

STRIP MINING: THE DESTRUCTION OF ONTARIO FARMLAND

An invaluable Ontario resource — prime farmland — is fast disappearing. One of the major consumers of this land is the aggregate industry. Although the exact figures are unknown, one estimate from the University of Guelph is that 47% of Ontario's Class I and II agricultural land is underlain by aggregate deposits. While not all the aggregate is commercially valuable, a substantial amount of our best foodland may eventually be destroyed by pits and quarries. Within a 75 mile radius of Toronto, for example, there are at least 2,000 licenced open pit gravel mines covering 54,000 acres, most on Class I, II and III land.

The Canada Land Inventory classifies a land's capability for agriculture on the basis of its physical limitations. For example, within climatic restrictions, Class I land has no significant limitations on its capacity to sustain common field crops. Class II lands have moderate problems caused by topography, drainage, or soil structure and require more careful management. Crop yield from Class II land is about 80% of that from similarly situated Class I land. Class III has still more severe limitations resulting in crop yields of only about 65% of that from Class I land. Class IV land can sustain some crops, as well as pasture.

Prime agricultural land is one of Ontario's most valuable and limited resources, but it is not being replenished as it is destroyed. The best agricultural land is most highly concentrated in the southern part of Ontario, due to climatic and geological factors. Thus the region of greatest population is also the region with the best agricultural land. This places farming in direct competition with urban, in-

dustrial, and recreational land use. Peter Hannam, President of the Ontario Federation of Agriculture, identified the threat of pits and quarries in a speech to the Federation's Annual convention in November 1978. Pits, along with garbage dumps, airports and pipelines are some of the many urban intrusions which cities are "spewing into rural Ontario".

Certainly a great deal of land surface above aggregate deposits is too hilly and too stoney for cultivation, but it is equally certain that a great deal of irreplaceable Class I and II farmland is being torn up, particularly in Southwestern Ontario.

FAS researchers have contacted the Ministry of Natural Resources, the Ministry of the Environment, the Ministry of Agriculture and Food, and land use specialists at several universities in an effort to find out how much prime farmland is lost to the aggregate industry. Surprisingly, no Province-wide totals are available. Not one official in the Province of Ontario can say how many acres in total of our best foodland have been strip mined. A conservative estimate by FAS places the total at over 2,000 acres per year.

Conflicts over rural land use are usually resolved at the municipal level, so policies on the relative importance of extraction versus farming vary across the Province. At the Ontario Municipal Board level, objections based on the loss of prime farmland are not usually sufficient, in themselves, to prompt a recommendation against pit mining. The conflict might be seen in a different light should a Province-wide picture become available.

This conflict over land use was virtually ignored by the Ontario Mineral Aggregate

Working Party. They recommend pre-emptive land use rights for the extractive industry. The Proctor and Redfern inventory and study of aggregate resources in Southwestern Ontario briefly mentioned the problem. The report did not attempt any analysis or solution of the situation, except to point out that rehabilitation could put the land back into production.

Rehabilitation of farmland is a complicated and expensive procedure. Proper drainage must be re-created, and care be taken to control slopes so as to minimize soil erosion. To restore mined land to top quality farmland would easily double the price of gravel. It is unfortunate that we have the potential to reclaim the best farmland, but the extra care and preparation of the surface makes the cost prohibitive to most pit and quarry operators.

It must be pointed out that extensive rehabilitation can raise the agricultural capability of sites where cultivation had been marginal or impossible before mining. Sites where the aggregate deposit is right at the surface, combined with steep slopes, can be restored to a more level, stone-free surface better able to support crops.

On a Province-wide basis, there is presently no official information to show how much of the best farmland is lost to pits and quarries. It is clear that no matter how large its role, the aggregate industry is consuming top quality foodland which is seldom replaced. Ontario spans some 400,000 square miles, much of it rock and bush where farming is impossible. Why can't strip mining take place where the land is practically unused, instead of destroying our precious foodland?

