



City of Richmond

Report to Committee

To: Community Safety Committee **Date:** September 15, 2007
From: Phyllis Carlyle **File:** 12-8060-20-8094
 General Manager, Law & Community Safety
Re: Revised Soil Removal and Fill Deposit Regulation Bylaw No. 8094

Staff Recommendation

1. THAT the third reading of the Soil Removal and Fill Deposit Regulation Bylaw No. 8094 given on July 24, 2006, be rescinded;
2. THAT Soil Removal and Fill Deposit Regulation Bylaw No. 8094, as amended, in the form set out in Attachment 1 be given third reading.

Phyllis Carlyle
 General Manager, Law & Community Safety
 (604.276.4104)

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ROUTED TO:	CONCURRENCE		CONCURRENCE OF GENERAL MANAGER
Emergency and Environmental Programs	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Engineering	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Roads & Dykes.....	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Law	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Policy Planning.....	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
Transportation	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	
REVIEWED BY TAG	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	REVIEWED BY CAO
			YES <input checked="" type="checkbox"/>
			NO <input type="checkbox"/>

Staff Report

Origin

It was resolved at the open Council Meeting of July 24, 2006,

1. That the Soil Removal and Fill Deposit Regulation Bylaw No. 8094 be introduced and given third reading.
2. That public education initiatives be endorsed, and that the 'Soil Watch' signage program be developed in consultation with the City's Agricultural Advisory Committee.
3. That staff examine the feasibility of establishing a City-owned soil stockpiling facility.
4. That staff be requested to review the bylaw in twelve months' time.

Background

The Soil Removal and Fill Deposit Regulation Bylaw No. 8094 given third reading in July 2006 was, as required, forwarded for approval to the Minister of the Environment, the Minister of Energy, Mines and Petroleum Resources and the Minister of Community Services. Staff have had extensive discussions with each Ministry and have prepared a revised bylaw (Attachment 1) that incorporates the requested Provincial changes.

Analysis

Operational Issues

At the present time, City staff does not have the ability to enforce any standards regarding the quantity or quality of fill material that may be deposited onto Richmond properties designated as part of the Agricultural Land Reserve (ALR). When an alleged fill activity is observed by a resident and reported to the City, staff contact the Agricultural Land Commission (ALC) staff to ascertain whether this is an approved fill activity or not. While the City has a good working relationship with the staff at the ALC, there have been delays in ascertaining whether or not the property owner has obtained an approval from the ALC. In many cases, the owner advises that they have approval for their actions from the ALC. City staff have had discussions with the ALC's Director of Regional Operations in an attempt to understand ALC's situation and to facilitate a response to the City's inquiries in an efficient manner. In some cases, the properties are the subject of a 'stop work order' from the ALC and the City has not been advised in a timely manner.

The proposed bylaw will enable the City's enforcement team to deal more effectively with those owners who have not received approval from the ALC or are continuing with their fill operations in contravention of a 'stop work order' from the ALC. Unfortunately, the City is still not legislatively permitted to prohibit the deposit of soil or other material by reference to its quality or to contamination.

Collaborative Approach

During development of this bylaw, City staff has worked very closely with members of the City's Agricultural Advisory Committee (AAC), representing the forefront of the farming community in Richmond; the Minister of Agriculture and Lands; the Minister of the Environment; the Minister of Energy, Mines & Petroleum Resources; the Minister of Community Services and the ALC. The attached bylaw is the result of this collaboration and is intended to mirror the ALC Act in a number of significant ways:

