

Aggregate Resource Plan Stakeholder Advisory Committee: Recommendations & Final Report

SUMMARY

This report for Rocky View County Council contains the recommendations and perspectives of the Aggregate Resource Plan Stakeholder Advisory Committee members.

In 2013 the County Plan required the County to create an Aggregate Resource Plan (ARP) that would ensure responsible development of aggregate resources in the County while reducing impacts to residents. This was in response to growing tension between Rocky View residents and aggregate producers. After efforts to adopt the ARP, the project was ended because of non-consensus between residents, the aggregate industry, and Council.

In 2022, with continuing and growing concern about aggregate development, Rocky View County Council relaunched an Aggregate Resource Plan project. A Stakeholder Advisory Committee of individuals representing local perspectives to the complex issue was set. The objective was to have the Committee's report build a foundation for the project based on open dialogue, trust, and a consensus-based approach. In August 2023, the Advisory Committee was formed, with the goal to provide recommendations to Council. The full Terms of Reference for the Committee are available on the County's website.

Council appointed members with balanced representation of different interests, backgrounds, and expertise. Of the six volunteer committee members, two represent Country Residential residents of Rocky View County, two represent Agricultural residents of Rocky View County, and two represent the Aggregate Industry - one from a local, family-owned operator and one nominated by the Alberta Sand and Gravel Association. A third-party neutral Chair was appointed.

A key overall recommendation is that improvement on municipal processes dealing with aggregate is needed. The County needs to lead and be more active in its regulatory responsibility for land use, development, and on-site operations of the aggregate industry. Performance standards need to be established, monitored, and enforced. Industry supports this.

Resident and industry stakeholders want to be part of a productive engagement process with accessible and up-to-date information. Informed and strategic long-term County planning for aggregate development is required. The impact and tolerance of aggregate development differs throughout the County. Environmental, groundwater, and cumulative effects are significant concerns for residents in the west part of the County.

STAKEHOLDER ADVISORY COMMITTEE PROCESS

Committee members met ten times between August 15 and March 15 participating in seven in-person meetings, two online meetings, and an aggregate site tour. Committee meetings were open and accessible to the public. Initially, meetings were held in the Council chamber and publicly streamed. However, the Chair found that the formal setup inhibited active and engaged free-flowing conversations. Meetings were moved to a board room and livestreamed. Summary notes of each meeting were posted on the County website alongside a recording of each meeting.

Committee members formed interest-based working groups, which met outside of the formal Committee setting. They met directly with approximately 50 residents from different backgrounds and relayed that input at monthly Committee Meetings. Industry was in close contact with the Alberta Sand & Gravel Association (ASGA) and have provided resources and discussion points to the Committee.

The Committee process was designed to be collaborative, and interest-based. Interests are the underlying hopes, values, concerns, and motivations that drive actions. Discussions based on understanding and respecting the interests of all parties is a solid step in collaborative consensus building. Committee members were deeply committed to their role; conversations were open, honest, and respectful. Members' broad interests were discovered to be mostly aligned. These were:

- A need for consistency, certainty, and clarity on requirements for future development in the Aggregate Resource Plan.
- Improved performance standards for industry.
- Protection for environmentally sensitive areas.
- Responsible aggregate operations with effective compliance, inspections, and oversight.
- Good communications with stakeholders.
- Residents want confidence in technical decisions.

Interests differed greatly regarding appropriate Locational Criteria for aggregate development in the County. The varying perspectives are presented in Part 2 of the Report.

ARP Gaps: The Committee was asked to identify gaps in the 2018 ARP. These gaps, identified in the September meeting are included as an appendix. Throughout subsequent meetings, members discussed their detailed perspectives on those gaps. Those discussions led to developing the committee recommendations and defining the areas of non-consensus.

ARP Project Engagement: The Committee requests that all future public and stakeholder engagement regarding the ARP project is held separately from other engagement initiatives. This is an important subject and deserves dedicated engagement opportunities. The Committee defers specific details and planning of all future public and stakeholder engagement to County Administration.

Report Format: The report is in two parts. Part 1 contains the committee recommendations arrived at with consensus support. Part 2 includes the additional topics of committee discussions, and the various perspectives of members on those topics.

Part 1: Committee Recommendations with Consensus Support

A. Performance Standards for Aggregate Development

Recommendation #1: That the County develop Performance Standards specific to aggregate development in the County.

Rocky View County should develop reasonable and appropriate Performance Standards specific to aggregate operations across the County. All new Aggregate Master Site Development Plans, land use redesignation, and Development Permit applications shall comply with these Performance Standards.

The County should periodically review the Performance Standards to ensure they are aligned with evolving industry best practices and that they are effectively mitigating offsite impacts.

County operated pits should be held to the same set of Performance Standards and the County should advocate to the province that provincial pits adhere to these performance standards when operating within Rocky View County.

Reasons: The Committee agrees that consistent application of fair and enforceable Performance Standards should be applied to all aggregate operations in the County to mitigate offsite impacts.

B. Proactive Monitoring, Reporting and Enforcement by the County

Recommendation #2: That the County actively regulate aggregate operations through proactive site monitoring, timely expert review of submitted operating reports, and take appropriate enforcement action when necessary.

Rocky View County should accept its role as an active and responsible regulator of aggregate operations. The County should adopt a Site Monitoring Bylaw that outlines a framework for monitoring, reporting, and enforcement that will hold aggregate operators in compliance with the new Performance Standards and other County regulations. This monitoring and enforcement framework should include procedures to conduct regular site visits and inspections, expert technical review of regularly submitted operating reports, timely response to enforcement related complaints, and take appropriate enforcement actions should an operator be in contravention of Development Permit condition(s).

Reasons: The Committee understands that the County currently monitors and enforces Development Permit conditions strictly by means of a complaint-based system. Unless a development related complaint is received, the County does not proactively monitor aggregate development through site visits or conduct expert review of operating reports at the time of submission. It is noted that annual reports and the compliance record of each aggregate site are to be reviewed and considered at the time of Development Permit renewal.

The Committee supports effective regulation of aggregate operations in the County. Residents want confidence that the resource is well managed. Industry committee members stated that it would be beneficial to have the County take on the role of providing a transparent complaint process, resolving disputes, monitoring operations, overseeing industry reporting, and enforcing compliance. All members agree that the County needs to have access to technical knowledge (third-party review) to effectively evaluate operating reports and data, and to provide bylaw services for on-site evaluations and enforcement.