GRAVEL EXTRACT

is published by the Foundation for Aggregate Studies
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With financial assistance from the Samuel and Saidye Bronfman Family
Foundation. ISSN No. 0705-0550

COLLECTIVE WISDOM

PROMISES, PROMISES but where is the new Act?

Another Committee, this time with four members of the Ministry of Natural Resources, is just winding up its review of the new draft pits and quarries control legislation. Headed by former senior Legal Counsel McTavish, MNR's lawyer Barry Jones, Ted Foster and Sherry Yundt, the Committee was struck to "iron out the wrinkles in the new Act".

According to an MNR spokesman, the Act is still "going back and forth" within the Ministry but is, once again, expected "to be tabled at the next session of the Ontario Legislature".

Meanwhile control, licencing and policing of pits and quarries continues in its inadequacy. Pits are being licenced willy nilly, the Niagara Escarpment Commission is working without the knowledge of the content of the new Act, municipalities are being denied suitable powers to control land use, environmental effects of pits and quarries are not being considered — all this without an overall Provincial planning policy.

We urge the Provincial government to move quickly to ensure this new legislation gets a fair public hearing at Standing Committee this spring. It is not only the Foundation for Aggregate Studies with its 22,000 members and member organizations, but the Producers, the local decision makers and the consumer, who have been waiting years for a good strong Act.

If Premier Davis presents the Province with an Act which includes full reclamation requirements, preservation of Class I-IV farmland, public protection from social and environmental impact and a transportation policy which conserves energy — his legislation will take the lead in Canada and set a worthy precedent.

But our time is running out, as we cannot make planning decisions based solely on promises. Come on Mr. Davis — your Act is long overdue.

THE GRAVEL EXTRACT aims to collect the local wisdom; to be a forum for some 850 municipalities in Ontario. Here you can contribute the experience of your community and benefit from the experience of other Ontario communities in meeting both the needs and problems of aggregate production. With your interest, the *Gravel Extract* will be a conveyor — stockpiling information from hundreds of municipal sources. But it will be a two-way conveyor. We will keep you posted on legislative changes, court actions, and the ways in which other provinces are coping with resource and environmental problems.

The editorial board of the *Gravel Extract* seeks to reflect your collective experience. But it is dependent on municipal and community leaders to keep abreast of developments in every part of Ontario. We look forward to hearing from you.

APAO's INTERFACE AVOIDS REALITY

Interface is the new quarterly magazine published by the Aggregate Producers Association of Ontario (APAO). Its' stated aim is "helping people to better understand the aggregate industry", but the first two issues fall short of that goal.

Rather than explaining or defending the day-to-day mining operations which cause the majority of complaints from the public, the publication sidesteps the issue altogether. But the presence of four rehabilitation-oriented articles in only two issues suggests that the industry is trying to give the impression that there is a lot more rehabilitation going on than is actually the case.