- Provincial staff with the Ministry of Agriculture and Lands and the ALC have worked closely with the farming community in Richmond to produce a definitive outline of the activities that may occur on the ALR lands that would be considered 'normal farming practices' based on farming in general or are specific to the successful production of certain crops – this **Guidelines for Farm Practices Involving Fill** is posted on the Ministry web site for easy reference (Attachment 2).
- The requirements within the bylaw provide an efficient and advantageous mechanism for existing farm operations, to keep the City informed of activities involving soil removal and fill deposits that are part of 'normal farm practices' through the use of a one-page **Notice of Soil Removal or Fill Deposit** that would be completed and faxed to the Community Bylaws Division to document the activities and provide background for staff to address any inquiries or complaints from the public.
- For any new farming operations or activities that would be outside of 'normal farm practices', the bylaw outlines a comprehensive permit application process that addresses the jurisdictional issues between the ALC and the City and provides an approach that would permit the City's assessment and regulatory over-site regarding activities that are taking place on ALR lands and those activities that may not be farming operations.
- The Soil Removal & Fill Deposit Regulation Bylaw 8094 was revised with input from:
 - the Minister of the Environment for fill deposit operations;
 - the Minister of Energy, Mines & Petroleum Resources for soil removal operations; and
 - the Minister of Community Services for proposed fees.
- The City has been advised that the proposed bylaw will not require further approval from the Minister of the Environment and the Minister of Energy, Mines and Petroleum Resources. The proposed bylaws will maintain the existing spheres of Provincial authority and provide an effective permit process for the City. The City will again have to forward the revised Bylaw to the Minister of Community Services following third reading for approval of applicable fees before final adoption by Council.

Required Amendments

During the deliberations with staff at the offices of the Minister of the Environment and the Minister of Energy, Mines and Petroleum Resources, it became readily apparent that there would be no approval from either Minister for any City of Richmond bylaw which attempted to regulate or eliminate waste deposits or soil based on its quality or contamination. The amended bylaw, which is attached to this report,

provides the best possible regulation of fill activity or soil removal based on present Municipal jurisdiction.

The amendments made to the original bylaw essentially removed any reference to the prohibition of fill activity based on the quality of the fill material but support the Provincial regulatory framework presently in effect through the Agricultural Land Commission and the two Ministries involved. We maintain the ability to address any apparent negative physical impact on the City's roads, utilities and watercourses and any neighbouring properties through the permit process and related bylaws.

“Soil Watch” and Educational Initiatives

Staff in the Community Bylaws Division will be working closely with members of the AAC as well as the City's Engineering Department to develop the following:

- an educational program for the residents of Richmond using City resources such as the web site, the City pages in newspapers and other opportunities to raise the profile of the farming community, outline operations that are a normal part of a successful and thriving farming community and highlight the contributions that the farming community makes to the quality of life in Richmond, and
- a “Soil Watch” program which uses strategically placed signage within the ALR neighbourhoods within Richmond to draw attention to fill activities and provide a convenient, phone-based system to report these activities to City staff for appropriate action.

Establishment of a City-owned Soil Stockpiling Facility

Once the revised Bylaw has been adopted by Council, staff will continue exploring the availability of any City-owned property which may be used to provide an alternative location for the placement of clean fill. There are a number of large construction projects underway in Greater Vancouver and there is a shortage of property for any such stockpiling purpose.

Financial Impact

Staff estimates the cost of the “Soil Watch” signage and educational initiatives at \$10,000 and that the funds come from the general contingency account.

Conclusion

- The development of the Soil Removal and Fill Deposit Regulation Bylaw was the result of collaboration with Provincial agencies, Richmond's farming community and City staff in many areas.
- The adoption of the revised bylaw will assist staff in attempting to address many of the public inquiries regarding properties where fill is occurring that are brought to the City's attention.

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- The development of the "Soil Watch" signage program and educational initiatives will involve the community in activities on ALR lands and enhance the profile of Richmond's farming community.



Wayne G. Mercer
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WGM:wgm

Att: Guidelines for Farm Practices Involving Fill
Revised Soil Removal and Fill Deposit Regulation Bylaw No 8094



Soil Removal and Fill Deposit Regulation Bylaw No. 8094

The Council of the City of Richmond enacts as follows:

PART ONE – APPLICATION

1. Application

- 1.1 This bylaw applies only to lands located within an **agricultural land reserve**, as defined in this bylaw.
- 1.2 Nothing in this bylaw precludes or relieves a person from complying with the provisions of the *Agricultural Land Commission Act* and regulations or any other applicable local, provincial or federal enactment or regulation.

PART TWO – INTERPRETATION

2. Interpretation

- 2.1 In this bylaw:

AGRICULTURAL LAND RESERVE

means the area of land within the City of Richmond designated as protected agricultural land under the *Agricultural Land Commission Act*, as amended, and shown in the hatched areas outlined in bold in Schedule “A”, which is attached and forms part of this bylaw.

