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Surface Material Extraction Pits in Alberta:

What Landowners Need to Know

Alberta Government

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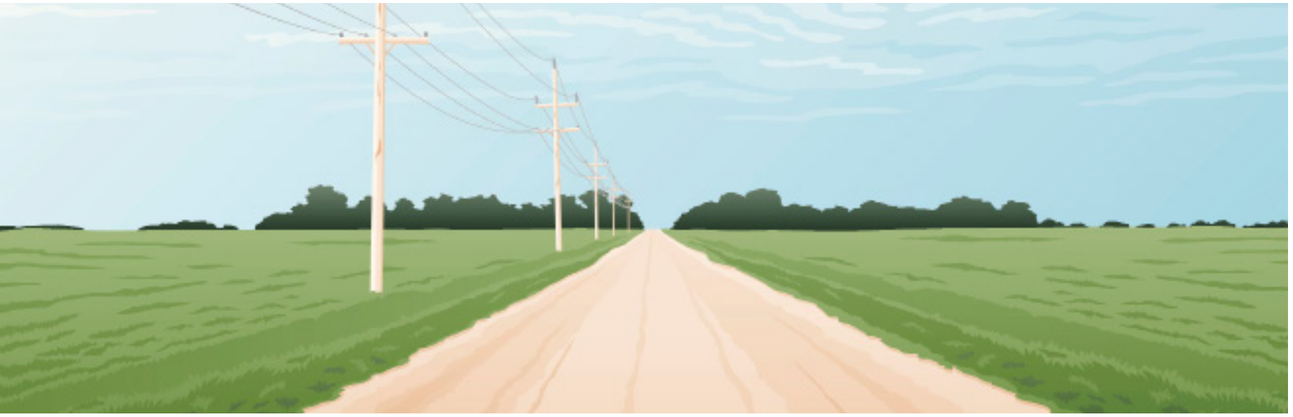

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About Surface Material Extraction

The rights to surface materials (sand, gravel, clay, and marl) are owned by the holder(s) of the Certificate of Title. These materials can be extracted through a surface excavation referred to as a “pit”. A pit site may include roads, facilities, and stockpiles. Mines, quarries, and borrow extractions are not classified as pits.

“Extraction” refers to the removal of the materials. The most common material extracted is aggregate, which includes sand and gravel. Additional activities at a pit operation may include processing activities that make the aggregate marketable, such as crushing, screening, and washing. The lifespan of a pit will vary, ranging anywhere from a couple of years to over 50 years. A pit’s lifespan will depend on the size of the deposit, market need, and location to available markets.

A company may establish a pit on private land with the landowner’s consent. The Alberta Surface Rights Act does not apply to sand and gravel pits, so there is no right-of-entry or expropriation process for sand and gravel pits on private land. There is no standard contract, so the owner of the land will negotiate bilaterally with the company to create an agreement for use of the land. Since these contracts can be in place for many years, it is important to get expectations reflected clearly in writing. A handshake deal is not sufficient. The person negotiating on behalf of the company does not need to be a licensed land agent.

The contract between the operator and the landowner should reflect both parties’ needs. Liabilities, timelines, and compensation expectations should be made explicit in writing. The landowner may wish to develop a plan for compensation if the pit becomes inactive.

The Farmers’ Advocate Office (FAO) recommends getting legal advice prior to entering into a contract. We also recommend that the landowner speak to an accountant to get an understanding of the possible tax implications. The FAO cannot recommend a particular lawyer, but a landowner can call the Law Society of Alberta at 1-800-661-9003 to get the names of three lawyers with appropriate expertise. The first half hour of advice with each lawyer is free.

The operator will also be required to obtain all necessary municipal, provincial, and federal permits, authorizations, and approvals prior to establishing the gravel pit.

Developing Aggregate Resources on Your Own

If you believe there are valuable sand and gravel resources on your land that you wish to develop, it is important to be realistic about the opportunity and take time to gather the necessary information. Not all sand and gravel is usable, and not all areas are appropriate for development. Establishing a sand or gravel project can involve large start-up costs and ongoing operating costs. The same regulatory requirements will apply to landowners who want to develop their own aggregate resources as companies leasing private land.