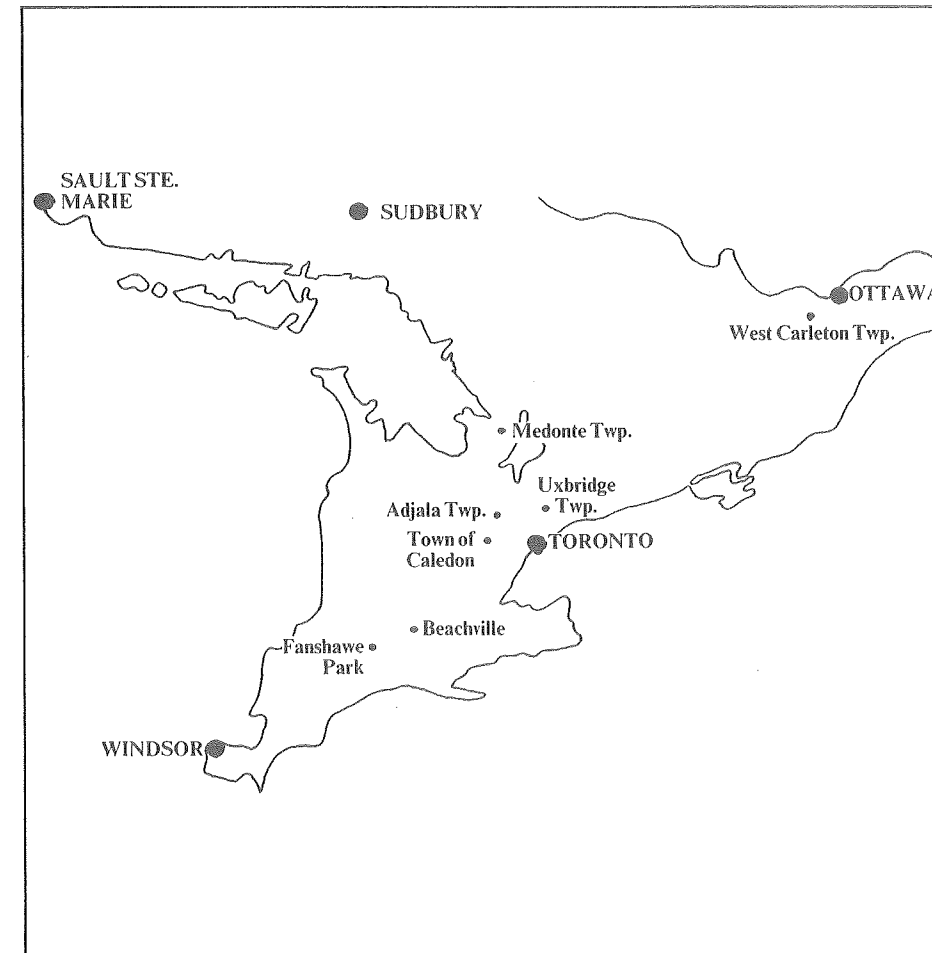
Along with slightly technical articles on aggregate deposits and non-traditional uses for the material, the quarterly is also used as a forum for the APAO's views. For example, in the first issue the Association came out strongly in favour of letting the Ministry of Natural Resources control extractive development along the sensitive Niagara Escarpment.

Interface presents a blinkered view of the aggregate industry and so far has not confronted the criticism and controversy which surrounds pits and quarries. Until it does it will not help anyone to better understand the industry. If the industry does not face the facts, it is unlikely that producers will clean up their act.

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MUNICIPAL NEWS ACROSS THIS PROVINCE



CALEDON OFFICIAL PLAN

Sand and gravel policies remain a question mark as the Town of Caledon Official Plan nears approval. Clerk C. Patterson told FAS "the Minister of Housing will probably approve most of the Plan, leaving the gravel issue and one or two other matters to be resolved at a later date".

The Town has long taken the position that no more land was to be designated for extraction until the Province brings down suitable new pit and quarry legislation. Now the Ministry of Natural Resources (MNR) is trying to force the Town to freeze development on 3000 — 4000 acres, in order to preserve it for future extraction. The Ministry wants Caledon to incorporate such a policy into its Plan. Mayor John Clarkson is annoyed at the request and feels that if the Province wants to freeze development it should be ready to buy the land.

Not only do the Town and MNR take a completely opposite view of future aggregate policy, but the request for a development freeze brings the Ministry into direct conflict with the Niagara Escarpment Commission. Much of the land the MNR wants to save for extraction lies within the Niagara Escarpment Planning Area, where further extraction is to be discouraged.

This is not the first time that the MNR has attempted to impose on a municipality regulations that they think may someday be law. Several years ago the Ministry tried to freeze aggregate reserves in Durham Region, but backed down in the face of public outcry. Now Caledon is feeling the same pressure. The final resolution of this basic policy conflict may well set an important precedent in the battle for municipal control of the aggregate industry.

Blasting in Medonte Township

Blasting at a quarry near the village of Coldwater, Medonte Township, which home-owners claim damaged windows and foundations, was halted through the efforts of Simcoe-East MPP Gordon Smith.