BC LAND SURVEYOR

means a person who is listed as a practicing member under Section 34(1) of the *Land Surveyors Act*, as amended.

CITY

means the City of Richmond.

COMMISSION

means the Provincial Agricultural Land Commission established under the *Agricultural Land Commission Act*, as amended.

COUNCIL

means the municipal council of the City of Richmond.

DEPOSIT	means to place, store, pile, spill or release, directly or indirectly, fill on a parcel or contiguous parcels of land where that fill did not exist or stand previously and includes a stockpile .
EXISTING FARM	means a parcel that has been previously operated as a farm in compliance with the <i>Agricultural Land Commission Act</i> and a parcel designated as a farm operation through property assessment and property tax designation.
FARM	means a parcel for farming purposes, such as farming of plants and animals, and includes a farm business or farm operation as specified in the <i>Farm Practices Protection (Right to Farm) Act</i> .
FILL	means a deposit comprised of soil or permitted material or combination thereof.
GUIDELINES FOR FARM PRACTICES INVOLVING FILL	means the document published by the <i>Ministry of Agriculture and Lands</i> , which outlines standard practices of agricultural fill , as amended.
HIGHWAY	includes a street, road, lane, bridge, viaduct and any other way open to public use, other than a private right-of-way on private property or any other public right-of-way as defined in Part 1 of the <i>Transportation Act</i> .
MANAGER	means Manager, Community Bylaws and any person designated by the Manager to act in Manager's place.
PARCEL	means any lot, block or other area in which land is held or into which land is subdivided but does not include a highway .
PERMIT	means an authorization to remove soil or deposit fill issued under this bylaw.
PERMITTED MATERIAL	includes: <ul style="list-style-type: none"> (a) any material that is listed in the <i>Guidelines for Farm Practices Involving Fill</i>, or that is used as specified in the <i>Guidelines for Farm Practices Involving Fill</i>;

- (b) any material not specified in (a) that is certified in writing, as a standard farm practice, by a **Professional Agrologist** in a form acceptable to the **Manager**; and
- (c) any material that is authorized for **deposit as fill** at a specified location by the Commission pursuant to Section 20 (3) of the *Agricultural Land Commission Act*, as amended.

**PROFESSIONAL
AGROLOGIST**

means a person who is a member in good standing under Section 15 of the *Agrologist Act*, as amended.

PROFESSIONAL ENGINEER

means a person who is a certified member under Section 20 of the *Engineers and Geoscientists Act*, as amended.

PROVINCIAL ENACTMENT

means an enactment of the Province of British Columbia.

REMOVAL

means to remove **soil** from a **parcel** or contiguous parcels of land on which it exists or has been deposited.

SOIL

means topsoil, sand, gravel, rock, silt, clay, peat or any other substance of which land is composed, or any combination thereof;

STOCKPILE

means a man-made accumulation of **soil** held in reserve for future use, **deposit** or **removal**.

WOODWASTE

means a wood by-product as defined under the *Code of Agricultural Practice for Waste Management* and includes hog fuel, mill ends, wood chips, bark and sawdust but does not include demolition waste, construction waste, tree stumps, branches, logs or log ends.

PART THREE – RESTRICTIONS AND EXEMPTIONS

3.1 Restrictions

- 3.1.1 Subject to a **Provincial enactment** and any procedure, authorization or permission thereunder, no person shall **deposit soil**, or cause, suffer or permit the **deposit** of **soil** on any land within the **agricultural land reserve** except in accordance with this bylaw.

3.1.2 Except as otherwise provided in this bylaw, but subject to any procedure, authorization, or permission respecting activity regulated under an applicable **Provincial enactment**, no person shall carry out, cause, suffer or permit the **removal of soil** from, or the **deposit of fill** on, any land located within the **agricultural land reserve** without first making application for and obtaining a **permit** from the City, and every such deposit or removal shall conform in all respects to the requirements and regulations of this bylaw and the terms and conditions of the **permit**.

