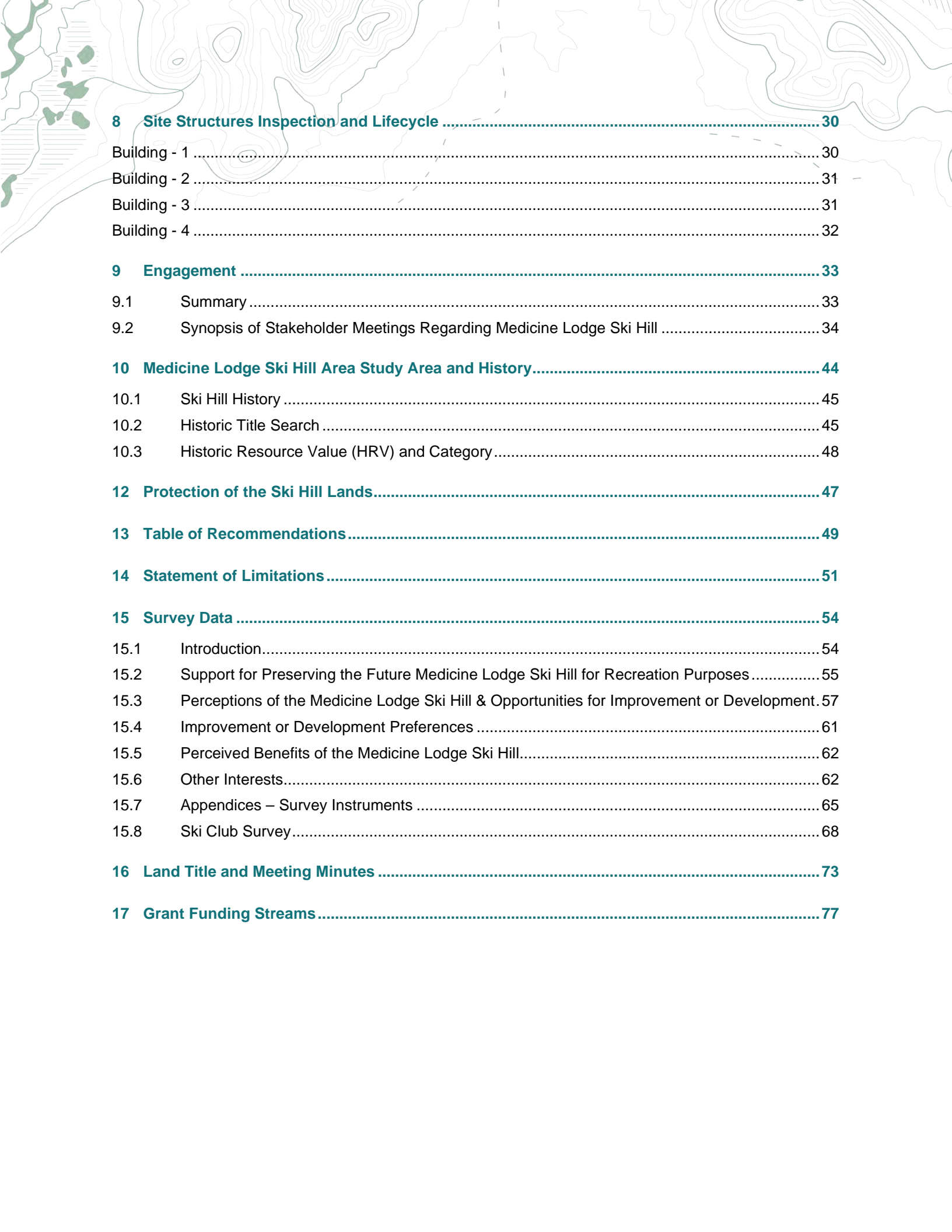


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1 Executive Summary

The Medicine Lodge Ski Hill is in Lacombe County, along highway 12 in the quarter section (S.W. 20-40-2-W5M). It has been operating as a ski hill since the early 1950s. There has been interest in the hill for some time from outside clubs and investors to further develop the areas of the hill for other recreational activities, including, but not limited to, mountain biking, cross country skiing, and hiking. It has become evident that any further development needs to follow a formal planning process to help ensure the future success of the ski hill from a sustainability and operational perspective. Additionally, during the summer of 2022, Central Alberta Economic Partnership (CAEP), undertook a tourism opportunity assessment of the existing and potential tourism assets within central Alberta. In that assessment, the Medicine Lodge Ski Hill was identified as having potentially strong tourism growth as a hill that could diversify and expand operations into other seasons. These potentials have led to strong partnerships to look at ways to develop the hill in a respectful and well thought out way that considers the impact to adjacent landowners, Indigenous stakeholders, Medicine Lodge Ski Club Board and members, as well as other interested user groups and stakeholders.

The Medicine Lodge Ski Hill Masterplan and Asset Utilization Study has been undertaken in partnership with the Town of Bentley, CAEP, and funding partner Lacombe County. A competitive Request for Proposal QU 20231, was issued seeking qualified firms to undertake a masterplan and asset utilization study for the Medicine Lodge Ski Hill. The intent of this project was to review the structural and operational components to identify a prioritized maintenance approach to help ensure the long-term sustainability of the operations. To support efforts, a comprehensive public engagement program was undertaken to determine the level of support required for the ski operation, the viability of snow making, and the potential enhancement and expansion of recreational opportunities into the summer months.

This study focuses on helping to preserve the ski hill as a community-based asset that supports community-based recreation, while helping ensure the preservation of culturally significant sites that may exist at the hill. It also describes future opportunities to enhance the region by exploring improvements that may create additional future tourism growth and expansion of recreation opportunities within the region.

This Medicine Lodge Ski Hill Masterplan and Asset Utilization Study is the first step in the process to refine existing information, collect history, preserve culturally significant areas, and provide future guidance. By understanding this asset's current state, required maintenance, and future objectives support diversification of recreation opportunities can be identified in or to enhance and attract residents including a skilled workforce to the broader region. This would improve the quality-of-life options for residents and visitors alike.

This Master Plan for the Medicine Lodge Ski Hill provides direction on enhancing the overall value of the facility to residents of the region. In addition to examining the structural and operational components of the asset, a comprehensive engagement process was undertaken to determine the level of support for the ski operation, snow making, and winter-summer trail development. The report provides direction on

high-level costing and phasing of actions. During the engagement process, other issues emerged directly relevant to the basic question of how to optimize the asset value for all stakeholders.

The Executive Summary includes three basic areas. The first summarizes key questions, findings and recommendations. The second summarizes recommendations formed into an actionable format of near, mid, and long-term horizons. The third is a topline summary of the public engagement process.

Part 1. Summary of Key Questions, Findings and Recommendations

1. Make the hill more operationally sustainable from a mechanical perspective by improving tow bar functioning.
 - a. A review of mechanical elements of the Samson T-Bar, Mini Handle Tow, and Star Handle Tow indicate they are decent condition. They require approximately \$130,000 in lifecycle repairs and upgrades. Upgrades as noted will result in lessened downtime and decrease volunteer trouble-shooting maintenance time and improve the ski experience.
 - b. Record keeping practices can be improved specifically lift operations and overall maintenance documentation for the lift operations.
 - c. Recommended for Medicine Lodge Ski Hill to develop a comprehensive maintenance plan be for lift operations supported by strict record keeping.
 - d. Numerous suggestions are provided in the body of the document for the improvement of lift operations. See Section 2 for a detailed review.
2. Explore the addition of snow making capacity to enhance reliability and extend the season.
 - a. Snow making may be possible for the Medicine Lodge Ski Hill. A detailed aquifer study is required in order to determine potential impacts on the current water supply as well as overall viability. It is estimated that snow making equipment for the hill would require a direct investment of just above \$6 million. A detailed breakdown is provided in the document.
 - b. Snow making can significantly extend the ski season at Medicine Lodge this represents critical issues for the Medicine Lodge Ski Hill Board and Town of Bentley. At present, the hill is operated by dedicated volunteers who have capacity challenges, increasing the operational period and complexity is not currently recommended. A 2-to-4-fold increase in the duration of the operating period (depending on the season) is not likely within the existing human capacity of the volunteer Board. A thorough examination of current volunteer capacity is needed along with a clear plan as to how to operate in a significantly extended season.
 - c. Recommendation is to not to pursue snow making capacity until there is a clear plan from the Medicine Lodge Ski Hill Board as to how it can improve existing operational record

keeping and maintenance and acquire the human resource capacity to potentially operate a consistent 3-to-4-month ski hill. The addition of snow making will enhance the service to the public but will not likely be successful with the current human capacity of the Board and volunteers. Snow making requires a significant expansion of the operation by extending the season and thus will create strain on the Board and volunteers. To reiterate, the addition of snow making capabilities which would greatly enhance the service to the public but is not likely to be successful within the current human capacities of the Board and volunteers. Snow making represents a significant 'expansion' of the operation by extending its season and thus the strain on the Board and volunteers.

- d. See Sections 4 to 6 for a detailed review.
3. To lessen the strain on the existing Medicine Lodge Ski Hill Board and volunteers such that the ski area can continue to offer an exceptional recreation opportunity to residents and potentially expand its season via snow making and ensure its operation remains effective and sustainable. This item will require a coordinated effort on the part of the ski hill Board of directors and the Town of Bentley.
 - a. The Medicine Lodge Ski Hill Board indicated it is at or near its human capacity limit.
 - b. Recommendation is for the Board in conjunction with the Town of Bentley to first develop a maintenance plan/program that incorporates all aspects of the operation from mechanical support through to customer service and snow safety dimensions. Essentially a gap analysis of what is currently viewed as working well and what is lacking.
 - c. Recommendation is for the Board to approach and work with the Town of Bentley and the County to secure 1-3 full-time equivalents to support on-going maintenance such that the Board and other volunteers are freed to more sustainably address governance, planning and macro-level operations. Work plans for the FTE's would be incorporated into the overall ski area work plan, noted above in item b.
 - d. Recommendation is for the Medicine Lodge Ski Hill Board to work with the Town of Bentley to recognize the Medicine Lodge Ski Hill as an essential municipal recreation asset not unlike a municipal leisure center which is afforded public support. The ski area's exceptional reputation and long history in the community is strong evidence of its value to the community.
 - e. Recommendation is for all parties to not pursue snow making expansion until human capacity issues are thoroughly addressed.
 - f. See Section 9 for more information.

4. Review the condition of the four (4) buildings and determine lifecycle requirements.
 - a. All four buildings require lifecycle maintenance ranging from roof repairs through to electrical and plumbing repairs. Further detail on each building is provided in the report.
 - b. Recommendation is to incorporate report findings into the long-term maintenance plan.
 - c. See section 8 for more details.

5. Ensure the 160 acres that encompasses the Medicine Lodge Ski Hill is purposefully planned to optimize its recreational and social value to the Town of Bentley and region.
 - a. It should be noted that with the addition of snow making to extend the ski season and the summer-winter trail system the Medicine Lodge Ski Hill site will essentially become one of Alberta's premier four-season outdoor recreation centers outside of the Eastern Slopes.
 - b. If the current facility expanded to being Alberta's premier four-season outdoor recreation centers it would need to be planned and managed with specific attention given to both structural and human capacity issues.
 - c. The potential for summer and winter trail development was thoroughly explored via public engagement at the community-wide level and with self-identified interested parties. There is strong support for trail development but not without concerns from adjacent landowners and the Indigenous community.
 - d. Adjacent landowner concerns can be addressed fairly expeditiously in the planning and development of a trail system. Indigenous community concerns need to be better resolved.
 - e. Recommendation is to continue dialogue with the Indigenous community. Once resolved, trail site design can begin. There are several inherent limitations to trail development on the site such as its limited size however a strong system of community-oriented trails is possible.
 - f. Recommendation to begin to identify interested parties or trail related clubs in the community to take a leadership role in trail design, development and governance.
 - g. Recommendation is to address adjacent landowner concerns at the trail development stage (see item 6, following this section)
 - h. See Section 9 for more detailed information regarding the community engagement that encompasses this item.

6. Ensure that existing random activity on the site is steered toward safe and appropriate uses.
 - a. Risk of fire is the primary concern pertaining to trail development along with overall damage to the area. These are real concerns with all trail development. However, it was made clear during the engagement phase that local people have been visiting the 160-acre site in all seasons for recreational purposes for decades. Informal use, of random trails, presents greater risk for fire and site damage.
 - b. A formal trail system will bring local recreation to the area. Trail users provide activity and behavioral norms as well as 'eyes-on-the-ground' which diminishes risk. There will always be risk in all forms of recreation, but the aim is to mitigate as much as possible.
 - c. Recommendation is to continue dialogue with the Indigenous community and began formal trail development as soon as is possible.
 - d. See Section 9, specifically the public open house for support for this item.
7. Secure the long-term viability of the Medicine Lodge Ski Hill as a recreation asset for the community in keeping with its original intent.
 - a. The Medicine Lodge Ski Hill was established in 1958 specifically as a ski recreation amenity for residents of the area.
 - b. It was noted throughout the extensive engagement process that external parties have at times pursued the 160-acre site for various developments. Also noted in the engagement process is that residents feel very strongly about keeping the site intact with its original purpose and intent.
 - c. Recommendation is for the Board of Medicine Lodge Ski Hill in conjunction with the Town of Bentley and the County to pursue a long-term designation or understanding with the Province of Alberta of the land such that it will maintain its current status as a ski area and recreation asset open to the community.
 - d. See Section 9, specifically the public open house for support for this item.
 - e. See Section 13, for suggested land use designation strategy.

Part 2. Recommendations and Phasing

This section provides a simple overview of recommendations and phasing. It is set up in near, mid, and long-term phasing. As the project progresses extraneous issues may arise that require attention. The recommendations strongly imply that the Town of Bentley should work closely with the Board of Directors of the Medicine Lodge Ski Hill and the two need to work closely with other stakeholders in order to be successful.

1.1 Near term Recommendations

The Board of the Medicine Lodge Ski Hill to develop a long-term maintenance and lifecycle plan that takes into account results of this report. The maintenance plan will be useful in securing grants for lifecycle improvements.

1. The Board of the Medicine Lodge Ski Hill to develop a long-term maintenance and lifecycle plan that takes into account results of this report. The maintenance plan will be useful in securing grants for lifecycle improvements.
2. The Board of the Medicine Lodge Ski Hill to develop a long-term development program for its human capacity needs.
 - a. To include present areas of volunteer strain
 - b. Key areas of operations the Board would like to remain involved with
 - c. How to best utilize the potential for FTE's into the work program
 - d. What additional requirements would be necessary as a result of a significantly extended season due to the addition of snow making
3. The Board with the Town of Bentley work together to determine the role and provision of FTE's to support the long-term operation of the ski area
4. The Town of Bentley, as the land owner continue to dialogue with the Indigenous community on addressing the potential for culturally significant sites on the 160 acres land leased to the Medicine Lodge Ski Hill
5. The Town of Bentley identify a partner(s) to take on the role of the trails club for the ski are site.

1.2 Mid-term Recommendations

1. The Board of the Medicine Lodge Ski Hill in partnership with The Town of Bentley apply for funds to develop snow making capacity at the hill
2. The Board and the Town of Bentley determine if a change in the land designation is required to secure the present status and uses of the 160-acre site. If not, then what designation is required.
3. The Town of Bentley secure a formal partnership with a local not-for-profit trails group. The Town, trails group with input from the Indigenous community complete trail development for the site. Re-engage with formal trail planning incorporating community concerns.

1.3 Long-term Recommendations

1. Complete trail development construction and institute an external partner e.g., a not-for-profit trails group such as Red Deer Mountain Bike Club to work with the Town of Bentley to manage both summer and winter trails
2. Implement snow making capabilities

Part 3. Community Engagement Summary

The community engagement process represents the core of the project. This report includes the first such engagement of the Medicine Lodge Ski Hill on record. An extensive and rigorous engagement process was successfully completed in a highly restricted period of time in accordance with the RFP. Ski Hill Operators, Adjacent Landowners, Trails group, the Indigenous community and general public were engaged at various levels. Engagement occurred in-person in a targeted and open-to-all-the-public formats. As well a comprehensive online survey was employed that garnered a strong response. Detailed information regarding engagement results is provided later in the report but herein are presented a topline summary of the findings.

1. There is a high degree of support for the Medicine Lodge Ski Hill throughout all consultations with few exceptions.
 - a. Residents perceive the ski area to add to their quality of life and that it contributes to making the region a better place to live and work. It is a prized community asset that distinguishes the area within Central Alberta. The ski hill is a contributor to the quality of life of resident and local businesses.
 - b. The community supports the ski area and would like to see improvements to mechanical elements to decrease rope downtime. Snow making would provide increased reliability and extend the season.
 - c. The Board of the ski area is committed to its continued operation and prioritizes addressing mechanical and building lifecycle improvement. The impacts of installation of snow making capabilities and requirements for additional human capacity support need to be examined further and ensure its sustainable operation.
 - d. Concerns pertaining to the ski area include managing parking and garbage and the protection of Indigenous culturally significant sites that may be present.
 - e. The community values the ski hill and area and would like to see a land use designation applied to the lands that would contribute to ensuring its long-term protection as an outdoor recreation site open to the public.
2. There is a high degree of support for winter and summer trail development in the community with some exceptions.

- a. The community at large sees value in trail development and is supportive. There is a strong local group of trails 'champions' willing to take on a leadership role.
- b. Adjacent landowners and smaller groups of residents-at-large are concerned about the risk of fire, garbage and parking.
- c. Indigenous community feedback concerns the identification and protection of culturally significant sites on the land.

There is widespread support within the community for the Medicine Lodge Ski Hill, to improve the site, add snow making and good support for trail development. Attention is required to ensure concerns of adjacent residents are addressed as well as those of the Indigenous groups (all noted in the Executive Summary).

Note that at the direction of the Medicine Lodge Ski Area Board of directors no attention was given to expanding or positioning the ski hill in a touristic context. At a later point the ski hill may wish to consider strategies for tourism development provided there is resident support to do so.

2 Lifts Review

Brian Bain, P.Eng of McElhanney, completed a review of all the passenger ropeways on March 6th, 2023, with Ross Moore, President, and Greg Chernoff, Vice-president, of the ski club. The ski area has four ropeways with details and findings in the following sections.

2.1 Samson T-Bar

The Samson T-bar is the main lift for the area. Installed in 1973, it has the following details,

- Top Elevation: 1115m
- Bottom Elevation: 1000m
- Bottom Drive with right angle gearbox, braking drum, rollback clutch, and v-belt connected electrical motor.
- Top floating bull wheel and counterweight tensioned.
- Hours: 6656 as of March 15th. This was noted in the maintenance documentation, however there is no hour meter installed so the accuracy of this number is uncertain.

Each tower angle was measured with data recorded in Table 1.