Local residents first complained in late August after experiencing damages due apparently to blasts at a quarry operated by Seegmiller Construction Company, under contract to the Ministry of Transportation and Communications (MTC). The MTC contract was let for the expansion of Highway 401 and has another 18 months to run. Initial meetings with company representatives were unsatisfactory to the residents, as they were told that the blasts would continue, and that they would have to submit individual damage claims to the operator's insurance company.

In September, Council decided to seek an injunction to halt the blasting. A soils expert explained that the local soil, once a lake bottom, tended to compact and settle when subjected to shock waves, producing the effect of earth tremors. Council also met with MPP Gordon Smith, who agreed to take their concerns to the MTC.

By the end of September Council had dropped injunction proceedings, as Smith had secured a promise from MTC deputy-Minister Harold Gilbert that in future the required gravel would be purchased from local pits. Some uncertainty still remained over whether this was a temporary or a permanent halt to the blasting.

It was not until a November letter to Council from James Snow, Minister of Transportation and Communications, that residents' fears were finally allayed. Clerk Tofts of Coldwater explained the final arrangements: "If more blasting is necessary next summer, it will not occur before agreement is reached between the gravel company, MTC, local residents, Village and Township officials, and the Ministry of Natural Resources. The MTC's insurance company is processing the damage claims and will shortly be passing them on to the Seegmiller Construction Company".

Fanshawe Park Gravel Deposit

The Upper Thames River Conservation Authority (UTRCA) is facing a dilemma over large sand and gravel reserves located in its Conservation Area at Fanshawe Lake. A study is currently underway to determine the distribution and quality of the deposit, which UTRCA officials believe to be quite valuable.

It appears that the developed section of the park, which includes a campground and a pioneer village, is underlain by the richest part of the deposit. If the reserves are mined, parts of the region's most heavily-used park will be turned into an open-pit mine. Balancing that aspect is the considerable financial gain the Authority expects to receive.

Conservation Authorities are responsible for water management, flood control, and conservation of the natural environment; they do not have a mandate for resource exploitation. An open-pit mine is the last thing one would expect to find in a Conservation Area.

The decision of whether to extract the gravel will be influenced by the outcome of the Environmental Impact Assessment of the proposed Glengowan Dam and Reservoir located upstream (northeast) of Fanshawe Dam. The study will look at the use of mined-out pits in a variety of water-

storage functions and combinations with the proposed and existing dams. The completed study, due in two years time, may endorse the creation of low-cost flood storage capacity formed by extracting some of the gravel.

Even before the Environmental Assessment is completed, the UTRCA must formulate a preliminary gravel policy for inclusion in the Master Plan for the future of Fanshawe Park.

Don Pearson of the UTRCA explained that the complexities of the situation will not be cleared up if the decision to mine is

made. "The pits could be used for flood storage, in which case they would be empty most of the year, or they could be used for low-flow augmentation, where they would be filled in spring and gradually drained as needed throughout the summer. Either way, all the usable aggregate will have to be removed at once, rather than over the twenty or forty year lifespan of a conventional pit.

"This leaves us with the problem of stockpiling all the material, because dumping it on the market would probably bankrupt all the local operators."

GRAVEL GOES METRIC

The Aggregate Producers Association of Ontario has announced that as of January 1, 1979, sand, gravel and crushed stone will be measured and sold in metric quantities.

The conversion chart below gives the metric equivalents of the most commonly used units.

METRIC	BRITISH
1 square kilometre	0.39 square miles
1 hectare	2.47 acres
1 cubic metre	1.308 cubic yards
1 tonne	1.1 tons



WEST CARLETON TOWNSHIP

A dispute over the proposed change from a wayside to a permanent licence at a site in West Carleton Township (northeast of Ottawa) has led to the Ontario Municipal Board, although a hearing date has not yet been set. (For an explanation of the difference between a wayside and a permanent pit, see page 6.)