Recommendation #3: That the County develop updated Application Requirements specific to aggregate development applications in the County.

Rocky View County should amend existing statutory plans and the land use bylaw to include detailed and specific Application Requirements for all planning and development applications related to aggregate extraction. Applications should be reviewed for both quality and completeness. It is acknowledged that County Administration's discretion should be appropriately applied when reviewing applications.

The Application Requirements should list the minimum submission requirements for new Aggregate Master Site Development Plans, land use redesignation, and Development Permit applications. County Administration should only proceed with a Development Permit recommendation when the application has been deemed complete.

Reasons: A set of defined application requirements will provide clarity and consistency for both applicants and the public, allow County Administration to reference consistent application criteria, and increase public confidence in the approvals process overall.

C. Improved Transparency and Communication

Recommendation #4: That the County develop a publicly accessible online platform dedicated to aggregate development within the County.

Rocky View County should develop a publicly accessible digital portal on the County website that provides information on all active and proposed aggregate sites in the County, including its geolocation and all approved or pending Master Site Development Plan(s) and Development Permit(s).

For all approved aggregate operations in the County, a compliance report should be available on the digital portal. This report should include an active record of monitoring activities undertaken by the aggregate operator or County, list all exceedances and contraventions by the operator, and list the remediating activities taken for each infraction reported. It is noted that all publicly posted information shall comply with the Freedom of Information and Protection of Privacy (FOIP) Act.

Reasons: The Committee feels that transparency with the public is a necessary step in fostering trust between aggregate operators, residents, and the County. Comprehensive and publicly available reporting on aggregate development activities and the monitoring and enforcement actions taken by the County would improve public confidence in the regulation of the resource.

Other: Some committee members suggest that continuous monitoring of noise and air quality data be required at prescribed locations at site boundaries. Committee members were agreed that data transparency is important, though some members cautioned that public access to such data could lead to nuisance complaints. They arrived at requesting that administration evaluate how to make continuous data available in a useful and practical way.

Recommendation #5: That the County define a mandatory stakeholder engagement process for all new aggregate applications and renewals.

As an additional Application Requirement, Rocky View County should require aggregate operators (the applicant) of all new Master Site Development Plans and Development Permit applications (including renewals) to demonstrate they have appropriately notified and engaged an expanded list of interested parties to their proposed development. The applicant should demonstrate how public feedback has been considered in the proposed site design and operations. The Master Site Development Plan should include a summary of these engagement activities.

The County should create and maintain an expanded list of interested parties (in addition to the required circulation radius) to assist industry in reaching the appropriate public audience during their engagement.

The engagement process should be inclusive, transparent, and solution focused to foster trust between residents, landowners, and industry. The engagement process must allow sufficient time for stakeholders and affected parties to meaningfully respond to the proposed project.

Reasons: Defining appropriate communications, expectations and engagement responsibilities of industry, residents, and the County, and establishing a process that all parties can easily understand and participate in can assist in reducing potential conflict. Improved responses to concerns and appropriate follow-up is needed.

Recommendation #6: That the County write an Aggregate Resource Plan with clear, accessible language.

The Aggregate Resource Plan and all supplementary bylaws and regulations should be written in a neutral and balanced tone, using clear and concise language, and providing objective information. All policies and regulations adopted by the County should include the important technical requirements but should also be accessible and reader-friendly to a non-technical audience. The ARP and supplementary documents can serve as an educational resource that is relatable to the public.

Reasons: Clear, concise, and easily readable information can improve mutual understanding of the issues surrounding aggregate development and build trust amongst all parties throughout the aggregate development process.

Part 2: Committee Discussions and Areas of Non-Consensus

Committee members discussed topics on which they did not have consensus. Part 2 contains the various differing perspectives shared by the country residential, agricultural, and industry members for each of these key topics discussed.

Please note: The observations listed under the various ‘Perspectives’ headings are the points of view, opinions, and experiences of the identified committee members. These perspectives have not been verified by the County to determine their validity.

1. Locational criteria for Aggregate Development

Discussion: Committee members did not expect to find consensus on the topic of locational criteria (i.e., where aggregate development should be located); they participated in respectful and spirited discussions on the differing points of view, outlined below. They understand that it is important that the County coordinates all land use planning, including residential plans with their plans for aggregate.

Background: The committee members from west Rocky View question the ability of industry to minimize impacts with performance standards alone. Their view is that industry should not be left to self-regulate through best practices, and that physical separation of aggregate development from incompatible land uses is the only effective means of mitigation.

The industry members and the agricultural member from east Rocky View believe that offsite impacts to adjacent land uses and local residences can be effectively mitigated through reasonable performance standards, monitoring, and enforcement. Industry believes that there was shared understanding in the committee that mitigation measures can be effective. They state that those measures can be used to responsibly develop close-to-market aggregate deposits which are in limited supply.

East Rocky View Agricultural Perspective

- New Country Residential development should not be allowed near existing aggregate extraction sites. The County should also not approve Country Residential in areas where there are known gravel deposits. The ARP should not discriminate and indicate that some areas are more important than others, the ARP should cover the entire County equally, and one residence is as important as several residences. Some residents are not more deserving than others, and the bylaw should be uniform across the County.
- There are landowners who have aggregate extraction on their land. A member stated that the large agriculture landowners in the County do not want their land sterilized. The positive value of aggregate to large agriculture operators should not be dismissed as being unnecessary. Landowners who wish to harvest aggregate and work with industry should not be penalized and lose value of a natural resource.