Table 1 - Chairlift Tower Angles

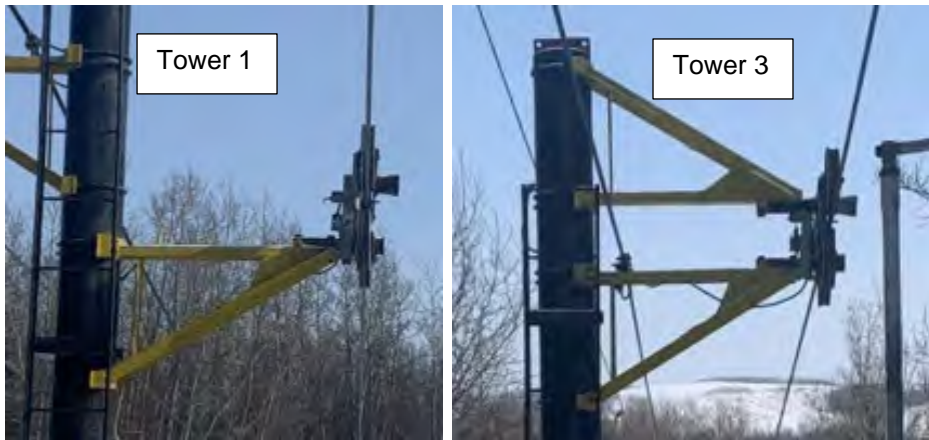
Tower #	Lateral Angle (deg)	Longitudinal Angle(deg)
1	0	0
2	0	0
3	0	0
4	0	6 dh
5	0	10 dh
6	0	12 dh
7	0	15 dh
8	0	18 dh
9	0	18 dh
10	0	10 dh
11	0	0

Every tower matches the profile except for Tower 12 which was originally shown as 10deg. There was a note stapled to the foundation drawings showing 12 deg. Based on every other tower being exactly per the drawings, I would assume this was changed during construction and is correct as it has operated for 50 years without issue. It was also noted that two towers had sheave alignments issues that should be corrected. Tower 7 heavy and Tower 5 light should be adjusted to center the rope.

A complete set of drawings was provided by the ski area operator and the following are comments on those drawings:

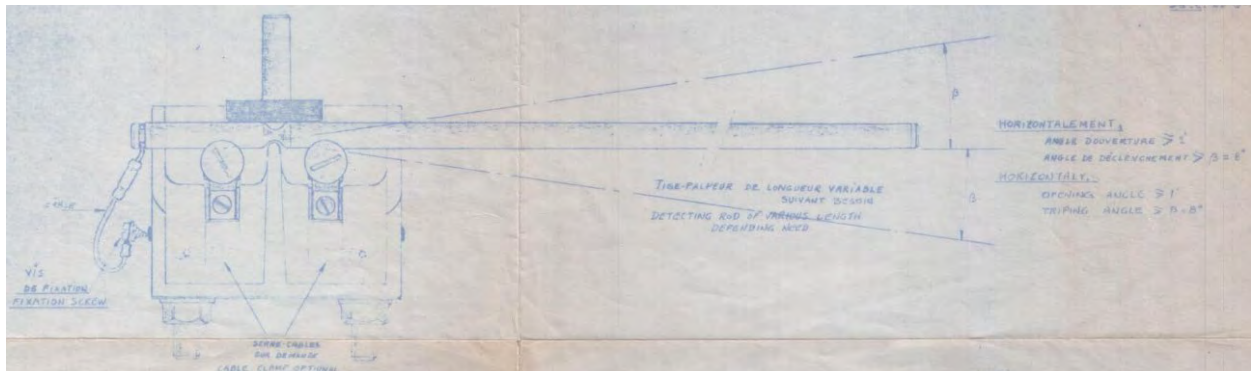
- No drawings have an engineering seal. Assume that sealed copies have been submitted.
- Missing line calculations. Line calculations are the basis of the design and can be used for future maintenance planning.
- The profile has a hand mark up for the heavy sheave assembly of Tower 9 to show a 4S opposed to a 2S that was the original. It is assumed that the tower was built as a 12-deg-tower which increased the loading, thus requiring a 4S. The concern here would be that the tower is lightly loaded which can cause de-ropements. However, it has operated in this condition for 50 years like this, so it is unlikely to be a problem.
- Electrical controls were partially updated in 1999 by Softac. No engineering seal was present; however the control cabinet has an Alberta Elevating Device and Amusement Ride Safety Authority (AEDARSA) sticker dated 1998. Therefore, it is assumed this alteration was submitted. During this alteration, it also appears a new brake and torque convertor were installed on the motor. Electrical components are rapidly becoming obsolete, resulting in older equipment not being readily replaceable.

Figure 2 - Tower Combination Assembly



- Missing return station drawings including drawings of the counterweight. Knowing the mass of the counter-weight is important in the lift's design, it should be confirmed that the counterweight ropes are replaced. During the summer of 2020, the tension ropes were replaced, and all counterweight parts disassembled and inspected. As there are no drawings for the return station or line calculations, confirmation of the ropes being used having the correct breaking strength is not possible.
- The original combo sheave assembly was per Tower 1 where only a lower support was attached to the tower as shown in Figure 2. The drawings included an updated assembly which had supports on

Figure 3 - Tower De-ropement Switch



the bottom and top as per all other combo sheave assemblies. It was also noted that some of the assemblies were not adjusted to have support and compression sheaves contacting the rope. The manual does not indicate a gap being present and the drawings show rope contact on the top and bottom.

- Discussions with operation staff revealed the main area of concern is the unreliability of their tower de-ropement switches. The existing design is lever-style, which has a tendency to create phantom faults and stop the lift. This style is currently not used on modern T-bars and a brittle bar is more common.

The Canadian ropeway standards only require operators to follow the manufacture's maintenance requirements. When this ropeway was manufactured, operations manuals were not as detailed as they are with modern ropeways. All aging ropeways require increased maintenance and inspections as they age to ensure long-term operation. The hand-written maintenance log provided was difficult to read and

didn't appear to include details of maintenance beyond manual requirements. The following are items that should be completed to confirm the existing condition. Following completion of these inspections, future inspection and maintenance intervals can be developed.

Gearbox inspection. This can be undertaken by opening it for a visual inspection. An oil analysis will determine the level of metallics present and indicate when servicing is required.

- **Motor service and inspection.** Removal of all sheave assemblies to allow for a visual inspection and for non-destructive testing (NDT) to be completed. This can be completed by inspecting a few each year to ensure they are reviewed every six (6) years.
- **Bull wheel bearings.** If there is no record of replacement, a grease and vibration analysis can be completed to determine their condition.
- **Removal of rollback clutch and service.** Visual inspection of all tower and station welding by a certified weld inspector to confirm no cracking.
- **UT (ultrasonic) measurement** of all tower tubes to confirm wall thickness. It will include checking for drain holes to ensure no water build up.

Any one of the items listed above can cause a lift to be down with long lead items to order part. Completing all of the above items provides a high-level of certainty regarding the condition of the lift for the long-term and increased confidence in reliable operation.

2.2 Recommendations

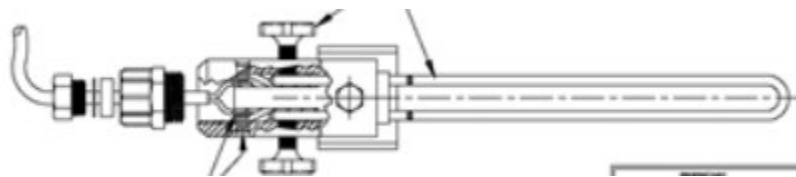
Based on reviewing the above, the following is recommended for completion:

Create maintenance plans for the items above to ensure their long-term operation.

Electrical system upgrade. Two items can be undertaken:

1. Replacement of existing de-ropement switches with brittle bars. This would require a new mount to be created to install the brittle bar as shown below. Estimated cost: \$20,000, excluding installation labour.

Figure 4 - De-ropement Switch



2. The next step could be completed in conjunction with the brittle bar but would include a complete replacement of the electrical control system and installation of a new electrical motor. A new communication cable would also be installed to provide individual tower enunciation. This can be buried or installed to the top of the towers. If installed on the towers, it would require an

engineering review of the tower foundations as the cable would be larger. The total estimate to complete this would be \$110,000, excluding the brittle bars. This assumes that installation would be completed by the ski area. Adjustment of tower alignments and gap on combination sheave assemblies.

2.3 Mini Handle Tow

The T-bar is currently located looking right onto the ski area which results in a long, 200m flat area to the observer's left. To efficiently move skiers, a gas-powered handle rope tow was installed. It was installed in 1992 and appears to have been altered sometime between 1999-2008 as the design code noted on the AEDARSA sticker shows 1998. Operations staff also indicated that a new gas engine was installed. The anchors were covered in snow therefore could not be evaluated.

The grade of the tow track allows the handles to drag in the snow, so the grade should be altered in the summer to allow for increased snow buildup.

The electrical system is original, so component-availability will become an issue. As this lift is not a main access lift, it doesn't necessarily need to be replaced, however, if any part fails and can't be replaced it will render the lift inoperable for at least a year.

No maintenance documentation was provided for this rope tow. Rope tows are simple devices, though, not requiring more than the following:

- Inspection of anchorage.
- Visual inspection of the structure for cracking.
- Inspection of bull wheel bearings.
- Inspection of the gearbox.

2.4 Recommendation

Based on the above review, it's recommended that the following be completed:

1. Create a maintenance plan with the items above to ensure long-term operation.
2. Alteration to grade under return rope at return bullwheel.



2.5 Button Rope Tow

This rope tow services a beginner area adjacent to the T-bar. It was installed in 1988, however appears to have had an alteration sometime between 2008-2017 as the design code listed the AEDARSA sticker as 2007. The lift currently has 4296 operational hours. The anchors were covered in snow, and therefore could not be evaluated.

The electrical system is original and thus component availability will become an issue. As this lift is not a main access lift it doesn't necessarily need to be replaced, however if any part fails and can't be replaced immediately, this situation will render the lift inoperable for at least a year.



No maintenance documentation was provided for this rope tow. Rope tows are simple devices, though, not requiring much more than the following:

- Inspection of the anchorage.
- Visual inspection of the structure for cracking.
- Inspection of bull wheel bearings
- Inspection of gearbox.
- Electric motor service and inspection.

Part 4. Recommendation

Based on the review above its recommend that the following be completed:

1. Create a maintenance plan with the above items noted to ensure long term operation.

2.6 Star Handle Tow

This rope tow is the other main lift at the ski area and was installed in 1992. It is a long tow, with 313m of slope length and a 72m of elevation. The anchors were covered in snow, so could not be evaluated. Some of the adjacent vegetation could be cleared from the ropeway.

The electrical system is original, so component availability will become an issue. As this lift is not a main access lift, it doesn't necessarily need to be replaced, however, if any part fails and can't be immediately replaced it will render the lift inoperable for at least a year.

No maintenance documentation was provided for this rope tow. Rope tows are simple devices, though, not requiring much more than the following:

- Inspection of anchorage.

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- Visual inspection of structure for cracking.
- Inspection of bull wheel bearings.
- Inspection of gearbox.
- Electric motor service and inspection.

2.6.1 Recommendation

Based on the above review, it's recommended that the following be completed:

1. Create a maintenance plan for the items noted above to ensure long term operation.

2.7 Maintenance Program

The only documentation provided was a file titled "Master Note Book", which appears to just be for the T-bar. It lists what was completed over the years. While it is required to document abnormalities found, the manual must be available for inspection. At this time, it doesn't specifically confirm what items were checked. CSA 98-19 standard requirements for inspections are detailed in sections 12 and 13. This standard should be available on site for review as there is important information that the ski hill operators should be aware of.

It is recommended, as part of updating the long-term maintenance as indicated in the previous section, that the following also be created:

- Daily ropeway log check list for each ropeway, Annex C of CSA Z98 has an example form. This provides a starting point and should be expanded on for specific recorded metrics to further define requirements.
- Daily, weekly, and annual checklists for each ropeway detailing each item to be inspected with any specific information needed.
- The maintenance history of each component of the lift should be recorded to inform long-term maintenance planning. Future maintenance requirements could also be recorded. Using a Microsoft Excel spreadsheet or equivalent would provide a data base where items could be readily sorted and filtered.

Once a maintenance program is created, it will be easier to ensure that all required maintenance is being completed. Furthermore, operators will know what maintenance work needs to be completed.

3 Snowmaking

The ski hill currently doesn't have any way to make snow, so they have to rely only on natural snow. This means that some years the hill can't open because there's not enough snow. This is a big problem for the ski hill because it could make it difficult for them to stay in business.

If a snowmaking system was installed, even a simple one, it would help to create more consistent ski days and allow the hill to open earlier. In Alberta, ski areas with snowmaking can usually open by early

December. Artificial snow is denser than natural snow, so not as much is needed to groom a hill, and it lasts longer into the spring months. Most ski hills in Alberta close in early April. The following details important aspects of a snowmaking system.

The basis of making snow is using pumping water from a supply across the hill to snow guns. These guns have a minimum pressure required to make snow. Snow is then made at strategic locations to limit the amount of grooming required.

4 Water Supply

The main issue with snowmaking at Medicine Lodge is availability of water. Determining a source is out of the scope of this project, however the following are the likely possibilities that will happen with no easily identifiable source.

There will be two options for water, either ground water flow is high enough to support snowmaking by direct pumping or a reservoir will be required to pump from.

4.1 Direct Draw

This is the simplest option as it only requires a high pressure pump. But first, they need to make sure there's enough groundwater flow rate in the aquifer to allow for the high flow rates from the pump without affecting the neighboring wells.

They can determine this by doing a step-drawdown test. In this test, they start by pumping at a low constant rate and gradually increase it to higher constant rates. Each step should last long enough to let the wellbore storage effects dissipate. They also drill perimeter wells during the testing to measure the effects at different distances from the main well.

4.2 Reservoir

If the step-drawdown test fails, then the alternate method is to use a slow constant flow rate with a low pressure pump to fill a reservoir. The high pressure pumping system then pulls from the reservoir to ensure a constant supply. The reservoir is sized to balance enough water to cover the hill in the desired timeframe. The downsides to reservoirs are they are expensive.

5 Pumping

5.1 Low Pressure Pumping

A low pressure pumping system could be utilized to fill the reservoir if required. A new wet well would be constructed from pre-cast manhole components to reduce costs and would house submersible pumps used to feed water to the reservoir. Downstream of the pump would be an underground vault with check valves and isolation valves to reduce risks of pump shaft damage during start-up. Inside the building would be pressure monitoring, wet well monitoring, flow monitoring and water temperature.

5.2 High Pressure Pumping

A high pressure pump could be installed adjacent to the water reservoir in a pumphouse. This would be the main source for water feeding all the hydrants on the hill. This building could also be built to double as heated space for water hose storage.

It is not recommend that full scale vertical turbine pumps be used due to the high cost and would suggest a municipal / commercial grade vertically stacked multistage pump. These pumps are inexpensive compared to vertical turbine pumps and can be phased to suit the growth of the snowmaking program. For example, 4 Grundfos CR pumps could handle 10 standard fan style snowmaking guns with each pump providing 60hp or a total of 240hp.

Figure 5: Example of a 50hp multi-stage vertically stacked pump



To support the pump, instruments such as flow meters, pressure transmitters, and water temperature would be included. Additionally, a new building should be erected to house the new pump arrangement, variable speed drives, the electrical distribution, and the Programable Logic Controller (PLC). The PLC would control the intake, low lift pumphouse and high lift pumphouse together to simplify operation for the operators. When complete, the operators would turn the system on or off and select the desired output pressure and the PLC would automatically fire up pumps as needed while the operators focus on setting up snowmaking equipment. The PLC would also be programmed to reduce risks associated with asset damage because of overpressure, overflow, or operator error events.

6 Snowmaking Equipment

From the high-pressure pumps, buried piping and electrical would be installed in the ground to specific areas across the hill as detailed later in this report. The pipe will have hydrants and electrical at intervals along the line to allow connection of the snow making guns.

For snowmaking equipment there are generally two types:

Internal Air/Water Gun: This method requires both air and water pipelines with centralized pump and air compressor stations. These systems require hundreds of horsepower in air compressors alongside with additional air pipelines that require registration by the Authority and meet compressed air design codes. The advantage is lower capital cost, relative weather independence, no field electrical lines and precise snow throw coverage. Challenges include high operational energy costs with air compressors, design considerations, requirements for whip-checks, operator compressed air safety training, and snow production is limited by air compressor throughput. Flow range is usually 15 – 70 GPM with lower flows at warmer temperatures and can be 1/5th the cost of external water/air guns.

Figure 6: Example of Internal Mix Gun



External Air/Water Gun: Similar to the internal air/water gun but mounted on a “lance” to spray the mixture higher in the air to increase “hang time” in the air to improve production rate. Challenges include the need for high water pressures, and higher capital cost compared to internal mix guns.

Figure 7: Example of External Mix Gun



Air/Water Fan Gun: These guns require a significantly reduced volume of compressed air, and the air compressor is mounted on the skid to eliminate the need for compressed air lines on the ski hill along with operational costly air compressors. Snow is created by water pressure forced through fine nozzles with air only used on the nucleator and a large fan placed on the back of the gun to push the expelled water into the air for freezing. Challenges include sizing nozzles for the expected snowmaking climate while balancing snow production, electrical power placed on the hillside, and high capital cost. Advantages include lower operational energy costs and can be ordered with up to 75 nozzles to allow maximum production of snow in any winter temperature.

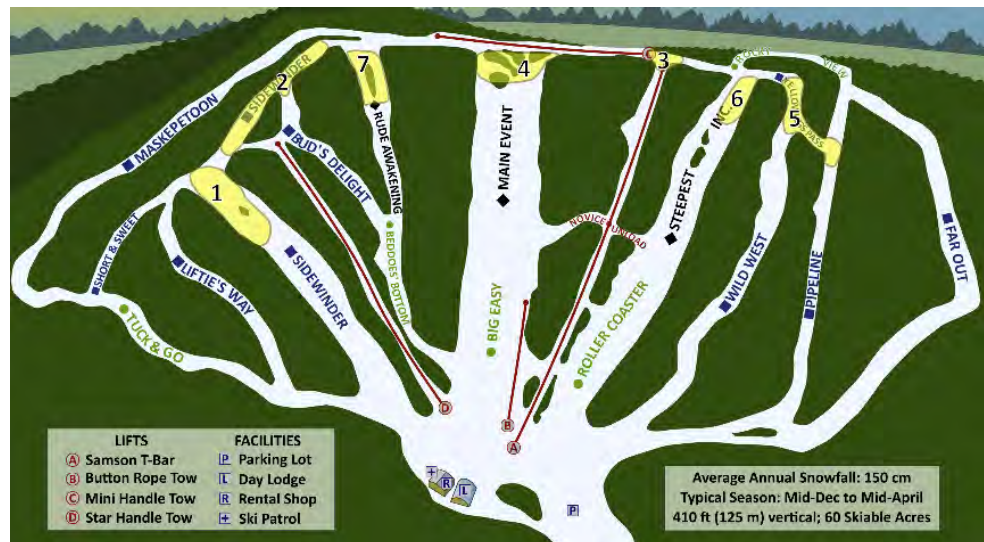
Snowmaking is typically limited to -3°C or colder depending on the equipment nozzle setup, water pressure, water supply temperature, use of additives, and number of nozzles operating. Fan guns tend to be the simplest and provide the lower expected life cycle costs. The downside to fan guns is they require large areas and narrow runs may not be suitable.

Figure 8: Example of a Fan Gun



6.1 Snowmaking Production

Snowmaking is highly variable to the local climate and the resultant number of fan gun nozzles operating. Studies have shown that evaporation, wind loss, operator setup, and snow saturation which can result in a low recovery rate of 30% with usual recovery rates



around 50-66%. As temperatures lower, the recovery rate can be near 80%, thereby increasing snow production as recovery rate increased. The following details out hill run requirements.