3.2 Exemptions

3.2.1 Despite Section 3.1.2, a **permit** is not required where the **deposit or removal**:

- (a)
 - (i) is related to, or carried out in connection with, an existing “farm use” or “non-farm use” supported by a “Notice of Intent”, as defined in the *Agricultural Land Commission Act* and submitted and acknowledged pursuant to that Act;
 - (ii) is for an approved farm practice as defined in the *Guidelines for Farm Practices Involving Fill* on an existing farm operation; and
 - (iii) is outlined in a “Soil Removal or Fill Deposit Notice”, identified in Schedule “B”, which is attached and forms part of this bylaw, and is submitted to the City for an existing farm operation, as indicated by their property assessment and property tax designation, a minimum of five (5) business days prior to scheduled **soil removal or fill deposit**;
- (b) will not:
 - (i) exceed One Hundred (100) cubic metres in volume on or from a single **parcel** over one calendar year; and
 - (ii) exceed one (1) metre in depth at any point; and
 - (iii) be carried out for more than One (1) month in duration;
- (c) is by a floriculturalist or horticulturist on lands owned by that person or business and in connection with such trade or business;
- (d) is required for the erection of a building or structure under a valid building permit or development permit issued by the City, where the **deposit or removal** is in accordance with the approved drawings submitted as part of the application for the building permit;
- (e) is related to the construction of works and services for a subdivision where the **deposit or removal** is in accordance with the approved drawings submitted as part of the application for subdivision;

- (f) is required to create, maintain or repair a private road, driveway, paved parking area, dyke or any **highway** or statutory right-of-way necessary to accommodate a permitted use on the property;
- (g) is required for the construction, maintenance or repair of utility works within a **highway** or municipal works, by or on behalf of the **City**;
- (h) involves the movement of existing **soil** within the boundaries of a single **parcel** or contiguous parcels of land;
- (i) is required for the construction or maintenance of a private sewage disposal system or septic field for which a permit has been granted; or
- (j) involves the open storage or stockpiling of **soil** or **woodwaste** intended to be processed and removed in connection with a lawful use of the land on which they are stored.

PART FOUR – PERMIT APPLICATION PROCESS

4.1 Application Requirements

- 4.1.1 Every application for a **permit** shall be made in writing to the **Manager** using the “Application for Soil Removal / Fill Deposit” provided for that purpose by the **City**, identified in Schedule “C”, which is attached and forms part of this bylaw and shall include:
- (a) a non-refundable application fee of Six Hundred Dollars (\$600.00);
 - (b) a security deposit in accordance with the requirements of Section 4.2.1;
 - (c) the following documents, plans and information relating to the proposed **removal** or **deposit** operation:
 - (i) evidence, satisfactory to the **Manager**, that an applicable application for **soil removal** or **fill deposit** has been made under the *Agricultural Land Commission Act*, as amended, and approved by the **Commission**;
 - (ii) a description of the composition and volume of the **soil** to be removed or **fill** to be deposited as prepared by a **Professional Agrologist**;
 - (iii) the street location, legal description and a copy of the title search of the **parcel**;
 - (iv) the consent in writing of the registered owner or owners of the **parcel**;
 - (v) a plan in reasonable detail indicating clearly the location of the proposed **deposit** or **removal** and all pertinent topographic features, including existing buildings, structures, watercourses and tree cover;

- (vi) the depths and proposed slopes which will be maintained upon completion of a **removal or deposit**;
- (vii) the methods proposed to control the erosion of the banks of a **removal or deposit**;
- (viii) the proposed methods of drainage control for the site during and after a **removal or deposit**;
- (ix) the proposed methods of access to the **removal or deposit** site during the operation including a scale map of the proposed routing and scheduling of truck and vehicular traffic;
- (x) evidence, satisfactory to the **Manager**, that all requirements have been met under the City's *Boulevard and Roadway Protection and Regulation Bylaw No. 6366*, as amended;
- (xi) evidence, satisfactory to the **Manager**, that all requirements have been met under the City's *Tree Protection Bylaw No. 8057* as amended;
- (xii) the location and size of any buffer zones necessary to provide a visual and sound barrier between the **permit** area and adjacent lands, parks, roads, **highways** and other uses;
- (xiii) the proposed methods of noise and dust control during the **removal or deposit** operation, in compliance with the City's *Public Health Protection Bylaw No. 6989*, as amended;
- (xiv) the proposed completion dates for all **removal or deposit** operations;
- (xv) where requested by the **Manager**, site plans prepared by a **BC Land Surveyor or Professional Engineer** which plans may be required to show or include, without limitation, a statement of the volume of **soil** to be removed or **fill** to be deposited along with the calculations, cross-sections and other data and information used in calculating estimated total volume, site contours, particulars as to the present use and occupancy of the **parcel**, proposed slopes, pertinent topographic features, buildings, highways, watercourses and all other structures, utilities and facilities;
- (xvi) an indemnity in favour of the **City**, in the form prescribed, indemnifying and saving harmless the **City**, its agents, employees, officers and servants, from and against all claims, demands, losses, costs, damages, actions, suits or proceedings whatsoever by whomsoever brought by reason of, or arising from, the issue by the **City** of a **permit** under this bylaw to conduct the proposed **deposit or removal** operation; and