Country Residential and west Rocky View Agricultural Perspectives

- A map provided in the 2018 ARP report suggests an abundance of aggregate resource supply in the County relative to future demand of the region. Aggregate operations exist in all parts of the County and in all surrounding jurisdictions. Some cities (e.g., Edmonton), successfully source aggregate from more than 300km away by rail. Aggregate is not a scarce resource and Rocky View County can supply its share of the gravel demand in Calgary and region for the next 200 years with just 3% of the County's land area.
- The Terms of Reference for the ARP and some committee members recognize that the costs and impacts of aggregate development vary throughout the County based on proximity to population and environmental features. Impacts are greatest where population density is higher or where environmental sensitivity is greater, and this varies throughout the county. They note that the committee commented on the diversity within the county; therefore, it's appropriate for the ARP to reflect this diversity.
- Aggregate development lasts for decades and is a permanent land use in the timeframe of an individual's home ownership, or childhood, or retirement. The impacts are substantial. These members state that facts show that aggregate operations release carcinogenic dust. They also point out that aggregate operations generate disruptive noise that is inconsistent with country residential life, can impact ground and surface water, and can permanently alter landscapes. They believe that human health is put at risk, and that many impacts are irreversible.
- There are impacts that are not contained within site boundaries (e.g., images of dust plumes escaping local pits were shared) and they assert that separation is the only effective mitigation. Physical separation from conflicting land uses is required. Setbacks to protect landowners in proximity to pits as well as effective monitoring, enforcement and meaningful penalties for non-compliance are critical. It is not possible to minimize impacts with performance standards alone, and that standards are often breached. They cited examples of aggregate industry violations observed in Rocky View County (e.g., required noise mitigating berms not constructed, mining outside of approved areas, dust plumes escaping pit boundaries, etc.) and across North America (e.g., a single aggregate operator, active in the Rocky View region, fined for more than 700 environmental and health violations in 25 years). These members will provide those examples if requested.
- Given the size of the County and the widespread location of aggregate throughout the County, administration and council have the ability and the responsibility to locate aggregate development in the least impactful areas of the County. By separating aggregate development from conflicting and valuable land uses, including the most environmentally sensitive areas and the areas of highest population density, the County can minimize the negative impacts and costs. This separation should include both explicitly prohibited areas for aggregate development (such as within Area Structure Plans), as well as clear setback distances that vary based on proximity to environmental features and population density.
- Greater consideration must be given to post-reclamation land uses as part of aggregate applications; it is not sufficient to simply say that the land will be reclaimed to its former use or to a higher value use. The viability of returning land to its former use post-reclamation must be assessed as part of the land use application, so that aggregate extraction does not sterilize other important land uses.
- The ARP should not be used to circumvent well-established land use planning principles regarding pre-existing land uses and separation of conflicting land uses. The ARP should not allow for the

County's intentional land use objectives to be circumvented, such as those outlined in the MDP and ASPs. Similarly, the ARP should not provide a shortcut for aggregate operations to be permitted in locations explicitly and repeatedly rejected by Council, such as the Scott Property in Bears paw.

- These members encourage the County to investigate the use of agglomerated development like the Star pit in NW Calgary. Instead of allowing strips of individual pits to operate for 30 years consider focussed, systematic, and intensively developed and agglomerated development. There could be aggregate nodes with agglomeration of development into certain areas that would have a relatively short life extraction.

Industry Perspective

- Unlike other forms of development, aggregate is not relocatable since its location is based on geological conditions. Mitigation strategies can be used to minimize potential impacts to surrounding land users.
- The aggregate supply in the County is not as abundant as the map within the 2018 ARP report depicts. The map provided in the 2018 ARP grossly over-emphasizes the location of aggregate in the County and was created using flawed methodology and poor-quality sources. Industry presented a separate map which illustrated a scarce resource supply in the County. Water well logs were used to generate the map which are frequently inaccurate and cannot be relied upon to accurately predict the extent or commercial viability of a deposit. The Beiseker area has been a good source of aggregate for many years, however it has been depleted with many of the pits reclaimed. Available exploratory testing suggests that there are no viable sources of aggregate between the Beiseker area and the Big Hill Creek area. The only way to understand viability is to complete field-level exploration activities (e.g., drilling, or geophysical surveys). Even if aggregate is present in sufficient quantities, it may be sterilized by other forms of development such as housing, utilities, pipelines, wellsites, etc. Additionally, commercialization of the resource requires that the current landowner is willing to entertain a lease or sale of the property. Viable sources of aggregate are in limited supply, particularly close to the end user.
- In a 2013 survey and report coordinated by the Alberta Association of Municipal Districts and Counties, Rocky View County reported that aggregate was only moderately abundant in the County, and they did not have a strategic aggregate reserve to fulfill future public works maintenance and construction needs over the next 15-to-20-year period.
- The responsible development of close-to-market aggregate sources is key to the sustainability of our province. Every kilometre that a load travels away from site adds an additional \$0.15/tonne to the total cost of aggregate, including the 600,000 estimated tonnes that Rocky View County consumes each year. Producing aggregates as close as possible to the market supports affordability in the housing and construction sectors, minimizes greenhouse gas emissions, reduces infrastructure maintenance needs, and ensures the responsible development of a non-renewable resource prior to permanent development, such as housing. Sterilizing close-to-market resources, through locational restrictions and large setbacks, will create environmental and economic impacts that will increase with further transport distances.
- Due to the relatively low unit value of aggregates compared to other mineral commodities, it is unfeasible to transport from long distances. Another member referenced an aggregate operation that transports aggregates by rail, but that is not common practice in the industry and limited by the existing rail network, availability of aggregate along rail, and quality of the material to warrant considerable price premiums.

- Aggregate extraction occurs throughout the province in various jurisdictions that have either no or minimal setbacks from other land users, including residences. For example, there are active extraction and processing operations within the City of Edmonton and the Town of Cochrane which successfully operate adjacent to numerous residences by implementing mitigation measures and communicating with their neighbours.
- Aggregates are a non-renewable resource, and once land is developed, access to aggregate is forever lost on that site. Alberta's Land Use Policies require that municipalities identify areas where aggregate extraction should be a primary use, direct subdivision and development activity so as not to constrain or conflict with non-renewable resource development, and utilize mitigative measures to minimize possible negative impacts on surrounding areas and land uses within the scope of their jurisdiction.
- Aggregate extraction is a temporary land use. It's responsible to develop this critical non-renewable resource before the area's ultimate land use while the resource is accessible. After aggregate mining has occurred, land must be reclaimed to a capability equal or better than prior to mining. Unique end land uses can be considered to provide community benefits. Some of Alberta's golf courses, lakes, and parks were once aggregate mining sites. These areas provide valuable space for nature and biodiversity post-mining. Operators must provide financial security to fund reclamation liability through the province which is reviewed every five years.
- A major component to the price of aggregates is the cost of transport from pits to market. Access to affordable housing is impacted by cost of aggregates, and thus where aggregates are sourced.
- There is no substantive evidence that suggests aggregate developments are a risk to public health. In Alberta, silica dust is considered an occupational hazard, managed by OH&S. Air quality concerns such as silica dust are carefully reviewed by Alberta Health Services during the application referral process.
- All residents of the County should be treated equally and fairly. Standards should be the same across the County so as not to create different class citizens. Aggregate extraction is subject to a rigorous regulatory framework that includes provincial and municipal oversight. Industry's view is that jurisdictional overlap should be minimized and suggests that provincial regulatory agencies, including Alberta Environment, Alberta Health Services, and Occupational Health and Safety are well suited for reviewing specific scopes for which they have the technical expertise and legislative authority.
- Industry believes that inspection of operations, compliance and enforcement of permit conditions is critical to building trust in any municipality. There was one example brought forward during discussions that confirmed enforcement action due to permit violations, and multiple examples also brought forward of complaints lodged, investigations undertaken, and compliance confirmed by the County".
- Industry members referenced numerous studies relating to their perspectives on this and other topics and will share these studies on request.