6.2 Priority Runs

In discussions with operations the main priorities are Big Easy and Main Event at a minimum to open.

For New Snow with only a single pass with the groomer

45cm depth, 50% Recovery¹, Total Water Demand

6,400 m³

For Compacted Snow with several passes with groomer

¹ Recovery rate refers to the efficiency of the conversion of water into snow. For example, 1 cubic metre of water input to the snowmaking gun

45cm depth, 30% Recovery, Total Water Demand	17,800 m ³
Number of fan guns	5
Time to Open, operating at an average 50% system utilization.	
45cm of New Snow, 50% Recovery, Total	5 Days
45cm of Compact Snow, 30% Recovery, Total	13 Days

6.3 Remaining Priority

The rest of the priorities as indicated on the yellow areas for Sidewinder, Steepest, Roller Coaster, Yellow Leg Pass, and Pipeline.

For New Snow with only a single pass with the groomer

45cm depth, 50% Recovery, Total Water Demand	6,800 m ³
--	----------------------

For Compacted Snow with several passes with groomer

45cm depth, 30% Recovery, Total Water Demand	19,000 m ³
--	-----------------------

Number of fan guns	5
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Time to Open, operating at an average 50% system utilization.

45cm of New Snow, 50% Recovery, Total	5 Days
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45cm of Compact Snow, 30% Recovery, Total	13 Days
---	---------

6.4 All Runs

For New Snow with only a single pass with the groomer

45cm depth, 50% Recovery, Total Water Demand	20,650 m ³
--	-----------------------

For Compacted Snow with several passes with groomer

45cm depth, 30% Recovery, Total Water Demand	57,350 m ³
--	-----------------------

Number of fan guns	10
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Time to Open, operating at an average 50% system utilization.

45cm of New Snow, 50% Recovery, Total

8 Days

45cm of Compact Snow, 30% Recovery, Total

21 Days

Depending upon the budget and area available the biggest reservoir that could be built is 57,350m³ however this could be decreased based on the allowable low pressure water flowrate. Once we have a final size of reservoir then the only decision left is how many pumps to allow for the desired time to cover the runs. The faster time to cover the runs the higher the cost in pumps.

6.5 Budget Capital Costs

The following opinion of probable capital cost estimate is based on historical pricing, tender results and current trends in pricing work. These estimates are considered Class D as defined as:

A preliminary estimate which, indicates order of magnitude of cost of the proposed project. The overall cost estimate is derived from broad lump sum or unit costs of similar projects. This level of estimate is used for long term capital expenditure plans and preliminary discussion.

As with all market costs these days there is a lot of variability and pricing could be different at the time of construction:

Item	Total
Step-Draw Down Testing	\$100,000
Reservoir	\$700,000
Low Pressure Pump System	\$800,000
High Pressure Pump system – 2 pumps	\$700,000
High Pressure Piping for Priority and Remaining priority	\$1,500,000
Snowmaking Equipment	\$900,000
Contingency 30%	\$1,290,000
TOTAL	\$6,090,000

7 Trails

7.1 Trail Planning & Design Process

The Town of Bentley has taken the first critical steps through this project to exploring future trail development at Medicine Lodge Ski Hill. This section is intended to provide guidance for future planning and design steps for the project and demonstrate how sound planning and design practices result in the development of sustainable trail networks.

A clear vision, a good plan, and proper implementation are essential to developing a successful trail network. If appropriate time, money, and energy are not invested up front, the success of the project will be at risk, the quality and the sustainability of the trail experience will be compromised, and the likelihood of receiving support and approvals from the stakeholders, regulatory agencies, and land managers will be reduced.

If done properly and with a purposeful approach, the creation of a clearly defined vision and executable plan will become the foundation on which every future funding, design, construction, maintenance and management decision will be based. In fact, the planning process for a trail should never stop. Under an adaptive management approach, trail operators should remain in a continual cycle of planning, implementing, managing, monitoring and adjusting to ensure user, risk management, and quality objectives are maintained throughout the lifecycle of the trail network.

Figure 9 - Adaptive Trail Management Cycle

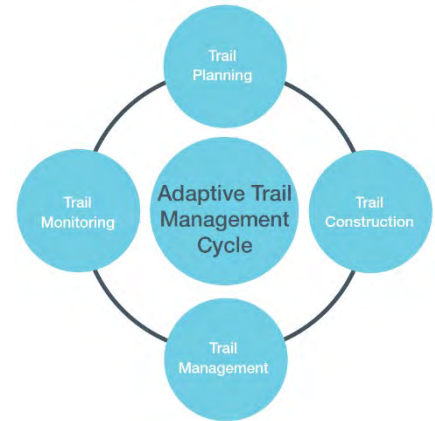
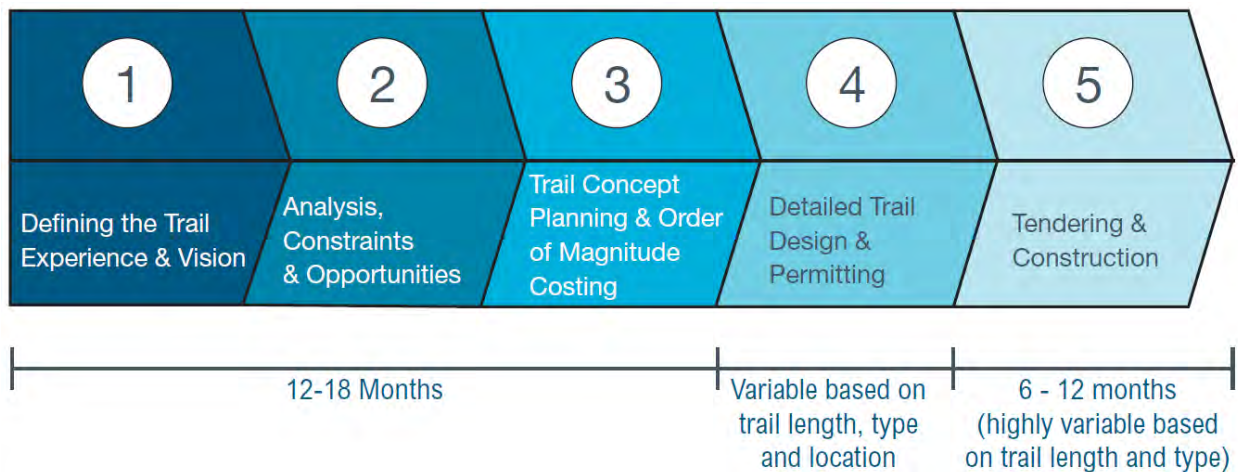


Figure 10 - Trail Planning Process Overview



It is recommended that the Town of Bentley and its stakeholders implement the trail planning and design process adapted to the local situation as described in the *Trail Development Guidelines for Alberta's Public Lands*. This document was developed by McElhanney on behalf of the Government of Alberta in 2019 and presents a comprehensive compilation of best practices, principles, and guidelines for all steps of trail projects, regardless of the land management framework.

The following sections document preliminary portions of Steps 1 and 2 of the process and are intended to inform future engagement, planning and design exercises.

7.2 Trail Network Experience and Vision

The vision for trail development at Medicine Lodge is to develop a safe, sustainable, and accessible community-based recreation asset for the people in Bentley and the surrounding area. Stakeholders indicated they preferred trail activities at the site that include mountain biking and pedestrian (hiking, running, walking, etc.) during snow-free conditions and cross-country skiing for winter months.

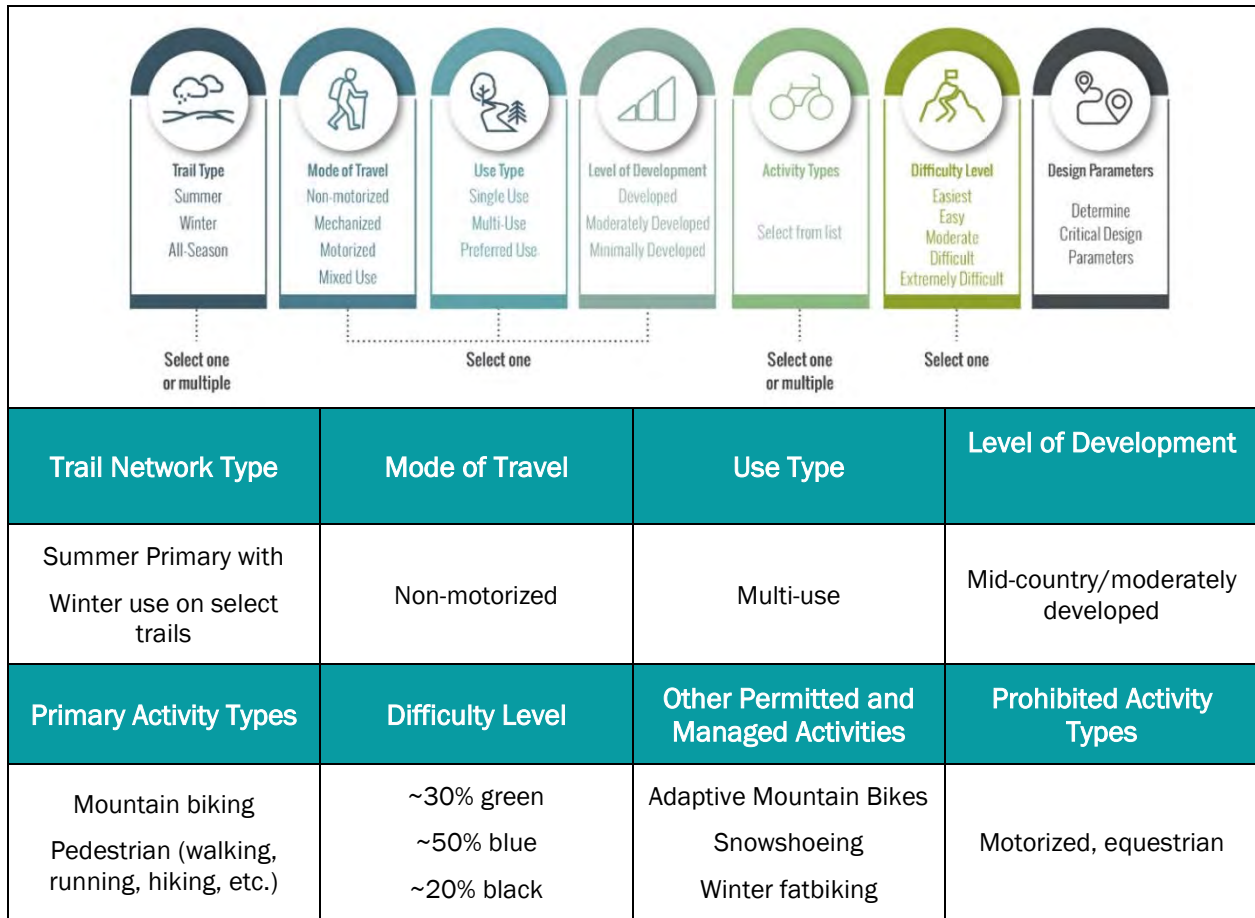
The following sections utilize the *Trail Development Guidelines on Alberta Public Lands* model for high-level trail network classification as input to future planning and design on this project.

7.2.1 Mountain Bike & Pedestrian Network

Stakeholders indicated that a multi-use mountain bike and pedestrian trail network would be the preferred use of the site in areas where terrain has the greatest vertical relief. Mountain bike and pedestrian use are generally compatible in purposefully planned and designed trail networks. Potential conflicts and hazards can typically be managed through purposeful design at intersections, providing sightlines and increasing clearing widths on trails, signage, and managing directional or single use of specific high-speed trails.

Stakeholders indicated that the purpose of the network should be to fill the introductory and intermediate skill gap that exists for mountain biking in the region. It was noted that other nearby riding areas, such as Red Deer and Baseline Mountain in Rocky Mountain House, had a good offering of beginner and advanced to very advanced trails, but lacked the quantity of intermediate skill level and progressive trails to allow residents to develop skills in a safe and accessible environment.

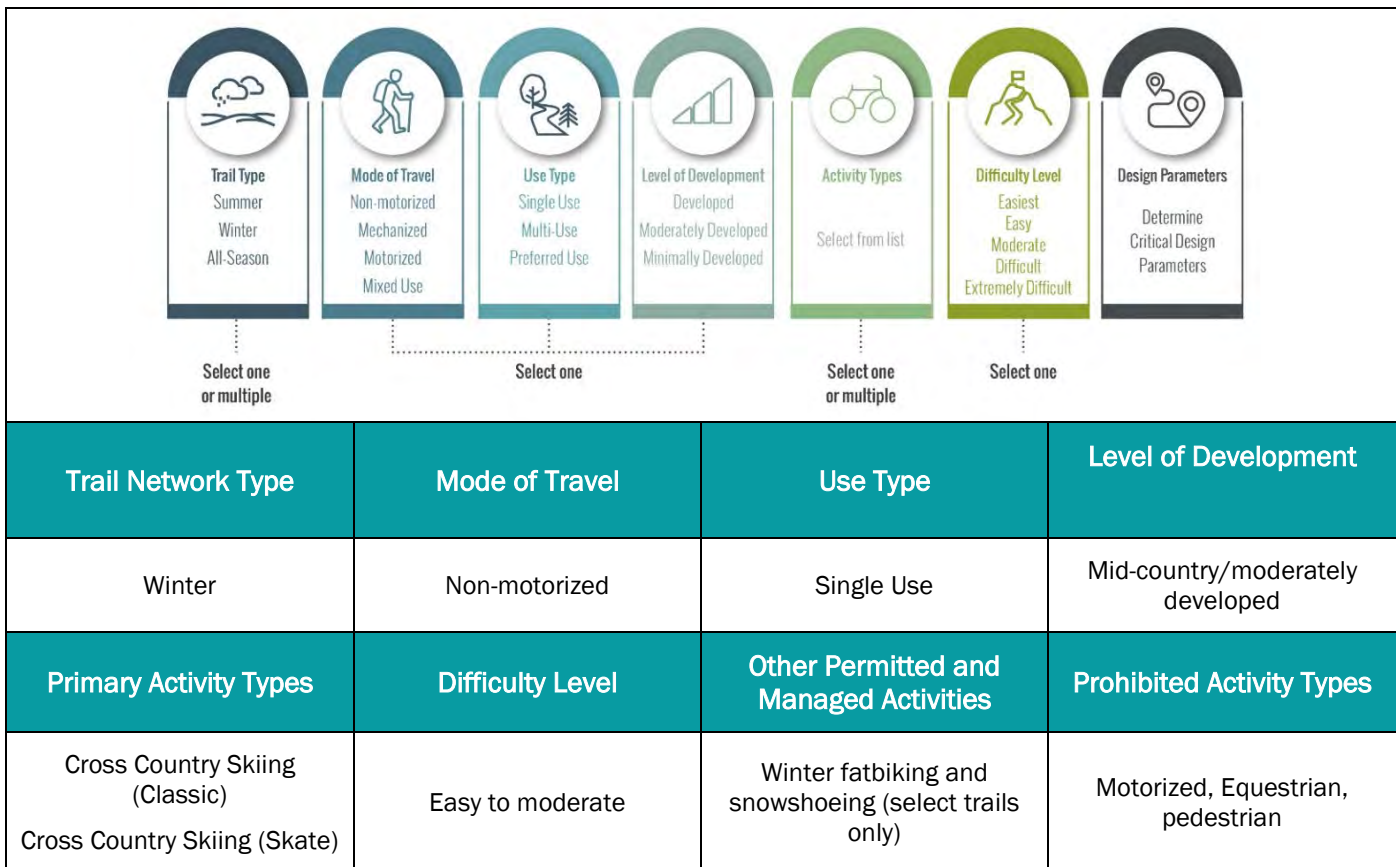
Figure 11 - Medicine Lodge Ski Hill – Mountain Bike (MTB) & Pedestrian Network



7.2.2 Cross Country Ski Network

Stakeholders indicated that the lower-lying portions of the site would be ideal for developing several cross country (XC) ski trail options through undulating terrain. Again, it was identified that the trail network should focus on accessibility and skill development, so focusing on beginner to intermediate level trails was recommended. Pending further analysis and design, winter fatbiking and snowshoeing are often other compatible uses that could share the same trail corridor as XC skiing trails and should be considered during future planning and design work.

Figure 12 - Medicine Lodge Ski Hill – Cross Country Ski Network



Cross country (XC) ski trails at Medicine Lodge are likely to be subject to similar operational opportunity and challenges as the existing ski operation. During periods or years with minimal snowfall, snowmaking may be required or the trails may not be available for their intended use. However, similar grooming equipment may be adapted and utilized which will reduce the capital cost required to begin operations.

7.3 Opportunities and Constraints

7.3.1 Opportunities

The Medicine Lodge Ski Hill is located in unique terrain feature located near the boundary of the Rocky Mountain Foothills and the Alberta Plains. The terrain on the property has up to 134m of vertical relief, with the existing T-bar and ski runs having nearly 100m vertical. Slope angles on the site vary approximately from gently sloping (<5 degrees) up to moderate slopes (approximately 35 degrees). In the geographic setting of the region surrounding Bentley, which is much more gently sloping with minimal elevation change, the property offers great terrain and vertical relief suitable for developing gravity-oriented trail networks which are not readily available near the Town.

Figure 13 - Approximate topography of site with 2 m contours (source: GIS data provided by Lacombe County)



The vertical relief of the site is optimal for the intended purpose of a community amenity trail network. Mountain bike and hiking trail networks could be expected to have lengths between 750m and 1500m and there is likely adequate space for five (5) to eight (8) trails. This layout and geographic configuration is similar to other comparable projects in Alberta, such as Hidden Valley Ski Resort in Cypress Hills Provincial Park.

Aside from the physical attributes of the site that make it favourable for trail development, development of year-round activities and trail networks at Medicine Lodge Ski Hill provides the Town of Bentley an

opportunity to actively manage and encourage positive activities in the area that are likely to offset the current informal and unfavorable uses of the site identified by stakeholders.