The site had been operated intermittently under wayside permits since 1962. The present operator, Weldon Wilson, applied for a permanent licence in August, which was immediately met by strong opposition from area residents.

Discussions took place throughout the autumn between residents, Township Council, Mr. Wilson, and the Ministry of Natural Resources. The crux of the matter was a question of whether enough aggregate remained at the site to warrant a permanent licence. While the residents contended that there was not, two conflicting MNR estimates of the reserves fueled

both sides of the argument. Other objections concerned property devaluation, increased traffic, children's safety, and the fear that the site would soon be mined out and replaced with stockpiles, an asphalt plant, and related activities. The OMB hearing was requested on the basis of these complaints.

Council finally approved Wilson's application in November, after the operator agreed to comply with a detailed site and development plan. These provisions were not strict enough to satisfy the objectors, who have chosen to go ahead with the hearing.

A spokesman for the Township was pessimistic about the objectors' chances at the OMB. "Mr. Wilson already made a great effort to co-operate with the residents when he agreed to the licence provisions. Besides, most of the objectors moved into the area after the wayside operations had already begun, and they have lived with it this long".

PRIVATE MEMBER'S BILL WOULD FILL IN ABANDONED PITS

MPP David Warner (NDP — Scarborough) has introduced a private member's bill at Queen's Park which would, if passed, give the Provincial government power to fill in hazardous abandoned pits and quarries. The bill, designed as an amendment to the present *Pits and Quarries Control Act*, received its first reading on November 23, 1978.

Warner's legislation was prompted by the July drowning of a 15 year old boy in a water-filled pit in Scarborough. Under the provisions of this bill, the Minister of Natural Resources would assess the hazard associated with abandoned operations and order the dangerous sites to be filled in. The Minister would have the power to authorize the appropriate municipality or company to carry out the work.

Since this proposed amendment is in the form of a private member's bill, there is very little chance that it will ever become law. These bills are usually politically doomed, no matter how necessary or important their contents may be. Warner hopes, however, that calling attention to the problem will help persuade Minister of Energy and Natural Resources James Auld to adopt the provisions of his bill into the forthcoming new pit and quarry legislation.

UXBRIDGE

A lull has been reached in the battle between Uxbridge residents, Township Council and pit operator John B. Regan.

Residents have been angered by the outgoing Council's August decision to reconsider Regan's licence application, after initially refusing approval last May. Under a draft agreement Regan will pay the Township 6.5¢ per ton extracted until new provincial pit and quarry legislation is brought down. The proposed agreement would add another 500 acres to the Township's 5000 acres of licenced extractive property.

Ontario Municipal Board hearings, originally scheduled for November 20, 1978, have been postponed indefinitely. The hearings were to have considered three by-law changes and two zoning appeals, all stemming from the Regan Company's activities in Uxbridge Township. Council had been dismayed at the prospect of the Board dealing with five matters at once only a week after municipal elections, and resolved to seek the postponement.

The dispute had also engendered a \$1 million slander suit, launched by John B. Regan against local resident Eric Munding for remarks Mr. Munding allegedly made at a September Council meeting. A court date has not yet been set.

FAS AIDS ADJALA RESIDENTS

Residents of Adjala Township have called on the Foundation for Aggregate Studies (FAS) to help them deal with truck traffic from a local pit. A truck-school bus accident in 1977 and a series of close calls since then convinced residents in southern Adjala that it was time to take action.

Traffic from the James Dick Construction Limited pit, especially on the 3rd Line and 10th Sideroad, has caused concerns over children's safety, noise and dust pollution. At present there is no binding regulation covering hours of operation at the pit, although the company has agreed to pay 50% of dust control costs and pay for road maintenance along its truck routes.

With FAS's assistance, the residents' group will investigate whether the company is living up to its agreement with the Township, and will press for hours of operation to be specified in a binding agreement. The group hopes that tighter traffic regulations will reduce the accident danger on local roads.