A private consultant or aggregate company may be able to provide advice on the feasibility of developing a pit. It may be helpful to get perspectives from multiple consultants prior to proceeding.

Regulation of Sand and Gravel Pits in Alberta

Large Pits (Class I Pits)

Class I pits are 5 hectares (approximately 12.4 acres) or more in area. There are approximately 888 Class I pits on private land in Alberta. The 5 hectare size limitation includes the entire pit disturbance area over the lifetime of a pit, including roads, stockpiles or other temporary facilities.

Landowner consent must be obtained before a Class I pit is established. These pits require registration with Alberta Environment and Parks (AEP) under the *Environmental Protection and Enhancement Act*, and must follow AEP’s *Code of Practice for Pits*. There is no provincial public consultation process for the AEP registration. All components of the *Water Act* apply, and applications under the *Water Act* require public notice.

The registration with AEP requires the company to submit an activities plan that provides details on the planned construction, operation, and reclamation for the pit. Any changes to the activities plan must be brought forward to AEP prior to the operator undertaking the new or changed activity. For a Class I pit, the operator must maintain written permission from the landowner for the life of the development. This means that if the land is sold, the operator must obtain written permission from the new landowner if they want to continue operating.

Small Pits (Class II Pits)

A Class II pit is less than 5 hectares in size on private land. A precise statistic on how many Class II pits exist in the province is not available. Class II pits are more common in Alberta, and it is estimated that there are over 1,500 Class II pits throughout the province. If the operator of a Class II pit wants to grow the operation larger than 5 hectares, they must apply for a registration with AEP.

Unlike a Class I pit, a Class II pit does not require a registration with AEP under the *Environmental Protection and Enhancement Act* and does not need to follow the *Code of Practice for Pits*. However, since these smaller operations are “specified land” under *Environmental Protection and Enhancement Act*, operators are required to conserve and reclaim these pits. They must also follow the *Environmental Protection Guidelines for Pits* and all components of the *Water Act*.

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Public Lands

In order to establish a pit on Crown (public) land, the company must obtain a surface mineral lease (SML) from the Government of Alberta. Companies that operate pits on Crown land use AEP’s *Guide to Surface Material Extraction on Public Land* rather than the *Code of Practice for Pits*. Pits on public land must abide by the conditions of their approval from AEP and require a Reclamation Certificate at the end of their life. There are currently 1,734 SMLs on public land in Alberta.

If a grazing lease holder on Crown land refuses entry, the operator is advised to contact the regional AEP office responsible for the grazing lease. Grazing-related disputes concerning pits are handled by the Director. The Director’s decision can be appealed to the Public Lands Appeal Board (PLAB).

Historical Resources

All pits on both public and private land are subject to the requirements of the *Historical Resources Act*. Historical resources are significant pieces of Alberta’s history that must be recognized and conserved. This can include archaeological resources, paleontological resources, historic sites or structures, and Aboriginal traditional use sites.

For operations that are less than 5 hectares (12.4 acres) in size, the pit operator must consult Alberta Culture’s Listing of Historic Resources prior to initiating any development activities. Operations that are larger than 5 hectares (12.4 acres) must apply for a *Historical Resources Act* approval from Alberta Culture. Development activities may not proceed until *Historical Resources Act* approval has been obtained.

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Water

Regardless of the type of pit or the ownership of the land, the operator of a pit must obtain the appropriate authorizations under the *Water Act*. This includes any authorization needed for dewatering, altering surface drainage, constructing an end pit lake, disturbing groundwater or using water.

Adjacent landowners may be concerned about erosion and siltation of water bodies and other potential impacts. The general provisions of both the *Water Act* and *Environmental Protection and Enhancement Act* prohibit siltation and erosion and releases that may degrade water quality. The operator must ensure erosion control measures are in place.

Operators are expected to establish and comply with setbacks from surface water as approved by AEP. The department may require additional assessment, such as groundwater studies, prior to authorizing a pit operation.

The Role of the Municipality

Municipal zoning, land use planning, and land use bylaws all play an important role in the regulation of pits in Alberta. Zoning and bylaws may differ between municipalities. Most municipalities will strive to develop known mineral deposits as strategically as possible. Where the location of mineral deposits is not well known, this type of planning can present a greater challenge. The zoning of the land in the land use bylaws will outline permitted and discretionary uses for land in an area.