- (xvii) such further and other information as the **Manager** determines is necessary to adequately describe the nature and extent of the **removal** or **deposit** operation.

4.2 Security

- 4.2.1 Prior to the issuance of a **permit**, every applicant must deposit with the **City**, security in the form of cash or an unconditional, irrevocable letter of credit drawn on a Canadian financial institution, in a form acceptable to the **Manager**, in an amount equal to Twenty Dollars (\$20.00) per cubic metre of **soil** to be removed or **fill** to be deposited, based on the volume as outlined in the applicable reports submitted under Section 4.1.1 (c)(ii) and Section 4.1.1(c)(xv), to a maximum of Ten Thousand Dollars (\$10,000.00), to ensure full and proper compliance with the provisions of this bylaw and all terms and conditions of the **permit**.
- 4.2.2 That portion of the security deposit not required for the foregoing purposes or to repair damage to **City** property caused by the **removal** or **deposit** operations shall be returned to the applicant upon receipt of a final report, in a form acceptable to the **Manager**, from the **Professional Agrologist** and the **Professional Engineer** providing applicable documentation under Section 4.1.1(c)(ii) and Section 4.1.1(c)(xv) respectively and confirming that all aspects of the original **removal** or **deposit** operation have been fulfilled. Any assessment of damage to **City** property or the costs of necessary repairs will be provided by the General Manager, Engineering & Public Works or designate.

4.3 Permit Issuance

- 4.3.1 Subject to Section 4.3.2, where:
 - (a) an application for a **permit** complies with the requirements of this bylaw;
 - (b) the proposed **removal** or **deposit** complies with this bylaw and all other applicable **City** bylaws;
 - (c) the proposed **removal** or **deposit** has been approved by the **Commission**; and
 - (d) the **Manager**, having regard to the documents, plans and information submitted with the application for a **permit**, is of the opinion that the **deposit** or **removal** operation can be carried out safely, without undue nuisance or interference to adjacent parcels or the public, or damage or injury to persons or property;the **Manager** may issue a **permit**.
- 4.3.2 The **Manager** must not issue a **permit** where the proposed **removal** or **deposit** could reasonably be expected to:
 - (a) reduce, damage or otherwise adversely affect the long-term agricultural viability of the **parcel** which is the subject of the **permit** or any adjacent or nearby **parcel**;

- (b) endanger, damage or otherwise adversely affect any adjacent **parcel**, structure, **highway**, easement, utility works and services or right-of-way;
- (c) foul, obstruct, impede or otherwise adversely affect any stream, creek, waterway, watercourse, groundwater aquifer, waterworks, ditch, drain, sewer or other established drainage facility; or
- (d) endanger or otherwise adversely affect an environmentally sensitive area.

For the purposes of making a determination under this section, the **Manager** may require an applicant to obtain a report by a **professional engineer**, scientist, technician or other person qualified under a **Provincial enactment** to make an assessment or recommendation on the matter and the **Manager** may refuse, limit, or impose conditions on a **permit** based on information or advice provided in such a report or reports.

4.4 Expiry

- 4.4.1 Every **permit** shall expire twelve (12) months from the date of issue or upon such earlier date as may be specified in the **permit**.