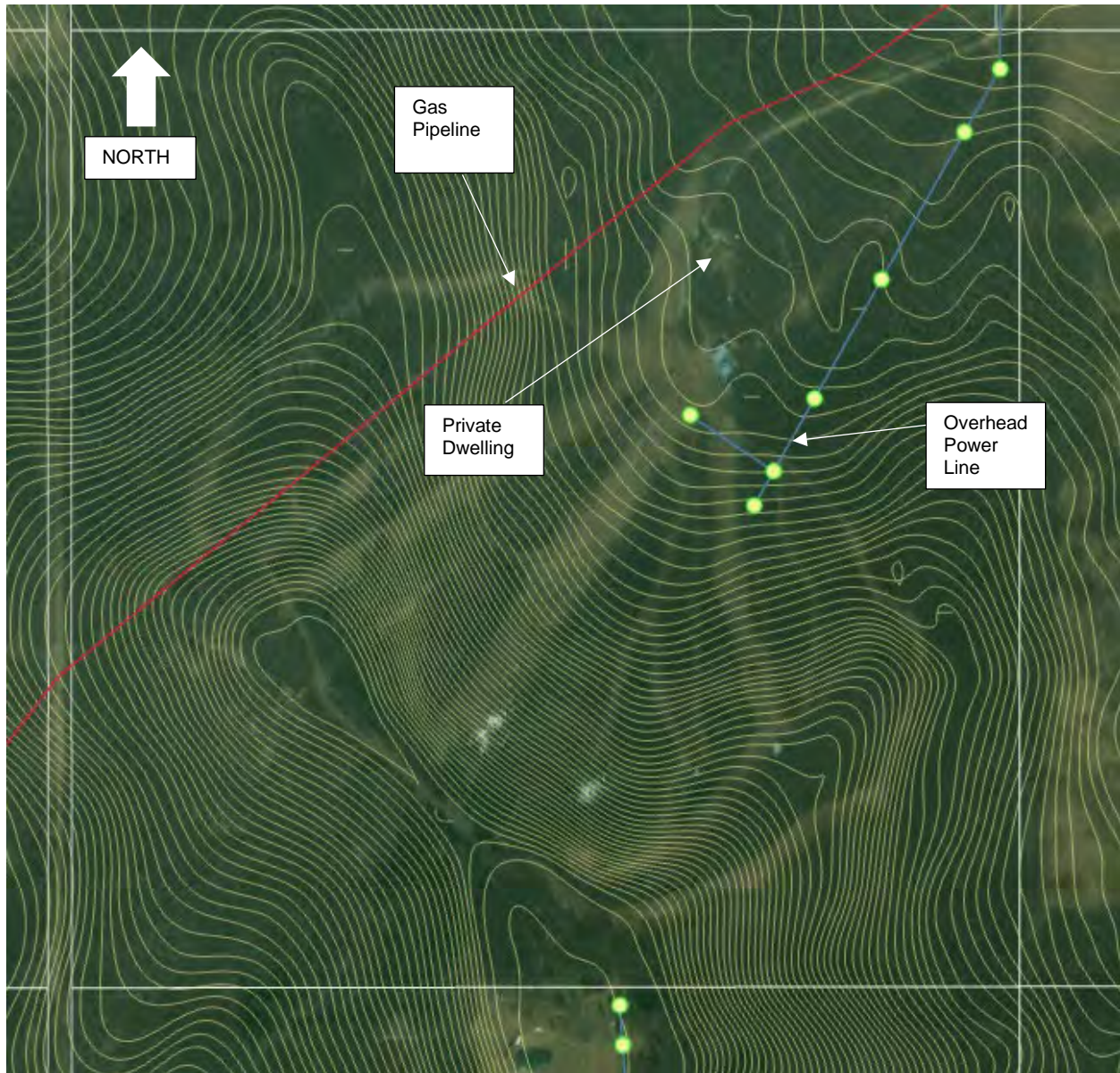
7.3.2 Constraints

Physical, social, and economic constraints must be considered in the future planning and design of trail networks at Medicine Lodge Ski Hill. Constraints were identified through the engagement process as well as a desktop review of GIS information provided to McElhanney by Lacombe County.

Some key constraints identified through desktop review and engagement include:

1. Steep slopes of several of the ski runs may limit the area available for sustainable trail routing.
2. Ski hill operations (current and future planned activities) must be considered in trail layout (e.g. snowmaking, grooming, etc.).
3. Utilities: there is a gas pipeline and an overhead powerline through the property as shown on Figure 14. Other utilities may exist and should be confirmed through Alberta One-Call during further stages of planning and design. Crossing agreements and coordination with the utility operators will be required.
4. The size of the site is small and remaining space for development is limited. Particularly in the context of cross country (XC) skiing, the suitable terrain for this type of development may limit the number of trails that can be developed to a very small network of one (1) or two (2) trails with total length between two(2) and four(4) km which many users may find undesirable.
5. There is an existing private dwelling located on the site. Trail layout and design must consider impacts on this resident.
6. Indigenous stakeholders have identified that there are environmentally and culturally sensitive sites on the property that must be respected.
7. Concerns from adjacent landowners and community members must be mitigated through purposeful and professional planning, design, and construction. These concerns include, but are not limited to:
 - Increased fire risk;
 - Erosion and environmental impacts;
 - Garbage;
 - Traffic/parking; and
 - Trespass on private land.

Figure 14 - Infrastructure constraints onsite identified by Lacombe County GIS data



7.4 Governance and Operations Model

Governance and operations models were discussed with key trail stakeholders in the community and a representative of the Town of Bentley during the trail focus group engagement session. The group discussed several potential models, including:

Owner/Government-Enthusiast Group Partnerships – similar to the existing relationship between the Town of Bentley and the Medicine Lodge Ski Area Board, a partnership whereby the municipality retains

ownership of the lands with a negotiated licence of occupation to a not-for-profit organization to operate the trails. The municipality benefits by providing a highly desired recreation opportunity for residents with minimal investment, the not-for-profit status of the third-party provider is eligible for grants not typically available to a municipality and this type of partnership better ensures a high degree of community engagement.

Town owned/maintained/operated – implies that the Town owns and operates the trail system with municipal employees. Benefits to the Town include greater control of the asset and operation but that would come with greater operational costs. Given that third-party trail management has been demonstrated in various locales including Red Deer there is little need to pursue a direct model of governance.

First Nations Partnerships – are valuable and should be explored wherever possible

Pay-per-use models – are more common in larger ski area summer operations that have a large volume of mountain biking attendance with strong control access infrastructure that allows easy administration of point of sale. Though this is common in larger ski areas it is less appropriate for Medicine Lodge Ski Area.

The focus group identified that given the priorities of the site as a community asset with limited financial and operational capacity of the Town of Bentley, that the preferred model would be a **partnership between the Town of Bentley and a not-for-profit enthusiast group**, similar to how the ski hill is currently operated. The main benefits identified for this model included:

- Access to more funding sources (e.g., government and not-for-profits can often access different funding sources for the same site or project).
- Both parties can work collaboratively with various skillsets required through the trail planning, design, construction, operations, and maintenance processes. Enthusiast groups are likely to have the best knowledge of user desires and best practices, while the Town of Bentley can offer procurement, project management, and financial management support to a project. A collaborative approach has the potential to build increased capacity, ownership, and interest within the community.
- Through the future planning and design phases of the project, the project proponents should consider and address:

Organizational Structure - Configuration of the current Medicine Lodge Ski Hill Board of directors in consideration of summer use. If a new entity for trail development is considered, agreements must be developed to define the roles, responsibilities, and limitations of each group in the partnership and the structure must be conducive to the operational requirements of the facility.

Capacity - Government-enthusiast group partnerships rely on the capacity of both parties in terms of funding, volunteer effort to complete the ongoing planning, design, operations, and

maintenance requirements of trail networks. The community must evaluate this capacity on an ongoing basis during future phases of the project to ensure that growth of trail networks occurs in a sustainable manner.

Risk/Liability - Risk and liability of operations must be evaluated, documented, and managed through the partnership. It is recommended that these factors be considered by a qualified professional during future phases of the project to ensure that risk levels are acceptable to all parties involved and that they can be managed and allocated appropriately through any operation partnership model used.

7.5 Benefits of Trails

Trails and trail systems provide an expansive list of benefits, similar to other recreation facilities such as sports complexes, playgrounds, and parks. If mountain bike trails are successfully and sustainably incorporated into the recreational offerings of Medicine Lodge, the residents of Bentley and the surrounding area would have an opportunity to realize these benefits.

7.5.1 Attract and Retain Residents

It used to be true that people followed jobs. Currently, people often move for reasons other than work and jobs may follow these people. In a report published by Mastel et al. (2021) "*Montana Movers Study 2021 Report*"), it was found that the top reasons for moving to Montana were to have better outdoor access, live in a smaller and less congested setting, and to take advantage of an increased quality of life. The addition of mountain biking and cross-country ski trails at Medicine Lodge would help attract business owners, skilled and educated workers, and would enhance the quality of life for existing residents. A trail system at medicine lodge would also contribute to attracting and retaining families, providing children and adults with outdoor recreation opportunities year-round.

7.5.2 Health Benefits

Trails have a profound impact on the health of user groups that surround them. Potential trails at Medicine Lodge would not only attract existing trail users, but they could also expose new trail users to outdoor recreation. Gordon et. Al (2004) found that new exercisers are likely to travel shorter distances to access trails more so than habitual users. Constructing trails at Medicine Lodge could be an effective way to encourage more people to exercise when they are in close proximity. Currently, the closest mountain biking trails of a similar style and elevation profile are nearly 30 minutes from Bentley, double the distance than to Medicine Lodge, at the Red Deer Mountain Bike Park (Trailforks). This relationship of new trails exposing new users to outdoor recreation resulting in increased levels of physical activity also points to an overall decrease in chronic health issues (Dunn, 2018). Not only can this lead to a decrease in chronic health issues physically benefit trail users, but it can also place less strain on the healthcare system.

7.5.3 Environmental and Economic Sustainability

An important aspect of trail development and maintenance is stewardship of the land upon which the trails are built. Sustainability is a core value of land stewards, and trails at Medicine Lodge have the potential to provide environmental sustainability, but also add economic stability to the area. As

mentioned above, Medicine Lodge trails would be closer than the current options in Red Deer or to the west in the Rocky Mountains. Providing local trails would keep users in the Bentley area, reducing transportation fuel consumption. These trails would also expose more users to the local ecosystems, fostering an intrinsic value of upholding the area’s environmental integrity. With trail users staying in the area, they would also be more likely to spend money at local stores and restaurants.

8 Site Structures Inspection and Lifecycle

There are 4 building located at the Medicine Lodge Ski Hill they are as follows

Quonset Building 1

Rental Shop Building 2

Day Lodge Building 3

Private Residence Building 4 (not inspected)

Buildings 1 through 3 were inspected on February 15, 2023, by a certified Red Seal Journeyman Carpenter (1995) and Licensed Home Inspector. The inspection report outlines, conditions found that may either be a safety issue or require a significant expense to correct, deficiencies found that should be addressed but are not considered serious, and items that are considered limitations of the inspection.

The following table indicates the high priority items to be addressed and the priority items.

RED outlined rows indicate potentially significant findings from the report summary.

Other rows are other important findings.

Category	Issue	Action
Building - 1		
Exterior: Electrical	Open ground noted. This condition reduces the safety of the electrical system. This condition is related to a missing ground pin on the extension cord.	Consult an electrician
Exterior: Roofing	Holes in roof covering	Repair holes to prevent water intrusion. Approximately 10-12 years remaining.

Building - 2		
Service Panel: Breaker / Fuse	Double taps noted at one or more neutral bus locations. This condition may allow for overheating/loosening of connections.	Consult an electrician
Interior Systems: Electrical	Exposed, unprotected wires attached to unsecured ceiling light fixture	Consult an electrician
Exterior Systems: Weather Sealing	Rake flashing, chimney storm collar, and chimney flashing missing or not sealed	Replace missing flashing and seal storm collar. Inspect sealing every three years. 20-25 years remaining.
Building - 3		
Service Panel: Breaker/Fuse	Double taps noted at one or more neutral bus locations. This condition may allow for overheating/loosening of connections.	Consult an electrician
Interior Systems: Stairs and Railings	Unstable guard wall noted. Reinforce to improve safety.	Consult Licensed Carpenter
Interior Systems: Toilets	Toilet poorly secured to flange. This condition may allow for leakage and may require a new wax seal.	Consult licensed plumber to evaluate and improve
Plumbing: Water Distribution Line	Polybutylene water lines present. This material is no longer permitted/manufactured for installation due to a history of failure. Some insurance companies may not insure structures with this material	Consult insurance provider to determine coverage
Plumbing: Gas Lines	Gas line subject to damage from foot traffic and storage.	Provide Protection or secure to furnace cabinet to prevent damage to the gas line
Water Heater: Age	Water heater near or beyond its expected service life.	Recommended to budget for a replacement.

TPRV/Discharge Line	TPRV discharge tube missing. This is a required component to properly control dangerous discharge.	Consult Licensed Plumber
Exterior Systems: Weather sealing	Furnace chimney storm collar seal degraded, four notable exterior wall penetrations lacking proper seal	Re-seal storm collar, and exterior wall penetrations. Sealing will require inspection every three years. Approximately 20-25 years remaining.
Exterior: Structure, Trim and finishings	Exterior doors, trim, and roof fascia are exposed, untreated wood and are weathered. Exterior wall base plate at SW corner is decayed.	Recommend re-finishing and painting to prolong their life. Remove decay and replace base plate with treated wood or metal to prevent further decay.
Heating: Combustion Air Vent	Combustion air vent intentionally blocked	Remove blockage to allow for proper combustion and exhaust gas flow
Building - 4		
Exterior Areas: Electrical	Reversed polarity outlet noted. This condition reduces the safety of the electrical system	Consult licensed electrician



The full inspection report is on record with the Town of Bentley

9 Engagement

9.1 Summary

Support for a revitalized ski area was near unanimous excepting concerns around the 'source of water'. The overarching feeling is that the hill should be supported by making mechanical, structural, and human

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capacity improvements. Off-season rentals received less attention, but there were no significant concerns noted. Off-seasons rentals should continue as in the past.

Developing summer and winter trails to support non-motorized activity, such as cross-country skiing and snowshoeing in winter, and hiking and mountain biking in the summer received mixed support. The majority of online responses favoured development. The subset of trail development supports also favour its progress. Concerns emanate, firstly, from adjacent landowners regarding issues of privacy, fire risk, water source concerns, parking, garbage, and threat of another rock concert. Indigenous community dialogue reported concerns around the identification and protection of culturally significant sites. The trails support group is obviously supportive and proposed various models of trails governance to address many, if not all, of these concerns.

9.2 Synopsis of Stakeholder Meetings Regarding Medicine Lodge Ski Hill

9.2.1 Methodology

Stakeholder engagement for the project involved meetings with five (5) separate groups representing different elements of the vested public. It also included a comprehensive online survey that yielded 360 responses.

It is important to note that the purpose of the engagement was to:

1. Identify issues and possibilities with the existing ski hill operation and leased land and not to present pre-determined courses of action.
2. Despite the presence of adjacent or nearby public lands engagement, focus solely on the 160-acre parcel owned by the Town of Bentley and leased to the Medicine Lodge Ski Area society.

The five stakeholder groups include the:

- Board of the Medicine Lodge Ski Area
- Adjacent landowners
- The general public through a widely publicized open house whereby anyone could attend
- The Indigenous community
- Those interested in trail development.

Again, all this was supported by an online survey.

9.2.2 Medicine Lodge Ski Area Board Meeting

In February 2023, a series of meetings were held in the Town of Bentley concerning the direction of the masterplan and study being undertaken regarding the future of the Medicine Lodge Ski Hill.

The first meeting was held February 7 with ski hill Board Members. It was led by Jon Hartenberger and Joe Pavelka. Also present was Marc Fortais, CAO of the Town of Bentley, Kimberly Worthington, representing CAEP, and the Board members of the Medicine Lodge Ski Hill. The meeting began with a short slide presentation on the project emphasizing the aim to seek input at the early stage of planning.

Top eight issues:

1. The ski hill requires considerable lifecycle investment to ensure its continued success and operate more efficiently with fewer shutdowns.
 - a. A current issue is the number of times the chair cuts out during operation.
 - b. People are understanding, but the chair operation needs to be addressed.
 - c. Having to constantly address this issue adds to volunteer strain.
2. Snowmaking equipment is required to extend skiing opportunities and create a more reliable operation.
 - a. Presently, the snow cover is unreliable. Some years it can be as low as three days. This year it is much higher but remains unreliable.
 - b. Snow making would allow the season to be reliably extended and add to the overall value of the ski hill to residents.
 - c. Snow making concerns include capital cost of equipment and access to water.
3. The Board and volunteers want to remain an integral part of the Medicine Lodge Ski Hill operation, but they need support. Presently, volunteer burnout is inevitable.
 - a. At no point do the current Board and volunteers wish to step back from the operation of the ski hill. There is great pride and satisfaction in their work.
 - b. They acknowledge that it is getting more difficult to recruit volunteers, especially those who can carry out basic work required to keep the hill going.
 - c. They acknowledge that there is little 'backup' if a current volunteer cannot do what is needed.
 - d. Ideally, there would be a full-time caretaker and, ideally, 1-3 FTE's that could be applied seasonal, fulltime or as required.

- e. Paid support would have a huge impact on the long-term sustainability of ski hill operations, but the question remains as to who would pay for it.
4. There is interest in increasing skier visitation, but not to the detriment of the community ski experience.
 - a. Increasing daily visitation is not critical to the Board. They prefer to extend the season and ensure a positive and non-chaotic skier experience.
 - b. They report that attracting more people per/day would add to volunteer strain.
 - c. The aim is to not over-commercialize the area, thereby preserving its present charm.
5. There is interest in developing summer and winter trails but only if it means it does not further tax ski hill volunteers.
 - a. The Board saw value in adding summer and winter trails, but there is little interest to champion the cause at the Board level
6. They believe the aim of the Board should be to protect the Medicine Lodge Ski Area from any future development against its original intent.
 - a. The Town of Bentley has been approached in the past by developers to purchase and/or lease the 160-acre site for other uses. They acknowledge that this remains a constant threat and should be addressed.
 - b. The question remains as to what the best way is to protect the site such that its original intent will not be compromised in the future.
7. The Board discussed and agreed that they need to do something that is, if the ski hill continues to operate as is with no additional supports it may not be in operation in ten years' time. Volunteer support is not increasing, and snow conditions are increasingly unpredictable. If this continues unaddressed, it would likely signal the cessation of ski hill operations. *Operational sustainability* should be main focus of the Board moving forward.
8. It would be ideal if the Town and County could treat the Medicine Lodge Ski Area as it does other community-serving recreation amenities and provide support in the form of FTE's.

Other significant comments:

Question on the value of the masterplan and why the \$100,000 was not given to the club to do as it deems necessary. The leadership explained that:

- The masterplan is a roadmap to prioritize the direction of the ski hill and presents greater opportunity for grants and other opportunities.

Protecting the long-term community ownership of the hill by placing a strongly worded caveat that will enshrine the original intent:

- The ski hill was acquired by four residents who paid the back taxes
- Their intent was to protect the ski hill for recreation in perpetuity

During the engagement it was indicated by the club members that the original lease had been located and states

- The hill is not transferable without the club's permission*
- The club has first choice to gain the assets*

*To date there has been no document found or provided to show evidence of such language. Additionally the existing lease signed in 2018 does not contain the above language.

A discussion then ensued about what is the Medicine Lodge Ski Area; is it a park, tourism attraction or a public serving leisure/rec center? The aim of the ski hill is and should be to add to the quality of life and enjoyment of surrounding residents. It is not large enough to be a tourism amenity, but it definitely supports local business by making the area more attractive to workers and their families. The group determined the ski hill, in operation and role in the community, is most like that of a typical municipal recreation center.

9.2.3 Meeting of Adjacent Landowners

On February 15, 2023, a meeting led by Jon Hartenberger and held with adjacent landowners of the ski hill. Several elected officials were in attendance including Marc Fortais and about 25 local landowners. Locals within in a one-mile radius of the ski hill were invited, but more were invited by one of the landowners, who believed that the radius should have been 5 miles.

The consultant provided the context of the meeting, with the results of the discussion of the previous week. The main goal of preserving the ski hill as a community destination was emphasized.