In order to establish an aggregate development on private land, the company must obtain a Development Permit from the municipality. This process includes an element of public engagement. Through the Development Permit process, the municipality can stipulate conditions related to an approved pit. Possible conditions could relate to location, hours of operation, buffers, noise, dust, haul routes, and traffic control. The municipality's development authority will have more flexibility for attaching conditions to a Development Permit where the activity is listed as a discretionary use under the land use bylaws.

The municipal requirements may go beyond what is required provincially, but they cannot contradict provincial laws. Municipal requirements are particularly important for Class I pits, which undergo less oversight from provincial regulators.

Keep in mind that two processes may occur at the municipal level, depending on the situation. In some cases, there will be a re-zoning application if the proposed application is not permitted within the existing zoning for a particular area. This would be a separate application than the Development Permit, and community members are encouraged to be aware of this distinction in any submissions they make.

Making decisions related to new sand and gravel pits can be a challenge for a municipality, as they must balance competing interests. Municipalities and their residents benefit from having aggregate resources available from within the community, as these products can be costly to bring in. Sand and gravel businesses also provide a good source of revenue for the municipality and the local economy. The municipality is tasked with considering these benefits alongside goals to preserve good agricultural land and the quality of life for community residents.

Gravel pits established by Alberta Transportation or the municipality itself are not required to go through the municipal Development Permit process. Some municipalities may require that Crown land surface mineral leases obtain a Development Permit.

Community Aggregate Payment (CAP) Levy

Municipalities have the option of imposing a Community Aggregate Payment (CAP) levy to help finance community benefits and offset community impacts from pit operations. Under the provincial *Community Aggregate Payment Levy Regulation*, a municipality may establish a levy for sand and gravel operators based on the tonnage of sand and gravel shipped. The municipality may set the rate, but it cannot exceed the provincial maximum of $0.40 per tonne. Approximately half of Alberta's municipalities have a CAP levy in place.

The CAP levy was implemented to build positive relationships between aggregate companies and local residents by delivering tangible community benefits through funding directly back to the local community. There is no legislated requirement on how the funds are used. In some communities, the public is unaware of the contributions local operators make into the CAP levy.

Some examples of possible CAP projects include maintenance on shared roads, new public facilities (seniors' centre, skating rink, playgrounds/parks, etc.), bylaw officer training, noise monitoring, or a collaborative aggregate advisory committee. The type of initiatives may depend on the amount that is collected. In Sturgeon County, the CAP levy was used to create a water monitoring program with 21 monitoring wells that test for water quality and quantity on an ongoing basis.

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Communicating Concerns

Parties who are concerned about a proposed project should first try to speak with the operator directly. Establishing good communication between the pit operator and the community is very important when the pit is first being proposed. "Good" communication is open, transparent, and mutual. Community members should feel free to ask whatever questions they need in order to gather information about the project. If a community open house has not been offered, residents may wish to ask for one, as this can help ensure community members get consistent information.

If concerns cannot be addressed directly with the company, residents have the option of voicing their outstanding concerns through the municipal Development Permit process. This is also an avenue to ensure stipulations around noise, traffic, dust, buffers, hours, etc. are captured in the conditions of the Development Permit. Some municipalities will establish renewal clauses within Development Permits, which provide another opportunity to get any issues addressed in the future.

The FAO frequently works with landowners who are preparing submissions for municipal Development Permit processes in relation to various types of development, including sand and gravel pits. We always encourage our clients to pro-actively propose solutions and ideas. Instead of simply stating opposition to a proposed project, it is important to explain the direct impacts that may result from the proposed project and how they could be mitigated.

Community members who oppose projects sometimes opt to "protest" by not utilizing the public engagement opportunities provided by the operator or through the municipality. The FAO strongly discourages this approach, as valuable opportunities to get concerns addressed may be missed. It gets more difficult to address concerns if the project is approved and fully operational. Concerned residents are strongly encouraged to make use of the public engagement opportunities to bring their concerns forward during the planning stages to optimize the ability to mitigate concerns.