Ratepayer Victory Over Dofasco

In a surprise announcement in early October, Dominion Foundry and Steel Company Limited (DOFASCO) informed Oxford County that it had withdrawn its plans for an industrial waste dump at Beachville. DOFASCO had originally planned to dump 2 — 4 million tons of iron oxides into mined out portions of a company-owned quarry at Beachville. (See *Gravel Extract*, Vol. 1, No. 2).

The plan had run into vigorous opposition from the Beachville and Area Ratepayers Association led by Maurice Benjamin, as well as from Norwich, South Oxford and Zorra Township Councils, and the Council of Oxford County. Local residents had feared dust, water pollution and increased truck traffic to the site.

The company said the application had been withdrawn because an alternate site had been selected. DOFASCO refused to explain where the new site is located, except to say that it is not in Oxford County.

WAYSIDE PITS: A Back Entrance to a Permanent Licence?

While by-laws and official plans can sometimes go a long way towards regulating land use, there is one operation councils are nearly powerless to prevent: the wayside pits permitted by the Ministry of Transportation and Communications (MTC). Municipalities also operate wayside pits to serve their local gravel needs, but at least retain control over their own operations. MTC wayside pits, licenced by the Ministry of Natural Resources (MNR), can be opened without any municipal consent, approval or control.

Difference Between Wayside and Permanent Pits

The only practical difference between wayside and permanent pits is the length of time for which they are intended to be open. A permanent licence, renewable annually, can be valid for perhaps forty years, whereas a wayside licence is meant to be temporary. It too must be renewed every year, but is not intended to be renewed more than once or twice. While the MTC and MNR do not specify a maximum time limit for wayside permits, these pits are meant to be open only for a short time, to supply aggregate to one specific highway project.

In all other respects, the operation of a wayside pit is identical to a permanent pit, although the permanent pit almost always has an approved site plan and rehabilitation plan, and its location is governed to some extent by zoning by-laws. The

wayside pit lacks any of these controls, yet there are no upper limits on tonnage extracted, area, or the number of times which the same site can be re-licenced.

Selection of Sites

When the MTC needs gravel for a roads project it gives out an Aggregate Source List to contractors, showing the locations of potential wayside pits in the project area. The Source Lists are compiled with the assistance of the MNR. As these sites already have MNR approval, the chosen contractor is assured of a wayside permit if he selects a site from this list.

When tenders are called for a specific project, the local Council is informed of the potential sites. This warning sometimes provides a chance to negotiate traffic and noise agreements, or even press for the use of an alternate site. The issuance of the licence need not comply, however, with any local wishes or regulations. No public hearings or notice are required, and residents' complaints can essentially be ignored. As part of the Provincial Government, the MTC is subject to an environmental assessment on any project unless, as so often happens, it is exempted by order of the Minister of the Environment.

Wayside pits are given this special status on the pretext that many highway projects need nearby material at short notice. The Ministry seeks to reduce costs by not having to wait for the preparation and approval of site plans and rehabilitation agreements.

Rehabilitation

MTC policy specifies that all wayside excavations must be rehabilitated when the permit expires. Meanwhile, a site can be re-licenced to serve different projects any number of times until it is mined out. This conflicts with the intent of rehabilitation, as there is obvious reluctance to sink money into the restoration of land which in all probability will be torn up in two or three year's time to permit further mining.

The MTC solution to this apparent problem is simple. Any acreage which is not reusable is rehabilitated. Mined areas still containing aggregate reserves are not restored at all, in case they may be mined again in the future. There are no regulations governing how long these half-restored holes can exist.

Predictably, the rehabilitation carried out at a site is minimal. Wayside operators do not pay even the 2¢ per ton security deposits so they have no financial commitment to rehabilitate. The MTC requires only that the pit be generally levelled, with the angle of steep slopes reduced. No matter what the previous ground cover, the land is then seeded with grass and mulched. Any more ambitious rehabilitation plans must be carried out at municipal expense.

More and more municipal councils are balking at approving new permanent licences before existing operations are mined out. It is becoming standard procedure in this situation for an operator to try to excavate on an infinite series of wayside licences, running a pit that is permanent in all but name.