When opened to a question, answer, and comment discussion, these top six issues of concern arose:

1. Trespassers/Privacy. A number of related concerns were raised surrounding the general category of the threat of trespassing and privacy. They include:
 - a. Is there an increased fire risk? Is access for emergency vehicles impeded in any way? Will snow making threaten the water supply? Will motorized vehicles be allowed? Will there be overnight camping allowed? Will trail use cause environmental damage and scare away animals?
 - b. Some of the concerns could be addressed at the meeting such as there is no intention of allowing motorized vehicles and overnight camping. Others required investigation.

2. Increased visitation adds to increased risk. This item overlapped with the above, but the emphasis here was on opening to more people thereby creating more risk.
 - a. More people may or may not result in increased issues. Formal trails replacing currently used random or informal trails, which have little to no supervision may actually provide a higher degree of safety.
3. Trails are destructive and will interfere with the wildlife corridor.
 - a. It is up to the design team to make sure that any proposed trails are designed to higher standard than existing informal trails already on the site and that they do their best to avoid wildlife corridors
4. The threat of mountain bikers. Are they going to want to camp overnight? Are they going to overrun the place and create all sorts of damage?
 - a. Experiences in other Alberta locations would indicate that the implementation of mountain bike trails has not resulted in environmental or social disturbances. Some jurisdictions, such as Red Deer (Red Deer Mountain Bike Club), have self-reported that risk is decreased with more people actually using the trails.
5. Maintenance and who will pay? Who will take care of the place and who will pay for it was raised by a participant. The response was that it would be determined in the plan, but the point of the evening was to identify concerns.
6. Lastly, the infamous rock concert of 1978 was referred to several times as an example of an event that should never be allowed to occur in the future.
 - a. The response was that there are no aims to allow large events, but using the site as a community gathering place was supported.

Other comments:

On the subject of trails:

- Will the trails be a *big, tangled mess*?
 - Any trail design will be undertaken by qualified professionals, it is possible that exiting trail could be utilized.
- Equestrian trails? No, this is not in the scope.
- Potential for interpretive trails and signage? Yes, but that needs to be determined.
- Will the intersection be improved? This is not the function of the masterplan, however Alberta Transportation may recommend a study once a direction is chosen.

- Explain the meaning of *gathering spaces*? Areas supportive of gathering, picnic tables, benches, etc. Events such as farmers' market, reunions, festivals, and other small scale events that are local and regional cultural in nature.

9.2.4 Public Open House

On February 22, a meeting was held for the members of the Community of Bentley. Approximately 125 people attended. The purpose of the Masterplan was outlined, and the floor was opened to comments, questions, and answers.

Upon discussion, it was agreed that the closing of the community survey would be extended to March 15.

9.2.5 Six main themes emerged

1. Participants were highly supportive of the ski hill. They would like to see it add snow making to increase snow days and address lift issues such that it does not stop as often. There is strong support for the ski hill
 - a. The strong work of the volunteers was recognized
 - b. Numerous comments were made as to the importance of the hill in raising their children in the area
 - c. There were few, if any, comments not in support of upgrading ski hill operations
2. The possibility of adding both summer and winter trails was met with strong support. It is important to note that some adjacent landowners were present and relayed the same concerns as previously noted in the February 15, adjacent landowners meeting. Generally, concerns focused around
 - a. Privacy: increased risk due to trails and liability, and who will pay for it
 - b. It is important to note that some participants made it clear that people have been using and developing informal summer trails on the 160-acre site for over six decades.
 - c. A lengthy conversation ensued regarding which is more safe: numerous informal trails carried out in a haphazard manner or purpose-built trails that actually take into account wildlife corridors, culturally significant sites and environmental integrity of trail construction.
 - d. The question was raised as to whether the same trails could be used for summer hiking and biking and winter cross country skiing and snowshoeing. The reply was likely yes, but that would be up to the landscape architects.
 - e. Questions were asked regarding 'how far would people come' to use the trails, either hiking or mountain biking. The Red Deer Mountain Bike Club person indicated that it

would likely be as far as Red Deer and adjacent communities; i.e., that is their experience in Red Deer.

- f. A question was raised as to whether trails would compromise the integrity of the ski hill. Response: likely not, if they are planned and purpose-built. It is more likely that random informal trails would result in such damage.
3. There were numerous remarks supporting trails, especially those for mountain bikes. A member of the Red Deer Mountain Bike Club was in attendance (as a participant) and spoke at length about the success experienced in Red Deer and other areas.
 - a. Comments were made with respect to safety and risk that it is better to have a committed group of users (mountain bikers or hikers) on the trails and 'with eyes on the activity' which makes for greater safety than random trails, sporadically used with no oversight (see comment below)
 - b. *On the basis of liability, having more of our people present has resulted in a reduction in risk. The trail users are stakeholders, not intruders. It is a motivating factor for the Town of Red Deer to engage with us.*
 - c. Comments were made about the positive community spirit generated through the local mountain bike club.
 4. The question of cultural significance was raised and specifically if there had been any effort to reach out to the local Indigenous community. The reply was that dialogue had been initiated with Grand Chief Leonard Standingontheroad and a broader meeting was scheduled for March 8.
 5. A discussion ensued regarding protecting the Medicine Lodge Ski Hill as a recreation site. A comment was raised as a caution that oil and gas interests could pursue claims on the 160-acre site. Added to this conversation was the threat that developers could attempt to purchase the site. Several comments were made that the ski hill needs to seek protected status in some so that future councils could not alter the land use from its original intent.
 6. A question was raised about who would manage the hill and trails, who would do the work, and who would pay for it, i.e., similar to the adjacent landowners' meeting.
 - a. The response was that it is up to the master plan to address those concerns

9.2.6 General Comments

There was a concern that consultants did not get enough answers. It was explained that the purpose of the meeting was to identify issues and opportunities and that the community and others needed to be involved at *the front end of the process*, not at the end.

There was a question regarding tourism and whether a developed ski hill will be used to increase visitation and if so, why has there been no discussion on more hotels in the area. The reply was that the Medicine Lodge Ski Hill is purposefully intended to enhance community quality of life which also supports the attraction of businesses, visitors and future residents to the area, especially younger workers with families.

A question was raised as to whether there will still be a role for volunteers to govern the ski hill. The reply was yes: there is no intention to alter the agreement between the Town of Bentley and the Medicine Lodge Ski Hill society.

9.2.7 Indigenous Stakeholders – ‘What was Heard’

The consulting team began dialogue with the Indigenous community regarding the Medicine Lodge Ski Area by meeting with Grand Chief Leonard Standingontheroad and Counsellor Brad Rabbit on the afternoon of March 22, 2023. Grand Chief Standingontheroad was elected Grand Chief of the Confederacy of the Treaty Six First Nations in January of 2023. He is from the Montana First Nation in Alberta, Canada. The meeting was a general discussion the historic and of cultural significance of the Medicine Lodge area and of potential burial sites. The consulting team indicated to the Grand Chief that a meeting of the Indigenous community was being planned for March 8th, 2023, by the Town of Bentley with recommendations regarding whom should be included in the discussions, provided by Sandra McLeod from Asini Wachi Nehiyawak Band.

Conversations with the client clearly spelled out that Indigenous community dialogue would not be confined to the temporal scope of the contract. It would begin by meeting with the Grand Chief followed by a March 8th meeting and later determined exactly how future dialogue would proceed.

The Town of Bentley, in collaboration with Central Alberta Economic Partnership and its funding partner Lacombe County, hosted a meeting with various Indigenous stakeholders regarding the development of a Masterplan and Asset Utilization Study for the Medicine Lodge Ski Hill. The consulting team was advised by the client that Sandra McLeod was to coordinate invitees to the meeting.

The intent of the Masterplan is to provide longer term strategic guidance regarding utilization of the area as a recreational and cultural destination. A key objective for the Medicine Lodge Ski Hill is to preserve the natural beauty and historical significance of the area, while providing longer term guidance to promote community based recreational and cultural activity that is for everyone and that can be developed for the future in a respectful way to everyone’s benefit.

The meeting with Indigenous stakeholders was conducted to gain a better understanding of the significance of the area and to develop a long-term plan that ensure historically significant sites are preserved.

Key themes that developed through presentations and discussion at the meeting:

Sandra McLeod, representing the Asini Wachi Nehiyawak Band, provided a summary of suggested historical and cultural significances of the Medicine Hills area generally, but also the Medicine Lodge Ski Hill property, as being the potential location of burial sites, ceremonial sites, sacred springs, and artifacts.

Members of the Masterplan consulting team (McElhanney, et. al.) provided highlights about the plan's objectives and historical resource designations on the property:

Masterplan objectives:

1. Preserve the natural beauty and historical significance of the area
2. Provide long term guidance to promote community based recreational and cultural activity for everyone
3. Develop for the future, in a respectful way and for the benefit of all

Possible considerations for the Medicine Lodge Ski Hill

Winter

- Increase capacity for ski hill operations
- Cross Country ski and snowshoe trails

Summer

- Mountain biking and hiking trails
- Gathering spaces
- Cultural events

The Medicine Lodge Ski Hill property is listed as a Historic Resource by the Alberta Government under the following categories:

Historic Resource Value (HRV) 4c: (4) contains a historic resource that may require avoidance (c) under the primary consideration of a cultural concern

Historical and cultural significance at the Medicine Lodge Hill would need further study and verification.

Concerns were expressed that:

Not enough emphasis was given to Indigenous interests in the masterplan's objectives

Past commercial developments that have occurred within the Medicine Hills area and requests to acknowledge associated historical and cultural significance areas have not been adhered to.

Activities at the Medicine Lodge Ski Hill property may intrude upon possible burial sites, ceremonial sites, sacred springs, and areas having artifacts.

It was suggested that:

Trails developed at the Medicine Lodge Ski Hill property could have environmental impact to the land (e.g., mountain bike trails).

Water needed for snow making may affect water supply at the property and may disrupt possible culturally significant sites.

Not implementing any development should be considered as an option for the Medicine Lodge Ski Hill property.

Requests were made for future consultation and engagement prior to any proposed recreational or cultural developments at the Medicine Lodge Ski Hill property.

Appreciation was expressed to the Town of Bentley and its partners for hosting the meeting.

Trails Focus Group Engagement

On March 23, 2023, a meeting led by Tyler Wilkes and Kim Unger was held with members of the local trails' enthusiasts. A member of the Lacombe Planning department along with Marc Fortais and about 6 members of the public were present for the online meeting.

The consultant provided the context of the meeting, and a basic overview of the engagement findings to date.

Three main themes emerged:

1. Stakeholders indicated that a multi-use mountain bike and pedestrian trail network would be the preferred use of the site in areas where terrain has the greatest vertical relief.
2. Stakeholders indicated that the purpose of the network should be to fill the introductory and intermediate skill gap that exists for mountain biking in the region.
3. Stakeholders indicated that the lower-lying portions of the site would be ideal for developing several XC ski trail options through undulating terrain. Again, it was identified that the trail network should focus on accessibility and skill development, so focusing on beginner to intermediate level trails was recommended.

9.2.8 General Comments

The hill currently offers a unique central Alberta experience. Expanding trails and the addition of summer operations would provide increased outdoor recreation opportunities creating an environment where people can have fun and feel rejuvenated. All items on the list are beyond the capacity of the current volunteer base, more human resource capacity is required in order to expand operations.

10 Medicine Lodge Ski Hill Area Study Area and History

The Town of Bentley and adjacent central Alberta communities have a unique opportunity to enhance the Medicine Lodge Ski Hill to make it a regional four-season recreation amenity. The Medicine Lodge Ski Hill is located in the stunning Blindman Valley and has been operated by volunteers since 1962. As a functioning ski hill located in central Alberta, it represents a unique recreational offering to an area already rich in summer and winter opportunities. However, it is more than an amenity: many residents have formed an attachment to the hill. It is the place where children learn to ski with their friends and where families gather to watch.

The Medicine Lodge Ski Hill facility sits on a 160-acre parcel owned by the Town of Bentley. At present, the facilities' limited capacity coupled with increasingly unreliable winter weather risks rendering the operation irrelevant to the community. The Medicine Lodge Ski Hill requires a planning effort to allow it to achieve maximum utilization and community benefit. It requires a full site review, including mechanical operations and a comprehensive stakeholder engagement to explore all possibilities. The ultimate aim of the Medicine Lodge Ski Hill Master Plan Utilization Study is to demonstrate how the facility can play the best possible role in the community. The Medicine Lodge Ski Hill, once upgraded, will be a key quality of life asset that assists in attracting visitors to the site, young families especially. It will be the place that residents proudly bring their visiting friends and relatives for that unique central Alberta experience. As the broader central Alberta area gears up to engage in the visitor economy, Medicine Lodge has potential to play an important role.

Bentley Community Strategic Plan

"As we look to the future, we see the Town of Bentley as a community that offers residents a high quality of life that grows in a sustainable manner that is safe, clean, attractive, friendly and family-oriented. The community benefits from its strategic location building on its strengths of being proactive in planning for economic growth in an environmentally responsible manner. Bentley celebrates community spirit where citizens are actively involved in shaping and guiding the future of the Community."

This project aligns with the five strategic goals and high priority items outlined in the Community Strategic Plan. The project has actively engaged community members and identified volunteers as an appreciated and fundamental part of the community. The revitalized four-season Medicine Lodge Ski Hill will further add to the quality of life for residents throughout the region. It will also add to the economic competitiveness of the region in attracting and retaining workers, especially younger workers with

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families. Extension of the trails component into warmer months entrenches the facility as a destination recreation amenity open and accessible to a wide variety of skills, abilities and interests.

Conversations with First Nations have been undertaken and have provided an opportunity to build on the strong relationship the Town has with the local First Nations. The First Nations are a level one engagement partner; sufficient and meaningful engagement with this group has been critical to the project.

10.1 Ski Hill History

In 1946 the Bentley Ski Club Formed, they raised enough money to buy the present Ski Hill area and clear some of the land, at the time the club was 20-25 members. In 1956 the Bentley Ski Club and Lacombe Ski Club joined together to use the hill with a club membership of 45-50 members. Ponoka enthusiasts joined the club in 1959 and the membership grew to about 75 members. In 1959 the club expanded the ski area, improved the runs and added their first tow.

The club was incorporated under the societies act in 1963 and changed their name from the Lacombe Bentley Ponoka Ski Club to the Medicine Lodge Ski Club and has operated under this name ever since.

10.2 Historic Title Search

As part of this study a historic title search was undertaken in order to provide a clear history of ownership at the Medicine Lodge Ski Hill site. The title search combined with background documentation from the Town of Bentley provided a clear line of ownership from the Homestead Grant to present day.

In 1871, an order in council initiated a uniform land survey of the three Prairie Provinces as well as the railway belt of British Columbia. The land had to be accurately described and located through cadastral surveys before Letters Patent could be issued to a homesteader.

The Dominion Lands Act required that each homesteader provide proof that the land had increased in value through additions (cultivation, building construction, etc.) costing labour and/or capital. The Dominion Lands Act stipulated the improvements that had to be made to a land grant before a homesteader would receive a Letters Patent from the Crown.

When a homesteader filed an application, the local Dominion Lands Office screened and validated the claim and sent an inspector to the property to confirm that the improvements had been made. If the Board approved the application, it was forwarded to Ottawa for the "preparation and issuance of patents" by the Lands Patent Branch.

The grants usually consist of a one-page document with the following details:

1. The name of the grantee
2. Description of the homestead

3. Date when the land was granted

The images below were recorded by and received from the Alberta Land Titles Office and illustrate the Homestead Grant that was issued to Andru Gust Juuti, the original private owner of the quarter section, Sec. 20-Twp. 40-Rge. 2-Meridian W5, on April 8, 1939.

10.3 Historic Resource Value (HRV) and Category

Each land parcel in the Listing has been assigned a Historic Resource Value (HRV) of 1, 3, 4 and/or 5. The highest level of protection (HRV 1) is afforded to lands that have been designated under the HRA as Provincial Historic Resources. An HRV of 1 is also used to identify World Heritage Sites and lands owned by the Ministry for historic resource protection and promotion purposes.

HRVs are defined as follows:

HRV 1: contains a World Heritage site or a site designated under the HRA as a Provincial Historic Resource

HRV 2: deactivated (formerly used to designate a Registered Historic Resource²)

HRV 3: contains a significant historic resource that will likely require avoidance

HRV 4: contains a historic resource that may require avoidance

HRV 5: high potential to contain a historic resource

Each entry in the *Listing* also includes a letter that describes the **primary** historic resource category of concern, as follows:

a - archaeological

c - cultural

g - geological

h - historic period

n - natural

p - paleontological

Activities proposed for lands in the *Listing* are assessed by staff of the Ministry for their potential to affect any category of historic resource. For example, an activity proposed for a parcel listed as “p” may also be assessed for its potential to affect archaeological sites.

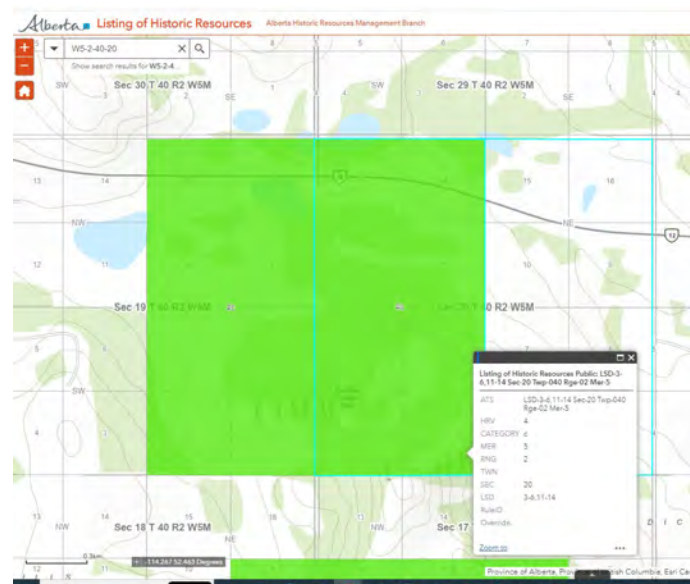
When submission of a Historic Resources (HR) Application is triggered by the *Listing*, and only a portion of a proposed development area lies within lands contained in the *Listing*, the entire project area is subject to review and must be included in the application. In such cases, *Historical Resources Act* requirements may be issued for lands not previously included in the *Listing*.

10.3.1 Indigenous Heritage

All projects to be located all or partly within lands identified as HRV 4c in the *Listing* require the submission of an HR Application. Lands classified as HRV 4c contain or are in close proximity to Indigenous traditional use sites. The Ministry routinely requires applicants to avoid these sites or consult with First Nations about potential impacts.

In cooperation with other provincial ministries, the Ministry has implemented the commitments made in the *Government of Alberta’s Policy on Consultation with First Nations on Land and Natural Resource Management, 2013*. In the Pre-consultation Assessment stage administered by the Aboriginal Consultation Office (ACO), applicants will be notified if their project intersects with Indigenous traditional use sites included in the *Listing*. If any such sites are present, ACO Approvals Specialists will direct applicants to contact staff of the Indigenous Heritage Section. Applicants should be aware that the Ministry’s decisions regarding the adequacy of consultation on Indigenous traditional use site concerns are issued independently of the ACO. Projects that intersect with Indigenous traditional use sites require approval from both the ACO and the Ministry prior to proceeding. Specific procedures for Indigenous Heritage are available at <https://www.alberta.ca/Indigenous-heritage-section>.