Mitigating Concerns

When bringing concerns to the operator or the municipality, it is helpful to come with ideas and solutions for how the concerns could be mitigated. Any negotiations with the operator should be captured in writing with significant detail.

Hours of Operation

The Development Permit may stipulate the hours and days during which the pit may operate. Adjacent landowners may wish to request limitations on operating hours to prevent operation during the late evening or early in the morning. It is typical for a pit to only operate 6 days a week with restricted hours.

Roads

Aggregate companies try to source and develop pits in locations with good access to highways and high grade municipal roads to help minimize transportation costs. Pits are often developed in clusters, partly because of the location of the resource and partly because of the availability of local roads and infrastructure.

In most cases, the municipality will require the operator to obtain a Road Use Agreement. This can help confine traffic to certain areas and determine hours of use. Upon request, the municipality may require a traffic impact assessment to get a better understanding of estimated road use. Under the *Highway Act*, any proposed sand or gravel pit located within 0.8 km of a highway must also obtain a separate permit from Alberta Transportation.

Landowners should bring any concerns about haul routes or traffic to the operator during the planning stages. In general, it is desirable to avoid residences, but it can be challenge to accommodate all residences. Other mitigation measures include having warning signs, speed bumps, and speed limits to help ensure local safety. The operator may need to commit to additional maintenance beyond what is provided by the municipality to ensure the road quality is upheld. In some communities, the CAP levy may be used to provide additional maintenance on shared roads.

Dust

Dust may arise as a result of pit activities, the movement of large equipment, or hauling on nearby roads. This can be a concern for adjacent landowners for health, safety, and aesthetic reasons.

The owner of the pit is required to control dust, as it is considered a “substance” under the Environmental Protection and Enhancement Act. It is important that the operator adapt equipment and site operating practices to decrease the amount of dust arising from a pit. These mitigation measures should be described in the authorized operating plan for the pit and implemented during operations. The Road Use Agreement with the county and the local land use bylaws will also play a role in minimizing dust problems by stipulating the conditions for using a road.

Certain practices can help limit dust. Watering roads is the most common means of controlling dust. Some operators may take additional measures such as misting loads between transfer points, but this approach is less common. In urban areas, the crusher may be enclosed (this is not as common in rural areas). When aggregates are being transported, using a tarp on the truck box can help limit dust considerably.

Noise

Crushing is the main source of noise arising from a pit. Wind and terrain can influence how the sound travels, so installing the crusher at a lower elevation or creating berms can help minimize sound issues. Buffer zones from the edges of the property and strategic placement of stockpiled reclamation materials can also be helpful.

In general, operators strive to locate the crushers as far as possible from nearby residences. When a project is being proposed, an adjacent landowner should not only ask about the anticipated level of noise, but also about the duration of noise. Aggregate companies may take different approaches to extraction: some may wish to operate year round, while others may work intensely for a few weeks at a time. Hours of operation, which can be stipulated in the municipal Development Permit, can help contain the noise within certain hours. A municipality may also have a noise bylaw that dictates permissible sound levels.

Noise from back up alarms can sometimes be a concern to residents, depending on the hours of operation. Sometimes alternatives may be available for operators that run during the night, but the appropriateness of such solutions depends on safety and provincial regulations.

Aesthetics

The visual impact of a pit can be a concern to adjacent landowners. Adjacent landowners cannot necessarily impose conditions on another owner’s land, but they can request barriers on their own property. Visual impacts can be lessened by creating good vegetative buffers around the property. Vegetative buffers have the added benefit of preventing erosion and siltation into water courses. It is recommended that any commitments made for visual barriers be captured in writing.

Fish and Wildlife

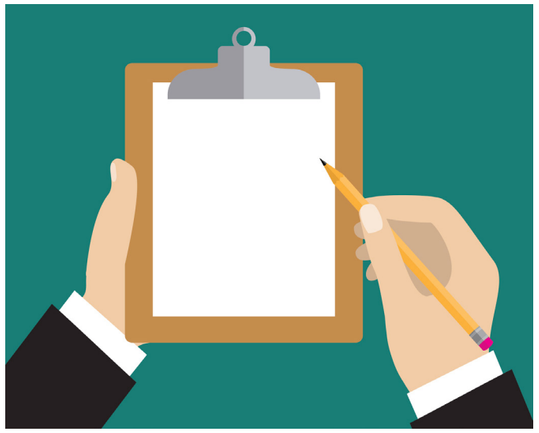
Various legislation exists to protect fish and wildlife features and habitats. Companies establishing surface material extraction pits are required to consider:

- the federal *Migratory Birds Convention Act*, which protects migratory birds and bird nests;
- the federal *Fisheries Act*, which protects fish and fish habitat; and
- the provincial *Wildlife Act*, which protects wildlife habitat.