2. Consideration for Groundwater

Discussion: On the west side of the County, potential negative impacts on groundwater have become a focal point for residents with the proliferation of gravel operations on the Big Hill Springs aquifer and Cochrane West, and along the Bow River. Residents near Cochrane West operations believe hydrocarbons found in their well originated with the adjacent gravel operation.

Country Residential and west Rocky View Agricultural Perspectives

- Setbacks and provision for adequate residual gravel filtration where pits would operate over the Big Hill Springs aquifer or other significant groundwater resources and important streams and rivers are required. Harm to groundwater could be irreparable. The County should use independent experts for observation wells where prospective gravel deposits overlay groundwater to determine groundwater elevations and quality and regular well monitoring to create baseline data to measure changes and to determine mitigation.
- In submissions to previous County proceedings, residents, Alberta Parks, and environmental groups opposed gravel operations which could impair the aquifer and main spring which sustains the Big Hill Springs Provincial Park and Bighill Creek. They referred to work by a hydrogeologist, Dr. Jon Fennell, supporting their concerns.
- These members are concerned that industry hydrological studies measure only ground water elevations, not water chemistry, which is critical in addressing potential harm to the Big Hill Spring aquifer. They assert that scientific data collection requires time and investment.

East Rocky View Agricultural Perspective

- This area of expertise should be left to Alberta Environment. Consultation with Alberta Environment could address a separate bylaw for water and wildlife concerns.

Industry Perspective

- No impacts to groundwater from aggregate operations in the county or the province have been proven. They view the concerns from other members as unsubstantiated allegations and state that aggregate operations in the County do not operate within the groundwater.
- Industry already completes groundwater impact assessments, including a collection of baseline data such as groundwater levels and chemistry and ongoing monitoring at several sites. This work is completed by third party professional consultants and reviewed by technical experts at the provincial level.
- Several gravel operations in the eastern part of the County are located over sources of groundwater and industry members state that they have not experienced negative impacts on groundwater from these activities. Further, there are thousands of gravel pits in the province of Alberta that are monitored by appropriate provincial authorities to mitigate environmental hazards. Alberta Environment and Protected Areas has issued several Water Act authorizations to gravel pits in Rocky View County that contain monitoring and reporting requirements.
- Industry Committee members do not agree with the validity of the findings of Dr. Jon Fennell, the referenced hydrogeologist. His report has not been peer-reviewed nor used peer-reviewed references. The majority of conclusions contained within the report are unsubstantiated through

proper use of peer-reviewed references and thus represent an opinion. Most significantly, the main reference utilized to support his claim that water quality in sand and gravel aquifers may be impacted by aggregate operations is from a conference submission paper that evaluated the impact of acid rain and bog water on groundwater in areas of gravel extraction in Finland. Dr. Fennell fails to explain that the source of changes to water chemistry in this paper are contaminants present in acid rain which is irrelevant to the discussion in Rocky View County. Industry believes that presentation of these irrelevant facts from a completely different environmental setting is misleading and unprofessional. Multiple independent professional hydrogeologists have studied the aggregate deposit in the local area to Big Hill Creek and the Provincial Park, using field-level data, and have completely refuted Dr. Fennell's concerns. Another hydrogeologist submitted a letter to the County refuting Dr. Fennell's report. Furthermore, the Provincial environmental authorities are not aligned with Dr. Fennell's findings.

3. Cumulative Effects

Discussion: Committee members from west Rocky View suggest that evaluation of cumulative effects should be part of the basis for which new pits will be approved or refused in certain areas of the County. They recommend that the County clearly define the requirements for cumulative effects analysis, including temporal and spatial boundaries, minimum radius of the regional study area, and the valued components to be included. They point out that the Government of Alberta Land Use Framework states that: *'Cumulative effects management recognizes that our watersheds, airsheds and landscapes have finite carrying capacity. Our future well-being will depend on how well we manage our activities so that they do not exceed the carrying capacity of our environment.'*

Background: Noise, traffic, and air quality affected by dust from pit operations were expressed as significant concerns for residents living close to the multiple industrial sized aggregate pits in the west part of the County. They described large dust plumes emanating from various large pits and shared anecdotal information about traffic congestion and their increasing safety concerns about the number of large gravel trucks using rural roads.

Reasons: Only one reference to cumulative effects in the 2018 ARP was found, and yet cumulative impacts are a significant concern for residents.

Country Residential and west Rocky View Agriculture Perspectives

- The cumulative impacts from these factors have health and safety consequences. They observed that development permits for some 2017 approvals included only a nominal recognition of the potential cumulative effects of those mines, while another pit had no substantive conditions addressing cumulative effects.
- Areas in the County will reach a tipping point where the combined impacts of all pits will exceed the carrying capacity of the environment. The requirements of previous assessments were not clearly defined and, as a result, the assessments were of questionable quality. They are also concerned that these reports are treated as a checklist item rather than as a meaningful criterion for application approval or refusal.
- The County should require continuous collection of air quality and noise data from monitoring stations located at prescribed intervals at the site boundaries of all aggregate pits as well as regular monitoring of groundwater quality and elevations. Raw data should be made available in non-

summarized and non-average format, which would not preclude operators from interpreting and summarizing data in their regular operating reports.

Industry Perspective

- Cumulative effects are part of the current aggregate extraction development permit application process in the County. Noise, air quality, groundwater, and traffic assessments are completed based on defined methodology which includes a consideration of existing activity in the area and cumulative effects assessment. Aggregate developers must submit technical documents by a qualified professional for each scope.