Figure 16 - Copy of area showing Historic Listing



11 Moving Forward

Dialogue regarding new developments at the Medicine Lodge Ski Hill site with Treaty 6 and Metis Region 3 will continue. Once satisfactory communications have been completed the Town will plan further development of a trails system at the hill.

The list of recommendations provided are based on stakeholder engagement and inspections of the current infrastructure. With priority given to safety and the ability to maintain operations at the ski hill. The masterplan encompasses three basic elements of proposed upgrade. They include:

- The ski hill mechanical operation upgrades to extend the season.
- Supports to the volunteer base, including improvements to the concession area and continuance of off-season rentals.
- Proposed winter/summer non-motorized and non-hard-surfaced trail development.

12 Protection of the Ski Hill Lands

In partnership with the Town of Bentley, Lacombe County, and the Central Alberta Economic Partnership, this study was undertaken with significant engagement with the public, partners, and key stakeholders knowing their input would be integral to creating a successful process. The ski hill land is owned by the Town of Bentley and leased to the Medicine Lodge Ski Hill. However, the land falls within the jurisdiction of the County of Lacombe and as such it's land use is defined within the County's Land Use Bylaw. Engagement sessions brought to light a key commonality amongst all those engaged: a concern for the preservation of the ski hill in perpetuity. The main concerns expressed by an overwhelming majority of individuals engaged include:

- The recreational use of the land should be preserved for the future
- Urban types of development should not be permitted
- Future mineral exploration may occur and result in negative impacts to the site

The key question that addresses these concerns is: How do we protect the land from uses that are not related to recreation in the future, and ensure it remains a community-oriented outdoor recreation ski area asset in perpetuity?

Tools are available to the municipality that would protect the land for recreational use through the land use bylaw:

- Redesignation to Recreation
- Dedication for environmental reserve or municipal reserve
- Use as a conservation easement

These options do not apply to subsurface mines and minerals as these are owned by the Province and leased to operators. Municipalities are legislated by the Municipal Government Act (MGA) in how they control land use in their jurisdictions. One tool the municipality has to regulate land use is through their Land Use Bylaw. Municipalities are directed within the MGA to adopt a Land Use Bylaw. This tool regulates the use and development of the land. The site is currently zoned as Agricultural (A). The current designation defines a limited list of permitted uses and a more comprehensive list of discretionary uses, including “Oil and gas facility, uses accessory to the oil and gas industry”. This is approved as a Bylaw by the municipal Council and could be changed in the future only through a Bylaw amendment which requires a public hearing. The best tool to use in this case that would allow for the municipality to maintain control and use of the site is to *change the land use* of the site and designate it as Recreation (PR) as defined in the existing Land Use Bylaw. District-specific definitions may be added and it is recommended that a conceptual site plan of the trail or ski run network and its facilities be included in the redesignation.

There is another option which involves designating the land as Environmental Reserve or Municipal Reserve, is a tool the municipality could use to dedicate land for specific public benefits. The Environmental Reserve designation is usually used to designate land that is unsuitable for development, because of ravines or river valleys, steep slopes, or areas subject to flooding. The Municipal Reserve designation is generally used to provide for parks and recreational opportunities for the public, schools, and other institutional uses which may be allowed, depending on land use bylaw specifications. These dedications result in the municipality owning the land, thereby removing it from private control; in this case the municipality owns the site and therefore no benefit would be achieved with this option.

Thirdly, a Conservation Easement may be considered. Since 1996, conservation easements have been used as a tool in Alberta to conserve land through the collaboration of private landowners, land trusts, municipalities, and the provincial government. The scope of conservation easements was expanded in 2009 to include the protection of agricultural land. It is possible to register a Conservation Easement on the land which could benefit the current users. However an easement would require a partnership with a third party which could result in limiting the ability of the owner to expand or otherwise control the facility in the future.

Sub-surface resource exploration activities could occur because the area is controlled by the Province, not the municipality. It is highly unlikely that the province would grant a license to pursue below-ground exploration on the site for various reasons, including it would not wish to overtly contravene the aims of the municipality as it is imbued with heritage, cultural, and recreation value. However, an “iron-clad” assurance is not possible without Town-to-Province dialogue. It is recommended that the Town pursue such dialogue with the Province.

Land Use Bylaws, zoning, and designations in Alberta are fluid, often favouring development. Therefore, it is the opinion of the consultant that the “best” assurance for the long-term protection of the Medicine Lodge Ski Hill lands is to support a thriving, bustling, well-used outdoor recreation amenity, as framed in this report. Public support is often gauged by how much they actually use the area. The best way to protect the land is to fully integrate it into the lives of residents so they would feel compelled to rise to the occasion to protect the lands from external threats.

13 Table of Recommendations

	Phase 1	Problem	Risk	Mitigation Strategy	Cost
1		The buildings on site are in need of maintenance. The buildings can be described as being advanced in age	Without regularly scheduled maintenance activities taking place the lifespan of the buildings will be shortened, reduction of building lifespan can result in premature costs required for replacement. Volunteers do not currently have capacity to take on this work.	Undertake maintenance of items outlined in the building inspection report based on level of urgency and establish a regular maintenance schedule	\$ 24,000.00
2		The Samson T Bar is in need of electrical upgrades. Adjustment of tower alignments and gap on combination sheave assemblies. Mini Handle Tow Alteration to grade under return rope at return bullwheel.	If this work is not undertaken continued unpredictable extended periods of lift shutdowns will occur. Volunteers do not currently have capacity to undertake this work.	Establish a maintenance inspection plan and undertake quarterly and annual inspections of buildings	\$ 120,000.00
3		The ski lifts do not have a maintenance manual that operators can follow.	Without an increased preventative maintenance plan operators will be reacting to maintenance on the lift and not proactive. Increased lift shutdowns can result in lost days of skiing and diminishing the long term viability of the ski hill.	Develop a maintenance plan to support the operational requirements for the lifts	\$ 30,000.00
4		The volunteer base needs support to be able to meet the maintenance and operational demands at the ski hill reword	There is a potential for the volunteer base becoming increasingly fatigued possibly resulting in lost days of skiing due to a shortage of volunteers and diminishing the long term viability of the ski hill. Volunteers do not have capacity to take on additional work.	Consideration to be given to provide 2 FTE's. Employee to assist with operations at the ski hill. Adding a full time employee will offset volunteer fatigue. Responsibilities for lift maintenance, building maintenance and inspections could become part of their job responsibilities.	
5		There is an increasingly limited number of ski days at the hill	Without the ability to make snow seasonal weather fluctuations may result in a diminishing amount of ski days at the hill.	Undertake a detailed study of the existing water well and the feasibility of Snowmaking to support a more consistent and longer ski season.	\$ 100,000.00
6	Phase 2	Informal summer use at the ski hill exists (socially-developed trails, illegal camping, unauthorized gatherings, etc.).	Informal use/unmanaged trails system has negative impacts, such as trails in inappropriate locations, poor trail conditions, erosions and negative impacts on vegetation, noise, garbage, trespass on private land, etc.	Purposfully plan and design year-round activities at the site that encourage positive use and discourage and manage informal use.	\$ 20,000.00
7		There is an increasingly limited number of ski days at the hill	Without the ability to make snow seasonal weather fluctuations may result in a diminishing amount of ski days at the hill.	Integrate an artificial snow making system into the ski hill operations	\$ 6,090,000.00
8		Some stakeholders expressed resistance to further development and change at Medicine Lodge Ski Hill	Negative perceptions of ski hill development lack of education regarding out recreation programming sustainability.	Develop a program that focuses on visitor experience and impact monitoring including an education program, ongoing impact monitoring can be carried out by an FTE.	\$ 25,000.00
9	Phase 3	Increased use of the site may result in lack of available parking for visitors	Inconvenience of parking availability can discourage use of the site.	Undertake a small parking study and enhance parking if needed	undertaken by FTE
10		There is currently no outdoor shelter to hold family and friend gatherings	Inconveneince for summer community gathering potential.	Develop a pavilion and day use area to support small gatherings such as club events, weddings and birthdays	\$ 50,000.00
11		Without year round washroom facilities visitor's are limited to the length of their stay.	Shortened visitor times limits the length of stay at the site.	Install an all season washroom	\$ 125,000.00
12		Advanced age of buildings requires lifecycle planning	It is expensive and more difficult to maintain building advanced in age. Capacity of existing buildings may not be sufficient for future visitors.	Replace buildings as they approach the end of their lifecycle with a new ski lodge and other buildings that become necessary to support the increased use of the site.	\$ 1,000,000.00



APPENDIX A

STATEMENT OF LIMITATIONS

14 Statement of Limitations

Use of this Report. This report was prepared by McElhanney Ltd. ("McElhanney") for the particular site, design objective, development and purpose (the "Project") described in this report and for the exclusive use of the client identified in this report (the "Client"). The data, interpretations and recommendations pertain to the Project and are not applicable to any other project or site location and this report may not be reproduced, used or relied upon, in whole or in part, by a party other than the Client, without the prior written consent of McElhanney. The Client may provide copies of this report to its affiliates, contractors, subcontractors and regulatory authorities for use in relation to and in connection with the Project provided that any reliance, unauthorized use, and/or decisions made based on the information contained within this report are at the sole risk of such parties. McElhanney will not be responsible for the use of this report on projects other than the Project, where this report or the contents hereof have been modified without McElhanney's consent, to the extent that the content is in the nature of an opinion, and if the report is preliminary or draft. This is a technical report and is not a legal representation or interpretation of laws, rules, regulations, or policies of governmental agencies.

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Effect of Changes. All evaluations and conclusions stated in this report are based on facts, observations, site-specific details, legislation and regulations as they existed at the time of the site assessment/report preparation. Some conditions are subject to change over time and the Client recognizes that the passage of time, natural occurrences, and direct or indirect human intervention at or near the site may substantially alter such evaluations and conclusions. Construction activities can significantly alter soil, rock and other geologic conditions on the site. McElhanney should be requested to re-evaluate the conclusions of this report and to provide amendments as required prior to any reliance upon the information presented herein upon any of the following events: a) any changes (or possible changes) as to the site, purpose, or development plans upon which this report was based, b) any changes to applicable laws subsequent to the issuance of the report, c) new information is discovered in the future during site excavations, construction, building demolition or other activities, or d) additional subsurface assessments or testing conducted by others.



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Construction Cost Estimates. This construction cost estimate has been prepared using the design and technical information currently available, and without the benefit of (Survey, Geotechnical, Environmental or other information. Furthermore, McElhanney cannot predict the competitive environment, weather or other unforeseen conditions that will prevail at the time that contractors will prepare their bids. The cost estimate is therefore subject to factors over which McElhanney has no control, and McElhanney does not guarantee or warranty the accuracy of such estimate.



APPENDIX B

SURVEY DATA

15 Survey Data

15.1 Introduction

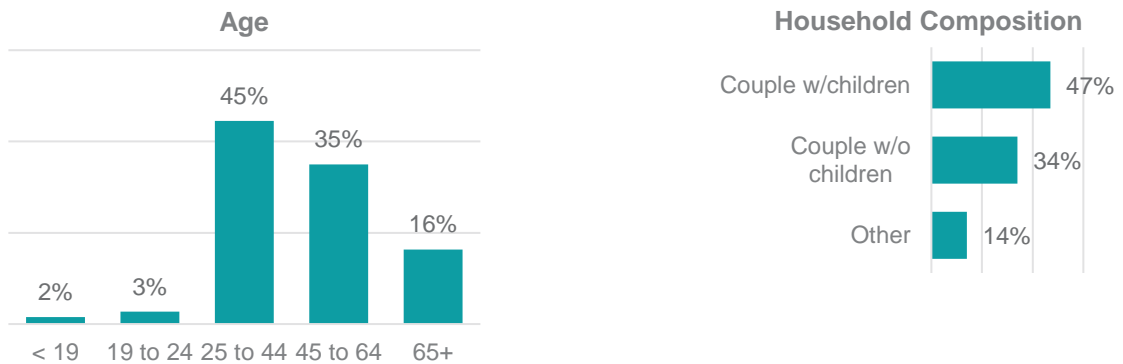
Two surveys were conducted as part of the public engagement process for the Medicine Lodge Ski Hill (MLSH) Masterplan/Asset Utilization Study. Overall, the findings from these surveys suggest wide-spread community support for preserving the MLSH for future recreation purposes and improving and developing both winter and non-winter recreation opportunities. The MLSH was strongly perceived by survey respondents to benefit quality of life and contribute to Bentley and area as a good place to live and work.

A General Public Survey enabled members of the public to provide input into opportunities for how the MLSH can continue to support recreation activities. Survey respondents could participate by completing an online or paper questionnaire. It was promoted to the public through social media, Town of Bentley and partner websites, and at community discussion meetings.

A total of 360 responses were obtained in the General Public Survey with 60 being Town of Bentley residents.

Some respondents identified as being Medicine Lodge Ski Club members (28), adjacent landowners that own property within 1.5 kilometres of the MLSH (34), Indigenous peoples² (18), and members of other recreation organizations (109)³. A considerable number of respondents (175) did not identify with any of these segments (and will be referred to as No Affiliation).⁴

Other characteristics of the General Public Survey respondents include:

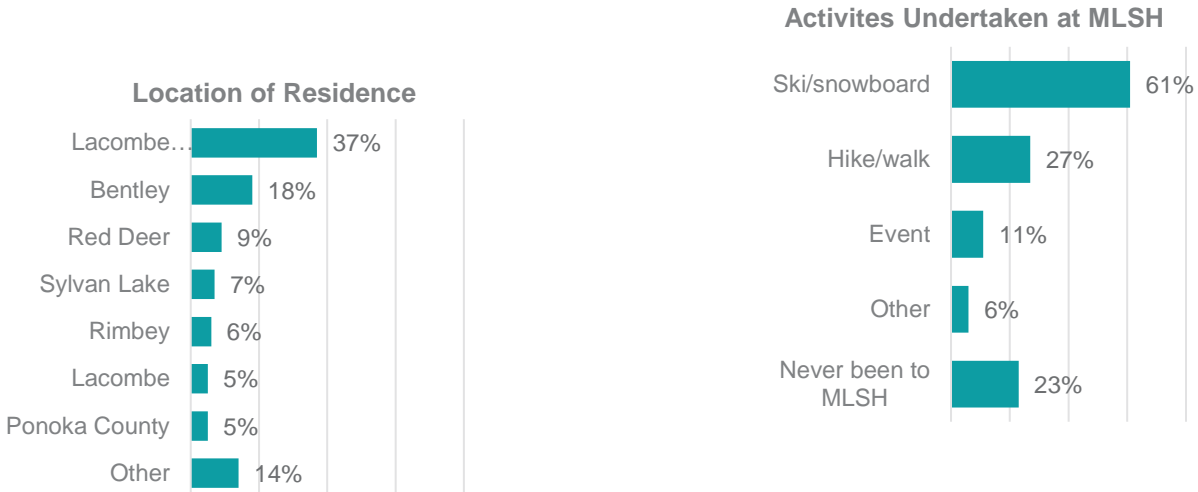


² First Nation, Metis, Inuit.

³ Cross country skiing, hiking, mountain biking, disc golf, or field sports (e.g., soccer) organizations.

⁴ Note: 35 of the 60 Town of Bentley respondents had No Affiliation.



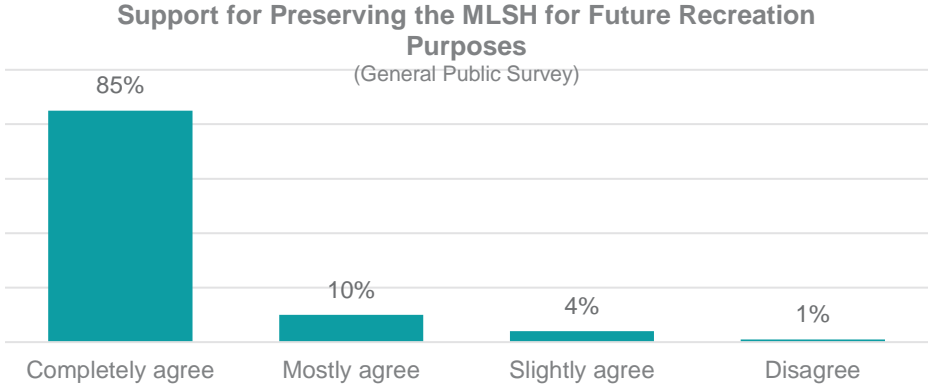


A survey was also undertaken specifically with Medicine Lodge Ski Club members (Ski Club Survey). A total of 27 members (Board members, staff, volunteers, and passholders) participated in the survey. The Medicine Lodge Ski Club provided contact information for 45 members who were invited to participate in the survey through an online questionnaire.

15.2 Support for Preserving the Future Medicine Lodge Ski Hill for Recreation Purposes

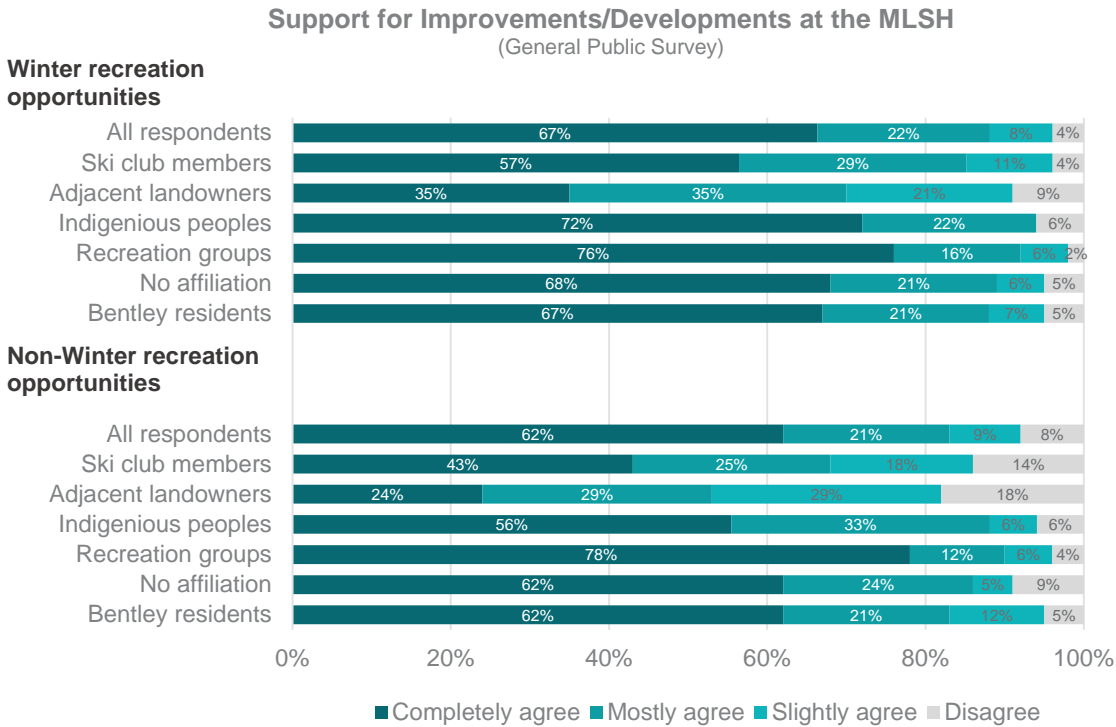
Over the years, the Town of Bentley has received requests by private organizations about purchasing the MLSH to develop tourism, recreation, and other types of initiatives at the property. If this were to occur, the MLSH would no longer be public land that is owned by the Town of Bentley.