Concerns About an Existing Operation

In some cases, adjacent residents may have concerns about an existing pit, long after the completion of the community engagement efforts and issuance of the Development Permit. This document has primarily focused on new aggregate developments, but some of the mitigating measures might be useful for those who want to mitigate concerns about an existing development as well.

In the event of a concern about an existing development, the first step is to communicate directly with the operator. Do not be afraid to ask questions or request a tour to get a better understanding of what is causing the impacts. If these discussions are not successful, a resident also has the option of bringing their concerns directly to their municipality. It may be beneficial to ask for a copy of the Development Permit to get a sense of what the original expectations were.



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Operators are required to self-report any contraventions of legislation or adverse effect caused by their activities. However, if a community member has good reason to suspect non-compliance with *Environmental Protection and Enhancement Act* or the *Water Act,* they can alert Alberta Environment and Parks (AEP) by calling 1-888-222-6514.

AEP conducts inspections of sand and gravel pits, sometimes at random and planned in other instances. Inspections are more likely to occur if there is a history of non-compliance or significant public or environmental concern.

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Reclamation

The goal of reclamation is to bring land back to “equivalent land capability,” which refers to the ability of the land to support uses similar to before it was developed. All sand and gravel pits on private land – regardless of their size or class – are required to abide by the *Conservation and Reclamation Regulation* and require a Reclamation Certificate from Alberta Environment and Parks (AEP). It is important to understand that although the operator has a legislated obligation to reclaim, there is no specific timeframe in which this must occur. You should check with your municipality to find out if they have additional criteria on reclamation timing.

Class I will have a planned reclamation detailed in the activities plan for the site. The operator of a Class I pit must provide a report to AEP every 5 years to provide an overview on the status of the pit. Under the *Code of Practice for Pits*, a reclamation security must be submitted to AEP as a financial deposit to finalize an application for a Class I pit. Security is not collected by AEP for a Class II pit. The amount of the security is based on the estimated cost of future reclamation. The amount determined by AEP will be held in the event that insolvency prevents the operator from reclaiming the land. The amount could also be forfeited if the operator refuses to comply with an Emergency Protection Order or Environmental Protection Order from AEP. Once a Reclamation Certificate is issued, any remaining security is returned to the operator.

Requirements for Class II pits are included in the *Environmental Protection Guidelines for Pits*, which describe reclamation targets and promote progressive reclamation. Operators of Class II pits are not required to follow the *Code of Practice for Pits*, but are still required to obtain a Reclamation Certificate. To support reclamation success, operators of Class II pits are strongly encouraged to pre-plan the reclamation intended at the end of the life of the pit.

Additional requirements concerning reclamation may be established at the municipal level. On public lands, reclamation planning is done in consultation with AEP’s Lands Officers.

Reclamation is based on final land use in discussion with the owner of the land in the planning stages. An understanding of the pre-construction condition of the land will form a valuable baseline for the final reclamation. Where these conditions are not known, off-site conditions are used as the target. The Code of Practice for Pits clarifies that topsoil, subsoil and overburden must be stockpiled for reclamation (using other materials requires permission from AEP). The owner of the land may ask for a copy of the application submitted in order to obtain more details about the initial soil assessment conducted and final reclamation plans.

As with oil and gas reclamation, a landowner may wish to retain some surface improvements from the pit operations, such as access roads. To do so, the landowner will need to supply a written consent at the time when the application for the Reclamation Certificate is made. Some surface improvements that remain in place may need authorization from the municipality as well.

Good planning in the initial planning stages could help limit the final burden of conservation and reclamation later on in a pit operation. The best practice within the sector is to reclaim progressively throughout the life of a project, replacing overburden and topsoil as development stages complete.

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