4.5 Renewal, Extension or Modification

- 4.5.1 If the **removal** or **deposit** operations authorized by a **permit** are not completed before the **permit** expires, or it becomes necessary to alter or deviate from the particulars of the **permit** application or drawings submitted for a **permit**, the **Manager** may renew, extend or modify the permit upon written request of the **permit** holder, subject to the following:
 - (a) a **permit** holder has no vested right to receive an extension, renewal or modification and the **Manager** may require that a new **permit** application be submitted;
 - (b) the permit holder shall pay a non-refundable fee of One Hundred Dollars (\$100.00)
 - (c) the application for a renewal, extension or modification is received no later than thirty (30) days before the expiry date of the existing **permit**;
 - (d) the **Manager** may renew or extend a **permit** for an additional period of not more than one (1) year, except where the extraction or processing of aggregate or minerals is being carried out pursuant to a valid permit issued under the *Mines Act* or other **Provincial enactment**, in which circumstance a **permit** may be renewed as required, but continues to be subject to all other terms and conditions of this bylaw and other applicable enactments;
 - (e) the **Manager** may require that the **permit** holder provide additional information authorized by this bylaw as a pre-condition to considering an application for a **permit** renewal, extension or modification; and

- (f) all terms and conditions set out in the original **permit** shall apply to each renewal, extension or modification of the **permit** except as amended or modified by the renewal, extension or modification.

PART FIVE – REGULATIONS

5.1 Regulations

- 5.1.1 Every **removal** of **soil** or **deposit** of **fill** shall comply with, and every **permit** issued under this bylaw is subject to the observance or fulfilment of, the following requirements, restrictions and regulations, to the satisfaction and approval of the **Manager**:
 - (a) no **soil removal** or **fill deposit** activities may be carried out between the hours of 8:00 p.m. and 7:00 a.m. the following morning;
 - (b) no **soil removal** or **fill deposit** activities may be carried out on a Sunday or any statutory holiday;
 - (c) every vehicle used for hauling **soil** or **fill** shall be properly licensed and insured and in compliance with all applicable laws and regulations governing the use and operation of the vehicle on a **highway**;
 - (d) every load of **soil** or **fill** shall be fully and properly covered so as to prevent **soil**, **fill** or dust from blowing or falling from the vehicle;
 - (e) all damage to drainage facilities, natural watercourses, **highways** or other public or private property shall be promptly and properly repaired to the satisfaction of the **Manager** at the expense of the **permit** holder;
 - (f) all streams, creeks, waterways, natural watercourses, groundwater aquifers, waterworks, ditches, drains, sewers or other established drainage facilities shall be kept free of all **soil** or **fill** arising from or caused by the **removal** or **deposit** operations;
 - (g) no **removal** or **deposit** greater than One-half (0.5) metres in depth shall be undertaken within Two and One-half (2.5) metres of any utility pole, pipeline, structure or **highway** or below overhead wires without giving prior notice to and receiving written approval from the **City** or other authority having jurisdiction;
 - (h) no **removal** or **deposit** shall be undertaken on a **highway**, statutory right-of-way or easement without first obtaining the permission in writing of the **City** or other authority having jurisdiction over such **highway** or statutory right-of-way;
 - (i) all structures or excavations erected or made in connection with a **removal** or **deposit** operation shall be temporary in nature and shall be removed forthwith upon completion of the operation;

- (j) all hazards or potential hazards arising from the **removal** or **deposit** operation shall be adequately fenced or otherwise protected for the safety of the public;
- (k) during and upon completion of every **removal** or **deposit** operation, the boundaries of all adjacent **parcels**, **highways**, rights-of-way and easements shall be protected from erosion or collapse and from run-off of water or mud;
- (l) all **stockpiles** of **soil** or **fill** shall be confined to the locations prescribed in the **permit** and shall be maintained so that they do not adversely affect or damage adjacent **parcels** or cause a nuisance to any person;
- (m) all **removal** or **deposit** operations must not encroach upon, undermine, damage or endanger any adjacent **parcels** or any setback area prescribed in the **permit** or a bylaw; and
- (n) all **removal** or **deposit** operations shall be limited only to the area specified in the **permit** which shall be clearly marked at the site and such markings maintained for the duration of the **permit**.

5.1.2 The **Manager** may issue a **permit** subject to the observance or fulfilment of additional conditions specified in the **permit** which in the opinion of the **Manager** are necessary to achieve the purposes of this bylaw.