4. Address Environmental Concerns

Discussion: The Committee recommends that the County access an up-to-date inventory of environmentally sensitive areas (ESAs), such as is being done by the Calgary Metropolitan Regional Board. They recommend that the County engage environmental experts to assess ESAs which in the future could be impacted by gravel operations. They recommend that the County understands the interactions of aggregate development with the surrounding environments, including wildlife corridors, and understand the environmental cumulative effects of aggregate development.

Country Residential and west Rocky View Agricultural Perspectives

- The County needs to take more responsibility for the long-term viability of the natural environment in the County impacted by aggregate development. This is the County's shared responsibility with the province. There must be clear language in the ARP about appropriate setbacks from environmentally sensitive areas with prohibition of pits in proximity to the County's most important environmental assets such as parks, rivers, and major wetlands.
- They recognize that operators require registration from Alberta Environment, under the Code of Practice for Pits. However, their experience is that the Code does not fully consider environmental impacts on groundwater or air quality and that the Code approvals are largely a "check box" exercise.
- In the experience of these members, after a development is approved by the County, landowner concerns regarding regional environmental effects of proposed gravel operations must be pursued through Statements of Concern submitted to AEP under specific regulations such as the Water Act. Achieving standing as a "directly affected party" in AEP reviews has been found to be difficult or impossible. When an opportunity to participate is provided, concerned groups must commit significant time and energy plus funding to engage expert support.
- Some appeals to AEP could be avoided if the County approval processes more fully recognized the potential negative consequences of aggregate development on surrounding ESAs. This requires environmental inventories of potentially impacted areas by independent experts, creation of appropriate setbacks and ongoing requirements for industry best practices if an approval is given. Applications to the County for aggregate developments should require notice and adequate time for participation by environmental stakeholder groups. They further suggest that the County provide some funding to support community interventions in County gravel applications.

East Rocky View Agricultural Perspective

- Alberta Environment has jurisdiction over the environment, and they should be the consistent voice on these matters within Rocky View County.
- Taxpayers should be offended that they are being asked to provide funding to groups with an individual and inclusive agenda.

Industry Perspective

- The environmental assessments currently required by the province and Rocky View County evaluate the potential impact of proposed aggregate developments to surrounding land users, including environmentally sensitive features. For example, wildlife assessments include desktop and field level evaluation of wildlife typically present on the site and surrounding area, including wildlife corridors. These assessments identify mitigation strategies that can be utilized to minimize impacts.
- An inventory of ESAs in Rocky View County already exists, and industry suggests that the environmental benefits of pits should also be considered. Aggregate development, particularly at reclamation, can have many positive environmental impacts such as increased biodiversity, the creation of wetlands and wildlife habitat, and improved agricultural capacity.
- Industry members of the Committee recommend the County should endeavor to reduce jurisdictional overlap with the province where possible.

5. Recognize Big Hill Springs Park as an Environmentally Sensitive Area

Discussion: Big Hill Springs Provincial Park is a seventy-acre park recognized for its thermal spring and tufa formations. The Park attracts more than 250,000 visitors per year. Contiguous lands, totaling over 1300 acres, held by gravel interests extend from the western boundary of the park for approximately two miles.

Country Residential and west Rocky View Agricultural Perspectives

- Most of the current aggregate applications and most of the ongoing resident concerns are focused on the Big Hill Springs and areas west of Cochrane. The ARP must address specific issues being raised in these areas. There are now four approved gravel mines enveloping 800 acres near Big Hill Springs Provincial Park. These, plus another 480 acres owned by another gravel company, create a continuous swath for one and a half miles west of Big Hills Springs Provincial Park. ARP policies governing County aggregate applications, approvals, and regulation must be sufficiently robust and clear to locate and manage future developments in other areas.
- Big Hill Spring Provincial Park requires protective setbacks, and significant setbacks and strong emissions mitigation measures for all gravel operations near the park.
- They observe that recent expansion for a pit, located approximately 800 meters east of the park, has resulted in stockpiles and conveyors being visible from the park.
- In addition to potential harm to groundwater, the large concentration and proximity of gravel operations at Big Hill Springs could result in negative cumulative impacts of dust and noise to the park and Bighill Creek, which would impact biodiversity. Wildlife corridors would be physically disrupted by berms and excavations and noise from a string of gravel operations.

- Agglomeration versus Consolidation: these members state that the park will see the worst of all worlds – agglomeration without consolidation. There will be five mines competing for available market and each contributing to cumulative impacts for thirty years. The proliferation of mines with thirty-year extraction lives demonstrates a grossly inefficient resource development model.
- Park visitors could be negatively impacted by the experience of adjacent industrial sites.

East Rocky View Agricultural Perspective

- As Big Hill Springs Park is a provincial park, any potential issues arising from air, water, excess visitation, and the like should be dealt with through provincial bodies who oversee parks.
- The ARP is a high-level document that should apply to the entire County. Micromanaging the ARP for one area (i.e., the Park) should not creep into this bylaw or into the aggregate rules and process. The County would be entering into provincial jurisdiction by including special attention to the park in the proposed bylaw.
- It is clear some residents have concerns regarding this park and the proximity to aggregate. This should be handled by a separate bylaw by the County that would work with and be crafted in conjunction with the province.

Industry Perspective

- Setbacks are already in place for ESAs and the Provincial Park. The County has the ESA's mapped, and the province already recognizes ESA's in its review of applications. Additional setbacks are not required. Mitigation measures can be utilized to protect environmentally sensitive areas. The various environmental studies currently required by the province and Rocky View County identify whether adjacent land and water users, including ESAs and Provincial Parks, may be impacted by a proposed aggregate development.
- Gravel pits operate successfully in Banff National Park, Jasper National Park, Kananaskis provincial park and many others. The idea that gravel pits and parks areas cannot co-exist is not supported.

6. Application Review Process

Determine a means to Develop the Confidence of Residents, Administration and Council in the Analysis of Expert Reports contained in Aggregate Development Applications.

Discussion: Committee members from west Rocky View involved in past applications lack trust in these expert reports. They have little confidence that the reports had adequate technical review by administration and, as a result, Council was provided with less-than-optimal support for their decision-making. Industry understands the County's current approach in regulatory aggregate development to be one of the most comprehensive of any of the municipalities in Alberta.