To gain a sense of the perceived value of the MLSH as a public recreation resource, General Public Survey respondents were asked about preservation of the property for future recreation purposes (rather than being developed or sold for other purposes). Overwhelmingly, survey respondents (99%) concurred that the Town of Bentley should preserve the MLSH. Furthermore, many of these respondents (85%) were resolute in their opinion by stating they completely agreed with the assertion. Detailed analysis also reveals that these opinions are consistent among all respondent segments identified in the survey (e.g., Town of Bentley residents, Ski Club members, adjacent landowners, members of other recreation organizations, and Indigenous peoples).



15.3 Perceptions of the Medicine Lodge Ski Hill & Opportunities for Improvement or Development

Results also reveal that General Public Survey respondents support improvements and future developments for both winter and non-winter recreation opportunities at the MLSH. Indeed, the vast majority of respondents stated their support. Winter recreation opportunities received slightly more support among respondents than non-winter. Detailed analysis shows that a significant majority of all respondent segments expressed support for both types of opportunities, although adjacent landowners were somewhat hesitant in their endorsement compared to other segments.



General Public Survey respondents were asked to provide comments about improvements to attract more alpine skiers/snowboarders (or extend the number of days the ski hill is open) and developments for other recreation opportunities. It was common for respondents to state broad endorsements for both of these issues (see table on next page).

A considerable proportion of respondents suggested snowmaking activities should be developed at the ski hill to attract ski hill users or extend the season. Other notable improvements suggested by respondents included upgrading existing T-bar or tow ropes, adding chair lifts (or carpets for learners), and refurbishing the lodge or existing buildings. Some respondents indicated preference that no improvements or developments should occur at the ski hill and a few were concerned about potential fee increases, use of tax dollars, and perceived limits to water supply at the site.



For other recreation opportunities, comments mainly focussed on eagerness for mountain biking, hiking, and cross country ski trails to be developed. Again, a few respondents stated that nothing should be developed or improved. Some others expressed the need to ensure wildlife and the environment are protected and security is addressed at the site.

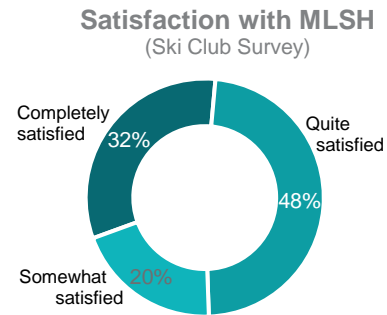


Remarks about Improvements/Developments (General Public Survey)		
Comments	% of Respondents	
	Improvements for More Skiers/ SnowBoarders or Extend Season	Develop Other Recreation Opportunities
Good/great idea, support improvements/developments	39	34
Snowmaking to extend/provide consistency for the ski season	21	0
Upgrades to T-bar/tow ropes	7	0
Prefer for nothing to develop/no improvements	6	6
Add chair lifts (carpets for learners)	3	0
Concern about increased fees	3	0
Will benefit local or regional recreation/tourism	2	3
Don't use/no increase to taxes	2	1
MLSH needs more promotion to public	2	1
Concern about water supply from new developments	2	0
Lodge/buildings need(s) improvement/upgrades	1	1
Concern about/need to protect wildlife/environment	1	4
Develop cross country skiing trails	1	4
Concern about need for more volunteers	1	0
Would need (more) security/control	1	3
Concern about impact on adjacent landowners	1	2
Develop snow tube/bike runs	1	0
Concern about competing with other ski hills	1	0
Improvements to food services	1	0
Preserve/protect cultural sites/partner with Indigenous groups	<1	1
Keep MLSH a public asset	<1	<1
Adjacent landowners should have final say	<1	<1
Develop mountain biking (trails/downhill trails)	0	23
Develop hiking (trails)	0	19
No motorized recreation	0	2
Develop other recreation amenities	0	2
Host concerts/music festivals	0	2
Develop horse/equestrian trails	0	2
Develop outdoor gathering/event areas; picnic tables, benches, fire pits	0	2
Preserve MLSH as a natural area	0	1
Develop snowshoe trails	0	1
Develop campground/camping	0	1
Birdwatching	0	1
Cultural activities	0	1
Do not jeopardize the alpine skiing	0	1
Nothing should be developed on existing ski runs	0	1
Concern about too many people	0	<1



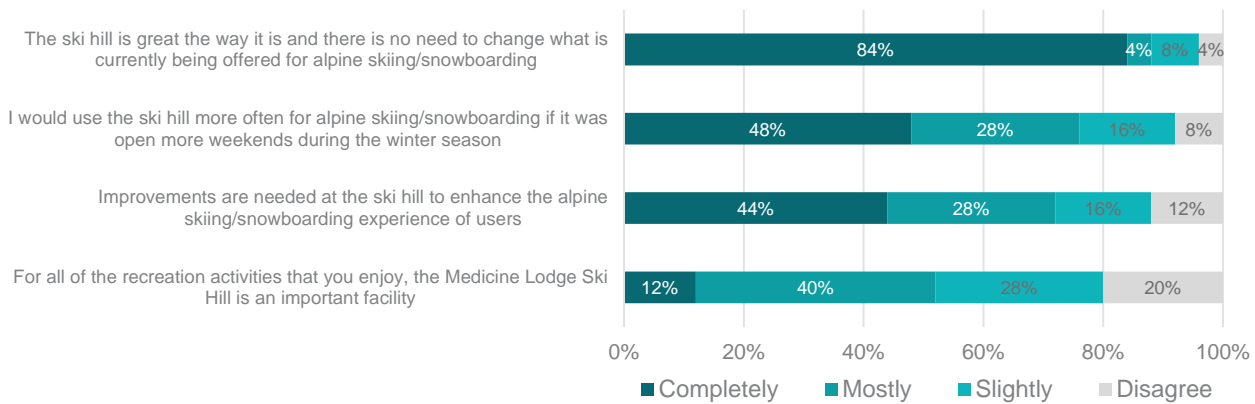
In the Ski Club Survey, all members stated satisfaction with the MLSH.⁵ The following characteristics, which they indicated liking about the MLSH, reveal the basis of their satisfaction:

- Friendly/community atmosphere – 64% (of respondents)
- Non-commercialized (volunteer operated) – 52%
- Convenient location – 32%
- Affordable – 20%
- Great/safe place to learn to ski – 16%
- View/nature/natural snow – 16%
- Family oriented – 12%



Aspects of these attributes likely influenced responses that Ski Club members provided to statements about the MLSH and its future development. From the findings, it is inferred that improvements and further development would be appreciated and supported by most of the members who were surveyed, as long as it doesn't change the character and charm of the MLSH.

Perceptions of the MLSH and Its Offerings (Ski Club Survey)



When asked for suggestions about changes or improvements at the MLSH, respondents to the Ski Club Survey offered the following:

- Better/more reliable ski lift/T-bar – 46% (of respondents)
- Snow making equipment/more snow – 38%
- Upgrade the lodge – 25%
- A terrain park (rails, jumps, half-pipe) – 17%
- Less dependent on (need for more) volunteers – 13%
- Cross country ski trails – 13%

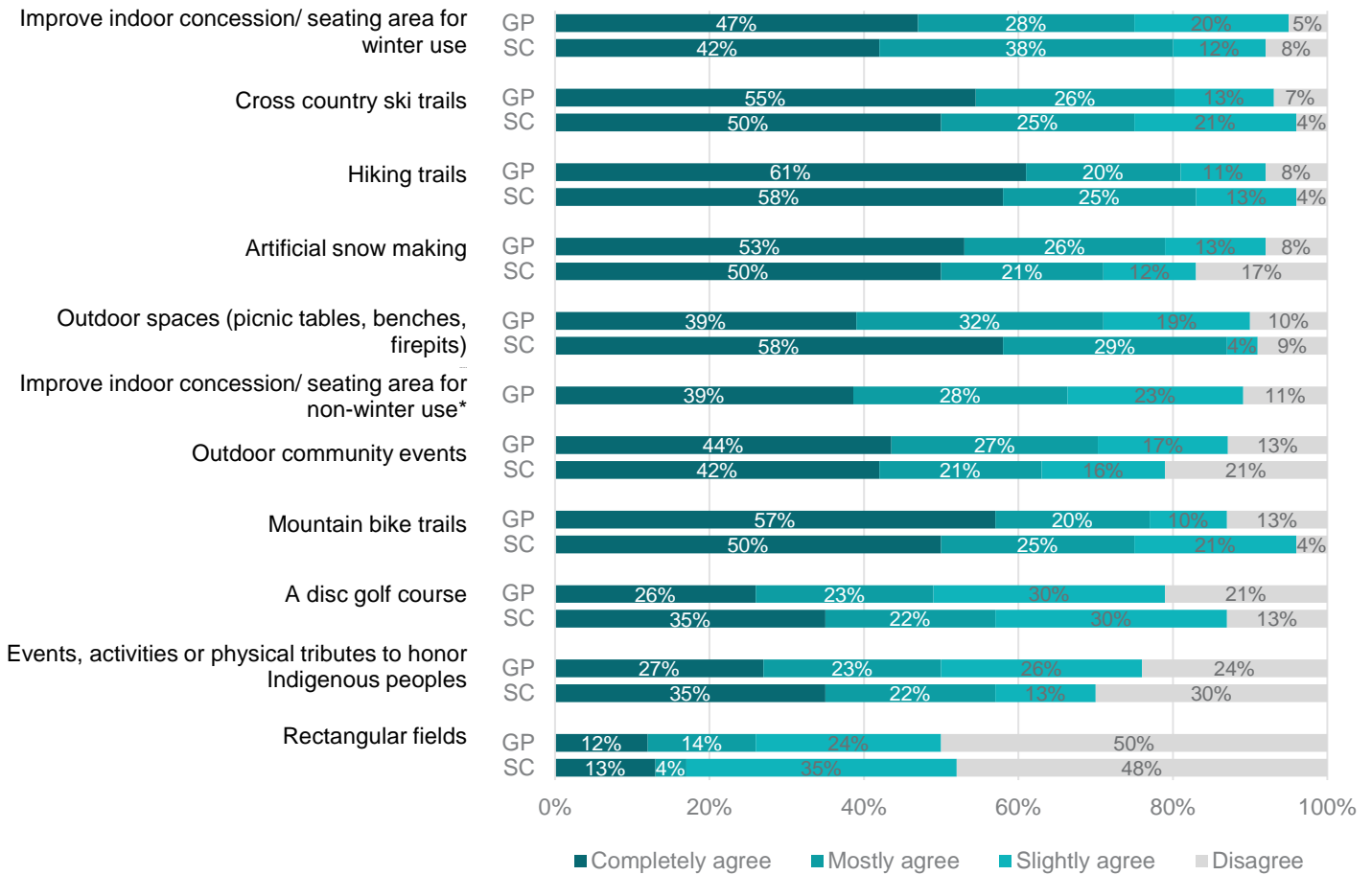
⁵ Note: No respondents indicated not very or not at all satisfied.



15.4 Improvement or Development Preferences

Respondents to both the General Public Survey and Ski Club Survey were presented with a variety of options that could be improved or developed at the MLSH. Based on respondent ratings of the options, there appears to be a preference for addressing winter recreation opportunities such as improving the indoor concession/seating area for winter use, developing cross country ski trails, and producing artificial snow. In terms of non-winter opportunities, however, developing hiking trails, enhancing outdoor space amenities (picnic tables, benches, firepits) and improving indoor concessions/seating areas for non-winter

Improvement/Development Preferences
(General Public Survey - GP; Ski Club Survey - SC)



*Note: Improve indoor concession/seating area for non-winter use was only asked in the General Public Survey.

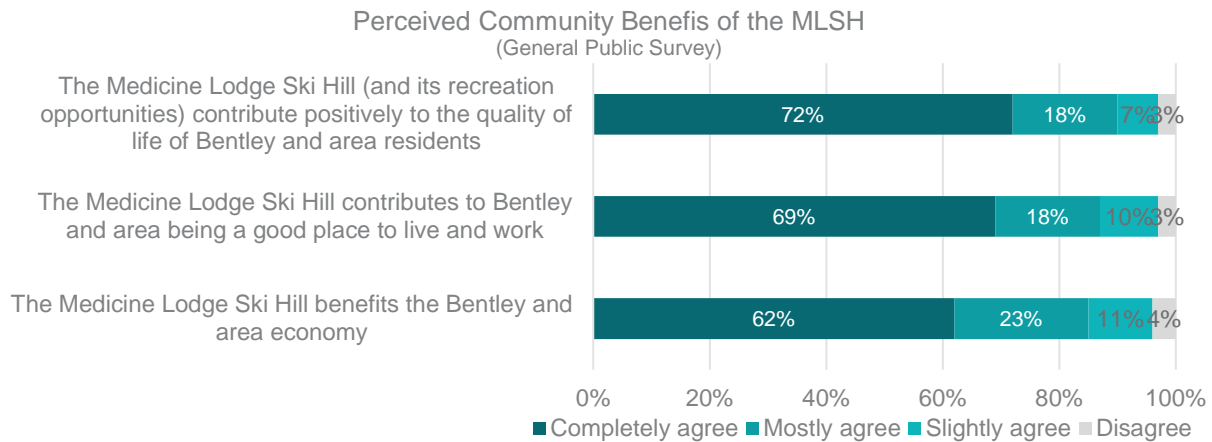
use were most favoured.

Comparing the findings between the two surveys, Ski Club Survey respondents gave high ratings to hiking and mountain biking trails and lower ratings to artificial snow making compared to General Public Survey respondents. The lower rating for artificial snow making may reflect the earlier observation about some Ski Club Survey respondents liking the natural snow at the MLSH.

Detailed analysis of data from different respondent segments within the General Public Survey reveals that Indigenous peoples were more likely to concur with initiatives to honor their history or culture⁶ and adjacent landowners were less likely to agree with artificial snow making, mountain bike trails, and events, activities, and physical tributes to honor Indigenous peoples.⁷

15.5 Perceived Benefits of the Medicine Lodge Ski Hill

The vast majority of General Public Survey respondents recognized community benefits associated with the MLSH such as contributing to quality of life, enhancing Bentley and area as a good place to live and work, and helping the economy.



15.6 Other Interests

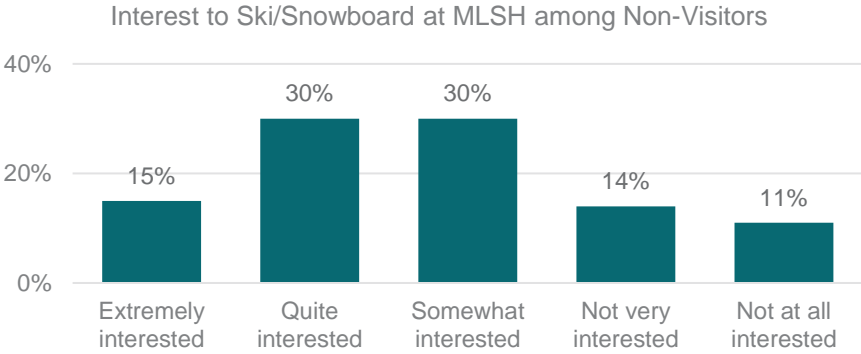
Most General Public Survey respondents who had never visited the MLSH stated interest to ski or snowBoard at the hill in the future.

⁶ Indigenous peoples respondents' ratings were 55% completely agree, 11% mostly agree, 17% slightly agree, and 17% disagree to events, activities, and physical tributes to honour Indigenous peoples.

⁷ Adjacent landowner ratings:

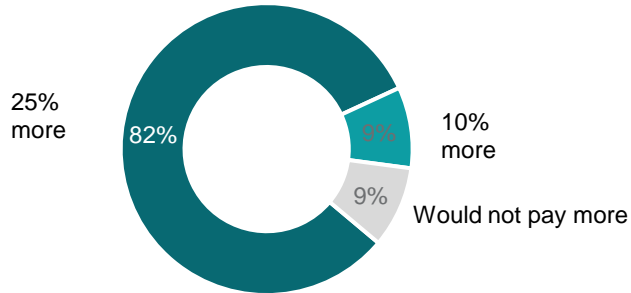
	Completely agree	Mostly agree	Slightly agree	Disagree
Artificial snow making	35%	24%	26%	15%
Mountain biking trails	27%	27%	19%	27%
Events, activities, and physical tributes to honour Indigenous peoples	12%	12%	15%	61%






Ski Club Survey respondents were asked about willingness to pay more for tickets or seasons passes if improvements were implemented at the ski hill to enhance the alpine skiing/snowBoarding experience (e.g., upgrades to ski lifts, snow making equipment, upgrades to buildings, hiring staff, etc.). The majority of respondents indicated they would be willing to pay more with most willing to pay at least 25% more.


Willingness to Pay More for MLSH Improvements
(Ski Club Survey)




15.7 Appendices – Survey Instruments

GENERAL PUBLIC SURVEY


Town of Bentley


caep
CENTRAL ALBERTA
ECONOMIC PARTNERSHIP


LACOMBE
COUNTY

The Town of Bentley and Central Alberta Economic Partnership, supported by the Medicine Lodge Ski Club, is exploring opportunities for how the Medicine Lodge Ski Hill can continue to support recreational skiing/snowboarding, as well as serve other recreation needs of the region and community.

Your input into this survey will assist the Medicine Lodge Ski Hill planning process.

It should take about five to ten minutes to complete the survey.

The Town of Bentley owns the Medicine Lodge Ski Hill, which is operated by the Medicine Lodge Ski Club.

- The property is approximately 15 kms west of Bentley along Highway 12.
- The property is 160 acres (the ski hill comprises 60 skiable acres).
- The Medicine Lodge Ski Club has been operating since the 1950's and the ski hill for many years. Ski Club volunteers (about 40) operate the ski hill and there is an active volunteer ski patrol on the hill during winter operations.
- Food and beverage services are available during operating hours and there is a ski equipment rental shop.
- The ski hill is open for alpine skiing/snowboarding throughout the winter seasons, but opening is often dependent on weather and natural snow conditions.
- Youth employment is provided at the hill to operate the ski lifts.
- There are about 4,000 visits per year.

Over the past few years, various groups have expressed interest in developing further areas of the property for other recreation activities such as mountain biking, cross country skiing, hiking, etc. The possibility of developing snow making equipment at the hill has also been considered to extend the days it is open for alpine skiing/snowboarding.

1. Have you ever visited the Medicine Lodge Ski Hill property?

No, never been to the property

Yes, to ski/snowboard

Yes, to hike or walk around

Yes, other (specify):

2. **<ANSWER IF YOU ANSWERED 'NO' TO THE PREVIOUS QUESTION>** How interested are you (and/or other members of your household) in alpine skiing/snowboarding at the Medicine Lodge Ski Hill in the future?

Extremely interested

Quite interested

Somewhat interested

Not very interested

Not at all interested

3. What are your perspectives about:

a. Implementing improvements at the Medicine Lodge Ski Hill to attract more alpine skiers/snowboarders or extend the number of days the ski hill is open each year?

Town of Bentley/CAEP

- b. Developing other recreation opportunities at the Medicine Lodge Ski Hill property so that it is used more in both the winter and non-winter seasons?