HAMILTON ROCK GARDEN: REHABILITATION MYTH

When the aggregate industry discusses rehabilitation, nine times out of ten the Botanical Gardens in Hamilton will be mentioned as a prime example. Although this sounds like a very impressive project, a couple of background facts should put this work into perspective and dispel any misconceptions about the nature of the achievement.

While there is no doubt that this is a spectacular example of a rehabilitated pit, the aggregate industry cannot take credit for it. The only industry involvement was digging out the original pit site, leaving a gaping hole in the ground. Now it points with pride to a project which it did not plan or finance.

To begin with, the former pit is now the site of the Rock Garden, not to be confused with the entire Royal Botanical Gardens, of which it is but a small part. The Rock Garden comprises only 5 acres, the Botanical Gardens, some 2000.

Secondly, the rehabilitation was not financed by the aggregate industry, it was funded by the public as a relief project during the Depression. Labour was cheap and plentiful at that time. For 25¢ an hour, gangs of workmen contoured the pit slopes and brought in tons of rock from the surrounding area. This work was carried out far more cheaply than could ever be accomplished today.

From time to time a municipality will explore the idea of turning one of their abandoned pits into a similar beauty spot. The Botanical Gardens administrators warn that there is no way of replicating the project today without spending many millions of dollars. Maintenance and plant care alone would run to tens of thousands of dollars per year, making this a most impractical rehabilitation scheme.

Industry representatives would create a better impression by pointing out more economical restoration works. The award-winning rehabilitation and appearance of TCG's Brantford operation, for example, is one of the rare cases of a pit making a favourable impression on the public mind.

FAS Position Paper

The FAS Brief, *A Summary of Studies and Recommendations*, revised version, is now available. The new edition of the 1977 study includes the most up-to-date facts, figures and costs of aggregate extraction, transportation, rehabilitation, and socio-economic and environmental impacts.

Every citizen concerned with the Ontario sand and gravel situation should have this information.

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U.S. Studies Land Reclamation

Imagine far-reaching Federal or Provincial legislation that would finally ensure that pits and quarries are properly rehabilitated. Preliminary work is now underway to formulate just that sort of law in the United States.

A major U.S. study on the reclamation of land torn up by strip mining is being conducted by a branch of the National Research Council, as requested by the Council on Environmental Quality. The study group, known as COSMAR (Committee on Surface Mining and Reclamation) issued its first status report in mid-August.

The purpose of the COSMAR study is to help establish effective regulation of surface mining and land reclamation for extraction of materials other than coal. At present, the rehabilitation of open-pit coal mines is strictly controlled by a new Federal regulation, Public Law 95-87. (See *Gravel Extract* Vol. 1, No. 1.) Under this law, land stripped for coal mining must be restored to its original quality in terms of slope, soil, and vegetation. The objective of the COSMAR study is to identify how these regulations can be extended to other types of strip mining, including aggregate extraction.

The mining techniques and surface disruption caused by various types of activities will be examined to determine the degree to which the reclamation requirements of P.L. 95-87 can be met by modern technology, and at what expense. The Committee will investigate alternate regulatory mechanisms in an effort to ensure the best possible after-use of mined lands.

The Committee is subdivided into nine panels, one of which is the Panel on Construction Materials, comprising sand, gravel and crushed stone. Each Panel is preparing a Working Paper, which will form the basis of the COSMAR report, due in July 1979.

Other Panels will consider reclamation of land affected by the mining of such materials as oil shale, bauxite, phosphates, and uranium. Still others will examine pits with different ratios of ore to waste, water table effects, and the surface effects of underground mining.

COSMAR sub-committees, using the Panel findings, will consider open-pit mining and land reclamation in light of socio-economic impacts, environmental impacts, and alternative regulatory mechanisms.

The Committee's final report will form the groundwork for comprehensive Federal legislation to ensure that strip mining can no longer permanently lay waste to the landscape.





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