Country Residential and west Rocky View Agricultural Perspectives

- Council receives a lot of information in a short period of time prior to a hearing. This means that it is critically important that Council receives high quality summaries of the complex technical reports that are essential in evaluating aggregate applications.

- To achieve this objective, it is important for Administration to have access to objective, independent expert advice in their review of proponents' technical application information. For example, the County does not have an acoustical engineer, although noise concerns and sound monitoring modelling are important issues in aggregate land use and development permit applications. The same issue exists for groundwater, air quality and other impacts that require complex technical analysis.
- Since it is not financially viable to maintain a full roster of technical experts as part of the County's permanent staff, application fees should cover the costs of contracting third-party experts to review applicants' technical studies.
- The current process has a serious gap that should be drawn to Council's attention. In the existing application process, administration typically only looks at information provided by the applicant. Administration checks applications for the presence or absence of technical reports but does not have the technical expertise or resources to assess the quality or completeness of many of the conclusions provided in those reports. This creates the potential for applications to be recommended for approval despite being inadequate with regards to technical study quality. This gap should be addressed in the ARP to ensure that Council has the best possible information on which to base its decisions.
- With access to independent third-party reviews of applicants' technical studies, Administration could then show how this objective information was considered in their recommendations to Council. This could increase Council's confidence in the decisions that they are making and thereby increase public confidence in council decision making.
- There should also be clear minimum standards for applicants' technical studies. From their experience, these members saw that in some previous applications groundwater, surface water, noise, economic impact, and cumulative effects studies were narrowly scoped, and, as a result, in some cases drew inappropriate conclusions.
- Administration's assessment of applications should clearly distinguish between policy and technical issues to ensure that both are evaluated satisfactorily.
- These committee members also recommend that intervenor compensation and/or capacity funding be provided to residents and other stakeholders to address the imbalance in financial resources between industry and impacted persons. This funding could be provided through fees for aggregate land use and development permit applications. This would enable technical studies to be independently reviewed, and impacts identified. This would assist the County by surfacing balanced perspectives to support more informed decision making.
- The ARP must include sufficiently detailed guidance to ensure that Development Permits fully reflect commitments in the MSDPs and that conditions established in the DPs are easily enforceable.

Industry Perspective

- Both the province and the County require technical reports to be completed by professional subject matter experts (e.g. professional biologists, agronomists, engineers and geoscientists). These professionals are regulated by their respective professional associations and have an ethical duty to protect the public through objectivity and competent practice. They support and defend their reports through the provincial and municipal review processes, as well as in public hearings.

- All application documents are available for any stakeholders to review and to state their substantiated professional opinion to the County. Industry questions whether ‘confidence’ can be measured, as typically a layperson simply doesn’t agree with the professional information without any basis for defense.
- Some committee members discount the professional review capacity of staff at the County, Alberta Environment and Protected Areas, Alberta Transportation, Alberta Culture, Alberta Health Services, and the Aboriginal Consultation Office. These agencies are all typically involved in the review of a proposed aggregate development. Alberta Environment and Protected Areas has reviewed and issued authorizations to several gravel pit applications in the County.

7. Economic Assessment of Aggregate in the County

Discussion: That the County prepare a comprehensive, independent, objective assessment of the costs and benefits and net economic impact of aggregate development. The assessment should consider all economic benefits to the County that result from aggregate activity and consider all costs to the environment and costs to residents along with all costs to the County of administrating, monitoring, and enforcing aggregate development and operations.

Background: Committee members recognize that aggregate has value for roads, building, and other infrastructure development and maintenance. Industry members quoted the use of aggregate per person in Alberta at 12 to 15 tonnes per year. Committee members understand that the County receives approximately \$1,000,000 in annual CAP levies from aggregate operators and that aggregate sites pay municipal taxes and offsite levies, and that aggregate operations hire employees who live in the County and use other County services and businesses.

Reasons: An economic assessment would support an understanding of the economic impact of aggregate for the County and ratepayers, allowing the county to evaluate a cost/benefit analysis specific to the County. Industry members state the information can be used to determine the extent to which existing aggregate sites in the County and elsewhere can meet the expected market demand for the region.

East Rocky View Agricultural Perspective

- There is a positive effect of aggregate extraction for large acreage farming operations, an end-pit lake is an asset to farming and ranching, especially in drought times. The reclamation of farming and grazing land, once aggregate is removed, is a benefit because of the absence of rocks that can damage equipment. Income from aggregate resources paid to the farmers and ranchers assists in offsetting downturns for landowners relying on income from their large-acreage agriculture endeavours.
- The County receives income from offsite levies, the Community Aggregate Payment (CAP) Levy, and land taxes from aggregate extraction. Rebuilding of haul roads to a higher standard is beneficial to industry and residents who also use the improved roads built by industry.

Country Residential and west Rocky View Agricultural Perspectives

- The CAP levy equates to less than twenty-five dollars per resident and they question if the impacts to residents and the cost to the County are justified. They would like to see an economic assessment that includes road repair costs, legal costs, impacts on property taxes and other direct and indirect

costs to the County, and costs to residents. Their view is that many of the benefits of aggregate development occur outside of the County. They state that County fees applied to industry should cover all costs to the County associated with aggregate development.

- Although industry members stress that haul distances must be minimized due to environmental concerns, the real concern is likely higher transportation costs.
- The information from an economic assessment should inform the ARP' s locational criteria for aggregate development within the County.
- The County needs to better understand the fundamental economics of gravel extraction so it can determine appropriate locations and mitigations. These residents question if the County has an obligation to provide relatively inexpensive gravel for the City of Calgary.
- These members are concerned about impacts to residential property values. An international study concluded properties within three miles of an active aggregate pit suffer a negative impact of 5 to 30 percent to their property values. This indicates that in the areas of the County with high population density, a new gravel operation could result in cumulative residential property value loss with more than \$150 million of associated residential property tax loss.