4. To what extent do you agree or disagree that the following improvements, amenities, or services should be developed at the Medicine Lodge Ski Hill property for users from the community, region, and elsewhere?

	Completely agree	Mostly agree	Slightly agree	Disagree
Artificial snow making to increase the number of ski days during the winter season	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cross country ski trails for use during the winter season	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvements to indoor concessions/seating areas to be used by skiers/snowboarders during the winter season	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiking trails for use during non-winter seasons*	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mountain bike trails to use during non-winter seasons*	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A disc golf course (for frisbee golf) for use during non-winter seasons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvements to indoor concessions/seating areas to be used during the non-winter winter seasons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rectangular sports fields (e.g., to play soccer)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor spaces with picnic tables, benches, barbecues pits, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor community events such as social gatherings, farmers market, breakfasts/ barbecues, festivals, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Events, activities, or physical tribute to honour First Nations and Métis people, the Inuit, and their legacies and cultures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Note: May be developed on the existing hills that are used for alpine skiing/snowboarding, as well as other areas at Medicine Lodge Ski Hill.

Comments about any of the above (including other recreation opportunities that are not listed):

5. To what extent do you agree or disagree that the following statements about the Medicine Lodge Ski Hill property?

	Completely agree	Mostly agree	Slightly agree	Disagree
The Medicine Lodge Ski Hill (and its recreation opportunities) contribute positively to the quality of life of Bentley and area residents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Medicine Lodge Ski Hill benefits the Bentley and area economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You support improvements/further development of winter recreation opportunities at the Medicine Lodge Ski Hill	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You support improvements/further development of non-winter recreation opportunities at the Medicine Lodge Ski Hill	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Medicine Lodge Ski Hill contributes to Bentley and area being a good place to live and work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
You support Medicine Lodge Ski Hill being preserved by the Town of Bentley for future recreation purposes rather than developed/sold for other purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments about any of the above:



6. Please provide any additional comments you would like to share about the future of the Medicine Lodge Ski Hill property:

The last few questions will help us understand characteristics of those who participate in the survey. All of your answers will be grouped with those provided by other survey participants and will be kept strictly confidential.

7. Which of the following best describes your household?

- Couple - with children living at home
- Couple - without children living at home
- Single parent household
- Living alone
- Living with roommate(s)
- Living with extended family
- Other (specify):

8. Which of the following best describes where you reside?

- Bentley
- Lacombe County
- Lacombe
- Sylvan Lake
- Red Deer
- Blackfalds
- Red Deer County
- Other (specify):

9. Which of the following represents your age?

- Under 19 years of age
- 19 to 24 years of age
- 25 to 44 years of age
- 45 to 64 years of age
- 65+ years of age

10. Are you/do you:

	Yes	No
A Medicine Lodge Hill Ski Club member	<input type="radio"/>	<input type="radio"/>
A member of a cross country ski club	<input type="radio"/>	<input type="radio"/>
A member of a hiking club	<input type="radio"/>	<input type="radio"/>
A member of a mountain trail biking club	<input type="radio"/>	<input type="radio"/>
A member of a disc golf club	<input type="radio"/>	<input type="radio"/>
User/organizer of a sport group that uses rectangular sport fields	<input type="radio"/>	<input type="radio"/>
Own property within 1.5 kilometers of the Medicine Lodge Ski Hill	<input type="radio"/>	<input type="radio"/>
First Nations, Métis or Inuk (Inuit)	<input type="radio"/>	<input type="radio"/>

Thank you for participating in the Medicine Lodge Ski Hill Survey. Your input is greatly appreciated.

Please return your completed questionnaire to the Town of Bentley office at 4918 50 Ave, Bentley, AB.



15.8 Ski Club Survey

Questionnaire:

Thank you for helping to plan the future of the Medicine Lodge Ski Hill. Your input into this survey will assist the Town of Bentley/Central Alberta Economic Partnership with the Medicine Lodge Ski Hill planning process.

If, for whatever reason, you are not able to complete the questionnaire all at once, you can close your browser and go back at a convenient time. When you start the questionnaire again, you can use the Questionnaire Link that was provided to you in the invitation e-mail.

To proceed to the questionnaire, select the 'Next' button below.

<NEXT PAGE>

The first few questions ask for your general opinions about the Medicine Lodge Ski Hill.

What do you like best about the Medicine Lodge Ski Hill?

If you could change one thing about the Medicine Lodge Ski Hill, what would it be?

<NEXT PAGE>

To what extent are you satisfied with the Medicine Lodge Ski Hill?

- Extremely satisfied
- Quite satisfied
- Somewhat satisfied
- Not very satisfied
- Not at all satisfied

<NEXT PAGE>

To what extent do you agree or disagree with the following statements about the Medicine Lodge Ski Hill?

<ROTATE >	Completely agree	Mostly agree	Slightly disagree	Disagree
For all of the recreation activities that you enjoy, the Medicine Lodge Ski Hill is an important facility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The ski hill is great the way it is and there is no need to change what is currently being offered for alpine skiing/snowboarding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvements are needed at the ski hill to enhance the alpine skiing/snowboarding experience of users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would use the ski hill more often for alpine skiing/snowboarding if it was open more weekends during the winter season	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments about any of the above:



<NEXT PAGE>
<SHOW FOLLOWING QUESTION IF RESPONDENT SELECTED STRONGLY OR SOMEWHAT AGREE TO THE STATEMENT "Improvements are needed at the ski hill to enhance the alpine skiing/snowboarding experience of users">

Beyond what you may have offered to the first few questions asked in this survey, what improvements do you think are needed at the ski hill to enhance the alpine skiing/snowboarding experience of users?

<NEXT PAGE>

Would you pay 25% more for lift tickets/seasons passes to help pay for the operations of the Medicine Lodge Ski Hill?

- Yes
- No

<NEXT PAGE>
<IF RESPONSE IS 'NO' TO THE ABOVE QUESTION, ASK>

Would you pay 10% more for lift tickets/seasons passes to help pay for the operations of the Medicine Lodge Ski Hill?

- Yes
- No

<NEXT PAGE>
<IF RESPONSE IS 'NO' TO THE ABOVE QUESTIONS, ASK>

Would you pay 25% or 10% more for lift tickets/seasons passes if improvements were implemented at the ski hill to enhance the alpine skiing/snowboarding experience of users (e.g., upgrades to ski lifts, snow making equipment, upgrades to buildings, hiring staff, etc.)?

- Yes, 25% more (for more improvements)
- Yes, 10% more (for some improvements)
- No



<NEXT PAGE>

To what extent do you agree or disagree that the following recreation opportunities should be developed at the Medicine Lodge Ski Hill for your use, but also for other users from the community or region?

	Completely agree	Mostly agree	Slightly agree	Disagree
Artificial snow making to increase the number of ski days during the winter season	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cross country ski trails for use during the winter season	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvements to indoor concessions/seating areas to be used by skiers/snowboarders during the winter season	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiking trails for use during non-winter seasons*	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mountain bike trails to use during non-winter seasons*	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A disc golf course (for frisbee golf) for use during non-winter seasons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rectangular sports fields (e.g., to play soccer)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor spaces with picnic tables, benches, barbecues pits, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor community events such as social gatherings, farmers market, breakfasts/ barbecues, festivals, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Events, activities, or physical tribute to honour First Nations and Métis people, the Inuit, and their legacies and cultures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*Note: May be developed on the existing hills that are used for alpine skiing/snowboarding, as well as other areas at Medicine Lodge Ski Hill.

Comments about any of the above (including other recreation opportunities that are not listed):

<NEXT PAGE>

Please provide any additional comments you would like to share about the future of the Medicine Lodge Ski Hill:

<NEXT PAGE>

The last few will help us understand characteristics of ski club members. All of your answers will be grouped with those provided by other survey participants and will be kept strictly confidential.

Which of the following best describes a typical visit for you (to ski/snowboard) at the Medicine Lodge Ski Hill:

- Go by myself
- Go with friends (including extended family members) as a group
- Go with my spouse/partner
- Go with/take my child/children (which may include your spouse/partner)
- Other (specify):



How many years have you been using the Medicine Lodge Ski Hill:

- This ski season is my first year
- More than this year to 5 years
- 6 to 10 years
- More than 10 years

The number of ski days at the Medicine Lodge Ski Hill fluctuates each ski season depending on availability of snow. Considering these circumstances, which of the following best describes your use of the Medicine Lodge Ski Hill during any given winter season.

- Once or twice a winter season
- Several times a winter season
- More than several times a winter season, but not every day that it is open
- Every (or almost every) day that it is open
- Other (specify):

Which of the following best describes where you reside?

- Bentley
- Lacombe County
- Lacombe
- Sylvan Lake
- Red Deer
- Blackfalds
- Red Deer County
- Other (specify):

<NEXT PAGE>

Thank you for participating in the Medicine Lodge Ski Hill Survey. Your input is greatly appreciated.

You can now close your browser.



APPENDIX C

LAND TITLE AND MEETING MINUTES

16 Land Title and Meeting Minutes

Figure 17 - Duplicate Certificate of Title

1. THIS CERTIFICATE IS NOT VALID UNLESS IT IS REGISTERED IN THE REGISTER OF TITLE.

2. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.

3. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.

4. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.

5. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.


6. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.

7. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.

8. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.

9. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.

10. THE REGISTERED INTERESTS IN THIS CERTIFICATE ARE SUBJECT TO THE TERMS AND CONDITIONS OF THE REGISTERED INSTRUMENTS.



Registered Instrument No. 2,78

Registered on the 17 day of JUNE

1958

Volume 5871 Page E.Y. 103

J.H. SMITH
Registrar of Titles

Duplicate Certificate of Title

Assoc. Fund Value 8143.00 Refer Cert. No. 91-U-151

North Alberta Land Registration District

This is to Certify that THE VILLAGE OF BENTLEY

IN THE PROVINCE OF ALBERTA, DOMINION OF CANADA.

is now the owner of an estate in fee simple

of and in THE SOUTH WEST QUARTER OF SECTION TWENTY (20) TOWNSHIP FORTY (40) RANGE TWO (2)

WEST OF THE FIFTY MERIDIAN IN THE SAID PROVINCE, CONTAINING ONE HUNDRED AND SIXTY

(160) ACRES MORE OR LESS.

RESERVING UNTO HER MAJESTY ALL MINES AND MINERALS.

subject to the encumbrances, liens and interests notified by memorandum underwritten or endorsed hereon, or which may hereafter be made in the register.

In Witness Whereof *I have herewith subscribed my name and affixed my official seal this* SEVENTEENTH *day of* JUNE *A.D. 19* 58

Registrar

P.O. Address BENTLEY, ALTA. North Alberta Land Registration District

OVER



Figure 18 - Duplicate Certificate of Title – Ski Hill

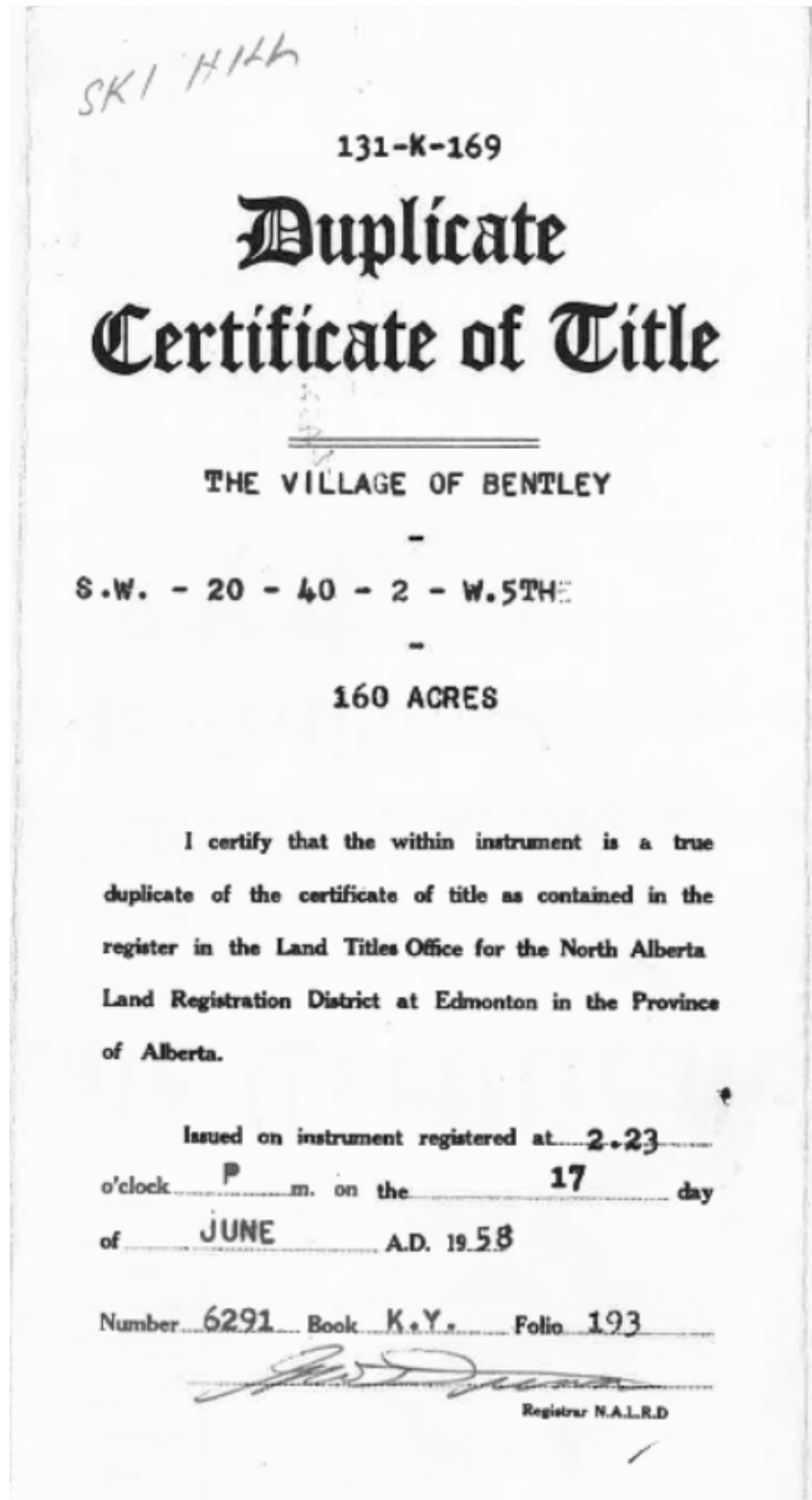
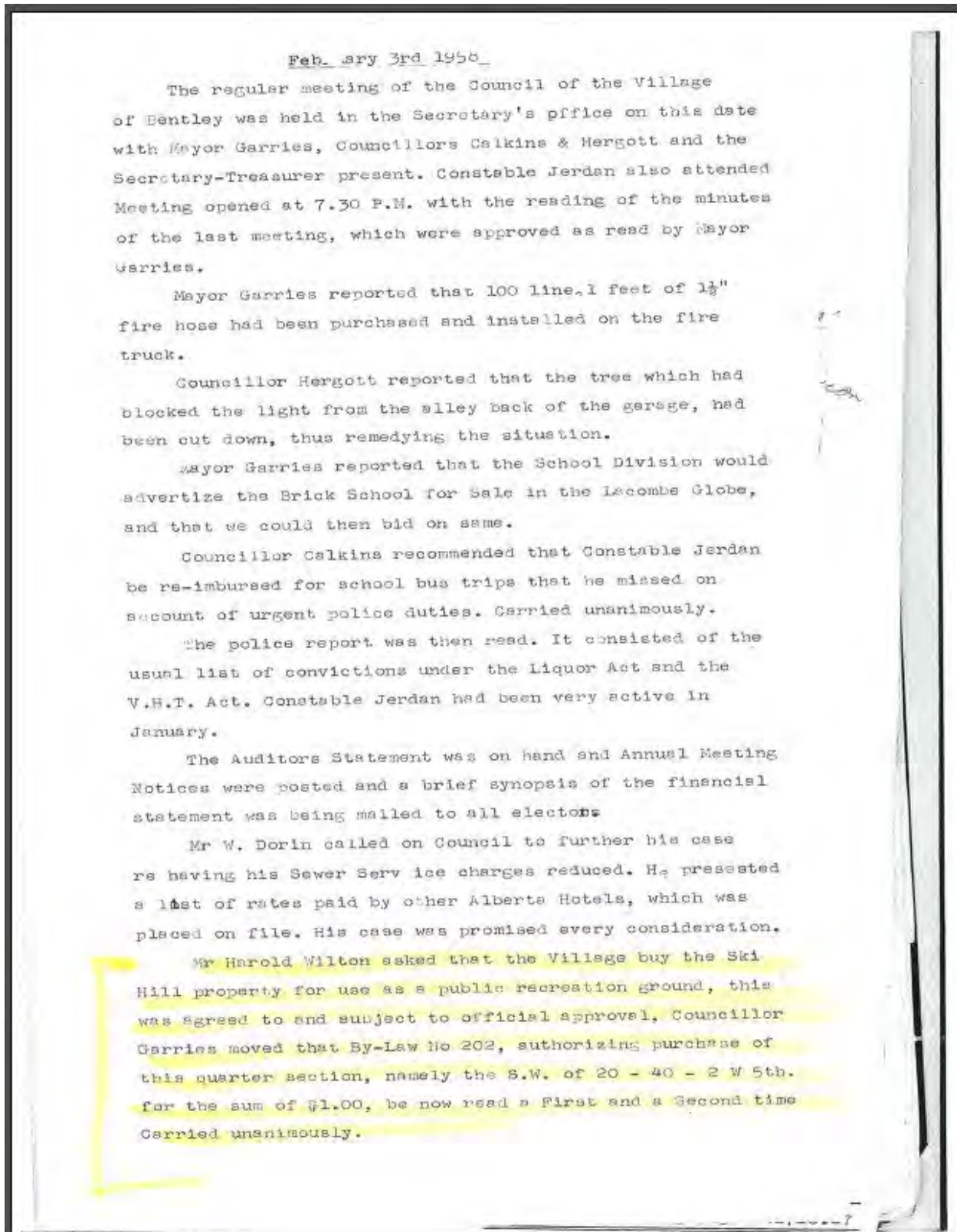


Figure 19 - Meeting Minutes



APPENDIX D

GRANT FUNDING STREAMS

17 Grant Funding Streams

Funders (the following funders have currently open programs open programs, others will likely open as funds become available):

- Travel Alberta
- Federation of Canadian Municipalities
- Municipal Affairs (Alberta)
- Municipal Climate Change Action Centre
- Community Foundations of Canada
- Alberta Eco Trust
- Alberta Blue Cross
- Government of Canada

Programs (some of these are not currently open but have upcoming calls for applications)

- Enabling Accessibility Grant, Government of Canada
- Cooperative Investment Fund, Travel Alberta
- Green Municipal Fund, Federation of Canadian Municipalities
- Asset Management Grant, Federation of Canadian Municipalities
- Green and Inclusive Buildings Fund, Government of Canada
- Alberta Municipal Water/Wastewater Partnership, Alberta Transportation
- Alberta Blue Cross, Our Built Together
- AgriSpirit Fund, Farm Credit Canada
- Save Energy Grant or Community Naturalization Grant, Fortis Alberta
- Legacy Fund – Building Communities through Arts and Heritage, Government of Canada