Industry Perspective

- An economic assessment should include an evaluation of the economic benefits derived from the aggregate industry, including CAP levy generation, payment of municipal taxes, offsite levies, and direct and indirect job creation. An Alberta Sand and Gravel Association report from 2023 describes these benefits in more detail.
- An economic assessment should consider the cost of alternatives to supplying the local and regional aggregate market if close-to-market resources in Rocky View County are sterilized. Unlike the oil and gas industry where alternative energy production methods are being increasingly developed, there is no replacement for aggregates. As such, if close to-market resources are sterilized, aggregate will need to be sourced and transported from further distances. Increased transportation requirements will result in higher costs for aggregates and thus higher municipal and provincial infrastructure costs, a loss of local jobs, and higher greenhouse gas emissions. The County maintains approximately 1,600 km of gravel roads, and an economic analysis should consider the economic impacts to the municipality if regulatory sterilization results in higher costs of materials.
- Supply of construction materials is not optional and is a requirement to sustain our way of life. During the COVID-19 pandemic, aggregate production was one of the industries deemed critical and allowed to continue to operate. The value of construction materials cannot be assessed on a financial basis alone. After water, the most consumed material on earth is concrete, of which >80% is made from aggregates.
- County assessment values can be used to determine if aggregate has had a negative impact on property values.

8. Mapping of Aggregate Resources in the County

Discussion: That the County prepare the best possible mapping of aggregate resources to better inform stakeholders in the County and to guide long-term development.

Background: Committee members reviewed and discussed the County map relating to aggregate deposits which was developed during the previous ARP project. They did not reach agreement on the information provided by that map.

Reasons: Some members state that effective mapping would allow the County to understand where potential for aggregate development exists and aid in making informed decisions, so that subdivision and development activity does not conflict with non-renewable resource development. Currently, industry and some committee members don't agree on the information regarding the supply and location of aggregate resources in the County. There is a need for clarity and for achieving the balance of protecting the resource and protecting residents and the environment. Mapping has a role in informing residents and industry where future gravel development might be possible.

Country Residential and west Rocky View Agricultural Perspectives

- Available mapping and other evidence shows an abundance of aggregate throughout the County. Better mapping will allow the County to be more informed about the relative abundance or scarcity of the resource. This information could inform planning decisions to protect residents and the environment without risking future aggregate supply. The 2018 draft ARP shows a bias to protect aggregate resources for future exploitation. The County has sufficient aggregate resources to supply Calgary and area for over 200 years with just 3% of County land area and for over 500 years with just 7% of County land area.
- Access to the resource should be permissive and based on avoiding negative consequences.
- While there is uncertainty about the quality of mapping that currently exists, other knowledge can inform the ARP before additional mapping occurs, including that:
 - Aggregate operations are currently in operation in all four quadrants of the County and the resource is broadly located across the County.
 - Aggregate operations are active near Rocky View County, including within the City of Calgary, Tsuut'ina Nation, Stoney Nation, and each of the five counties neighbouring Rocky View.
 - Based on demand estimates provided by the Calgary Aggregate Producers Group in 2015, typical supply from current and proposed gravel pits within the County could supply its share of aggregate demand in Calgary and the surrounding area for hundreds of years with a small fraction of County land.

Industry Perspective

- Updated mapping would need to be considered as guidance only and that awareness of its limitations is important. Without site specific analysis, this mapping does not inform where aggregate development is economic or environmentally appropriate. There is also no guarantee that current owners of these lands wish to see aggregate development, or that future owners will be amicable to such a use. Additionally, other land uses such as houses, roads, utilities, pipelines, and/or well sites may sterilize identified deposits and that granularity is likely difficult to add to any mapping.

9. Additional Regulatory Actions

Advocate to improve operations of Provincially owned pits in the County.

Discussion: The County should use available means to encourage provincial aggregate operations in the County to follow County standards for operating and reclamation.

Background: The Committee members all supported the recommendation that County pits follow County standards. Some Committee members recommend that provincial pits should also follow County standards. They discussed how the same standards could be extended to provincially operated pits in the County.

Country Residential and west Rocky View Agricultural Perspectives

- The County could require that operators who extract from provincial pits follow County standards when they are operating in provincial pits, and that this could be an eligibility requirement to operate in private pits in the County.
- Precedent exists in Alberta regarding reversal and rescinding of resource rights by the provincial government where prior approvals conflicted with residential and/or environmental plans. This could provide a model for the County with regards to previously approved aggregate operations that conflict with a new ARP.

East Rocky View Agricultural Perspective

- The proposed ARP should not add clauses that are unmanageable and unenforceable. Permit conditions cannot be changed on a whim.

Industry Perspective

- Provincially owned aggregate operations are not legislatively required to adhere to municipal bylaws, however in many cases municipal bylaws are being followed. Thus, including details on the regulation of provincial pits in the ARP would not be an effective use of time and resources.

Clarity about the Distinct County and Provincial Aggregate Regulatory Roles.

Discussion: The County and the province have distinct roles and responsibilities for aggregate applications and regulation. Clear information in the ARP for readers about these separate roles in aggregate applications, compliance, and enforcement should be provided.

Reasons: A preamble in the Plan could specifically define the County's responsibility for aggregate development and indicate that the County has shared responsibility for day-to-day monitoring, enforcement, performance standards, and compliance of aggregate operations.

Country Residential & west Rocky View Agricultural Perspectives

- Municipalities have sole responsibility for land use decisions. This responsibility is not shared with the province. To exercise their responsibilities for land use decisions, municipalities must carefully

evaluate all aspects and impacts of gravel operations to determine if the proposed land use is appropriate for the land in question.

- Municipalities also have clear responsibilities to protect both their environment and their resident, which are responsibilities that overlap with the province. The reality of overlapping responsibilities does not remove Rocky View's responsibilities in these areas.

Industry Perspective

- There are clear jurisdictional roles between the municipality and the province. For example, authorizations related to water use and impacts and reclamation security are clearly the role and responsibility of the provincial government. Road use, for example, is a municipal responsibility. In the case of provincial responsibilities, these are clearly defined, regulated, and enforced accordingly. The municipality should not duplicate effort.

Reduce red tape for some pit renewals.

Discussion: The County could consider using a streamlined approach for pit renewal applications for companies that do not have a record of non-compliance or substantiated complaints from affected stakeholders. Pit renewals would be held to the new standard being implemented by the County.

Background: Under the current situation, operators are required to apply for renewals every five years. Items 9(19) 3 and 7(5)c in the 2018 ARP can be interpreted to mean that when renewing development permits, operators are required to provide all the same technical documentation that a new development permit application requires.

Reasons: The impacts of an existing pit should already be known and subjecting existing operations to new standards and study requirements creates business uncertainty. With correct reporting, good compliance, and no complaints from stakeholders, studies on factors such as noise and air quality should not be required.

Industry Perspective

- Subjecting existing operations to new studies and standards adds additional cost to the supply of aggregates and creates business uncertainty. A streamlined approach would reduce the regulatory burden on operators and County administration and would support investment in the County.
- Many sites complete project scale plans and assessments during the initial MSDP and Land Use planning stages. It is not necessary or appropriate to update plans every five years unless there is a change in circumstances that might warrant an update of such reports. There should be a standard process for all pit renewals to provide business certainty.
- It is unrealistic to expect ongoing operations to cease if new studies and performance measures cannot be met. Investment in the development would have been based on the regulatory framework at the time. Once operations have commenced, continued operations are required to complete the project and ultimately reclaim the property to the approved end land use.

Country Residential and west Rocky View Agricultural Perspectives

- To the extent that a development permit renewal is not proposing any expansion of pit operations or alterations in operations, then it might be reasonable to provide an expedited renewal process

for pit operators with clean compliance records. However, the risks of scope creep are too serious to provide a blanket expedited process for all renewals. When a pit is expanding into new area, technical studies need to be updated to reflect the new area. If a pit is proposing to change its operations, e.g. adding gravel washing, the impacts of any operational changes need to be properly evaluated.

- It is also critical that development permit renewals of existing gravel pits be brought into compliance with new performance standards and other provisions in the ARP once it has been approved.

10. Respect for Property Rights

Members had some discussions on property rights.

Industry Perspective

- Regulatory certainty and the ability to recognize value from their property is critical to supporting investment in the County and province. In many instances, individuals and/or corporations have made the decision to purchase property in Rocky View County with an intention to develop aggregate resources and realize their value. These investment decisions were based upon an understanding of the regulatory scheme related to aggregate development at the time. New regulations, including setbacks and/or locational criteria, can sterilize millions of dollars of aggregate reserves and deprive landowners of their property rights to mine and sell their gravel.
- Property rights are a critical component in the development of a prosperous and thriving economy. As written in a Fraser Institute paper, the regulatory taking of a person's property constitutes a severe loss and a very significant interference with a citizen's private property rights which are critical in promoting freedom and economic activity.

Country Residential & west Rocky View Agricultural Perspectives

Three types of property rights should be identified:

- 1) The right of property owners to choose to extract aggregate from their property, subject to adherence with land use regulations.
- 2) The right of property owners to choose to pursue other forms of development on their property (residential, commercial, or other), whether or not potential aggregate deposits may be present, also subject to adherence with land use regulations.
- 3) The right of property owners to peacefully enjoy their property without being subject to disturbing or harmful impacts from surrounding properties.

Appendix: Gaps in the 2018 ARP as Identified by Committee Members

ARP Gaps: The Committee was asked to identify gaps in the 2018 ARP. Throughout subsequent meetings members discussed their detailed perspectives on those gaps. Those discussions led to developing the committee recommendations and defining the areas of non-consensus.

East Rocky View Agricultural Perspective on ARP Gaps

- Alberta Transportation and County pits should follow the same rules. Transparency is important, for example in reclamation.
- Education by RVC and industry about the process is important – people truly don't understand.
- Would like to see phasing clarified in the document.
- Extending the life of old pits.
- Setbacks- identify more clearly that Council can change setbacks.

Country Residential and west Rocky View Agricultural Perspectives on ARP Gaps

- Overall, the ARP needs to be clearer. There are four themes:
- Location: Where in the County is development explicitly prohibited and where is development allowed? ARP is skewed to protect the resource. There was no exploration of cost and benefit of development.
- Balance: There was a sense that the application process is not balanced between landowners and operators.
- Application Process: It seems like a checklist and that administration looks to see if the report was done and not at how good the information is. Process felt superficial and misleading. (when a community opposed the Scott development they hired experts who found gaps in the quality of the proponent's reports). There was no funding for stakeholders to do their own studies. There was distrust from residents about admin. Needs to be consideration of documents not provided by the proponent.
- Enforcement: the current process is complaint based. Need funding for enforcement.
- Residents want consistency and certainty.
- Would like to see GIS mapping for the full County.
- Recognise diversity around the County with different setbacks.
- Policy 6.4 Denies property owners to develop anything non aggregate. The bias is in favor of aggregate.
- The ARP is comprehensive.
- Some applications were approved by Council entirely on what the applicant provided- there was no other digging for more information.
- Applications are ad hoc. Would like to see them in a more orderly and thorough fashion.
- RVC needs independent experts to adjudicate opposing interests.
- Important to look at cumulative effects of an application - this is not properly developed in the ARP.
- There's work to be done on environmentally sensitive areas. Studies need to be more comprehensive. There are regional aspects to the environmental impacts of development.

- The plan has no definition of what constitutes a risk.
- Consider cumulative effects of pit development on sensitive areas.
- Landowners may not have the resources to come up with the technical information versus what companies have.
- Consider traffic impacts – what are the cumulative effects for traffic?
- The ARP does little to look at balancing the rights of property and the opportunity to develop.
- Everyone operates on their own ‘island’. Can industry share infrastructure?
- Reclamation
- County can look at areas that are vulnerable to development
- ARP should remove uncertainty.
- When there are opposing technical research reports, err on the conservative side.

Industry Perspective on ARP Gaps

- There are competing interests. Industry would be happy to have more performance standards.
- Certainty of supply is important to industry. The map largely overestimates the supply of gravel in RVC. Wouldn't want to potentially sterilize land for aggregate development.
- Public education is important.
- Process: important not to require duplicate processes. Alberta Environment does have the expertise to assess technical reports.
- Important to recognize this is a non-renewable resource.
- Need caution in affecting property rights and values with setbacks.
- Doesn't feel that the plan favours industry.
- The map and areas of potential aggregate needs to be revised.
- The ARP doesn't have enough to protect aggregate
- Prescribed performance standards should be used over setbacks.
- Use robust technical information to protect standards.
- Processing of aggregate is where setbacks are need – the aggregate resource is too valuable to eliminate by setbacks.
- How to protect landowners rights – the ARP has no mention of landowners
- Some land isn't viable for agriculture and is used mainly for pasture. Landowners should have more right to realize the potential of the land. Reclamation can improve land.
- Grandfathering provisions.
- Fixed set of requirements may not be practical. The process should allow for some flexibility. For example, a pit extension that is close to a project has been delayed in the application process, but not because of opposition.