PART VI – ADMINISTRATION

6.1 Right of Entry for Inspection

6.1.1 Subject to any requirements of a **Provincial enactment**, the **Manager** is hereby authorized at all reasonable times to enter upon and inspect any **parcels** to determine whether the requirements, restrictions, regulations, terms, conditions and directions of this bylaw or a **permit** are being observed. For certainty, any entry by the **Manager** to a site that is a “mine” for the purposes of the *Mines Act* must be conducted in compliance with the entry provisions of the Health, Safety and Reclamation Code for Mines in British Columbia under the *Mines Act*.

6.1.2 No person shall prevent or obstruct or attempt to prevent or obstruct the **Manager** from entering upon **parcels** as authorized by Section 6.1.1.

6.2 Notice of Non-compliance

6.2.1 The **Manager** may give notice to any person of a breach of, or non-compliance with, any of the provisions of this bylaw or a **permit** issued thereto and such person shall immediately cease all **soil removal** or **fill deposit** activities until such breach or non-compliance is remedied to the satisfaction of the **Manager**, and every owner of a **parcel** shall refuse to permit the further **removal** of **soil** or **deposit** of **fill** from or upon the **parcel** until such time as the breach or non-compliance is remedied to the satisfaction of the **Manager**.

6.3 Failure to Remedy Non-Compliance

6.3.1 In the event that any person having received notice of breach fails within the time specified therein to remedy such breach, the City or its appointed agents may enter upon the **parcel** or any part thereof and carry out the works required to remedy the breach, and the expense of doing so shall be paid by the person in breach and, if not paid within 90 days, the expense, with interest at the prescribed rate and costs, shall be recovered in the same manner as municipal taxes.

6.4 Suspension or Cancellation of Permit

6.4.1 If:

- (a) there is a contravention of any term, condition, requirement or restriction of this bylaw or a **permit** issued under this bylaw; or
- (b) a **permit** was issued under this bylaw on the basis of statements made in the permit application or a report, declaration or record required under this bylaw, that were false or misleading with respect to a material fact or that omitted to state a material fact, the omission of which made the statement false or misleading;

the **Manager** may:

- (i) suspend in whole or in part the rights of the **permit** holder under the **permit**;
- (ii) cancel the **permit**; or
- (iii) amend or attach new conditions to a **permit** with the written consent of the **permit** holder.

6.5 Right of Reconsideration

6.5.1 Where an applicant or owner of a **parcel** is subject to a requirement or a decision made by the **Manager** under this bylaw and is dissatisfied with the requirement or decision, the applicant or owner may apply to the General Manager, Engineering and Public Works for reconsideration of the matter within 30 days of the requirement or decision being communicated to them.

6.5.2 An application for reconsideration must be delivered in writing to the City Clerk and must set out the grounds upon which the applicant considers the requirement or decision of the **Manager** inappropriate and what, if any, requirement or decision the applicant or owner considers the General Manager, Engineering and Public Works ought to substitute.

6.5.3 The General Manager, Engineering and Public Works may hear from the applicant and any other person interested in the matter under reconsideration who wishes to be heard and may either confirm the requirement or decision of the **Manager** or substitute its own requirement or decision.

PART SEVEN – OFFENCES AND PENALTIES

7.1 Offences and Penalties

7.1.1 Any person who contravenes or violates any provision of this bylaw or any **permit** issued under this bylaw or who suffers or allows any act or thing to be done in contravention or violation of this bylaw or any **permit** issued under this bylaw, or who fails or neglects to do anything required to be done under this bylaw or any **permit** issued under this bylaw, commits an offence and upon conviction shall be liable to a fine of not more than Ten Thousand Dollars (\$10,000.00) and where the offence is a continuing one, each day that the offence is continued shall constitute a separate offence.

PART EIGHT – SEVERABILITY AND CITATION

8.1 Severability

8.1.1 If any section, subsection, sentence, clause or phrase of this bylaw is for any reason held to be invalid by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this bylaw.

8.2 Citation

8.2.1 This Bylaw is cited as “Soil Removal And Fill Deposit Regulation Bylaw No. 8094”.

FIRST READING

SECOND READING

THIRD READING

ADOPTED

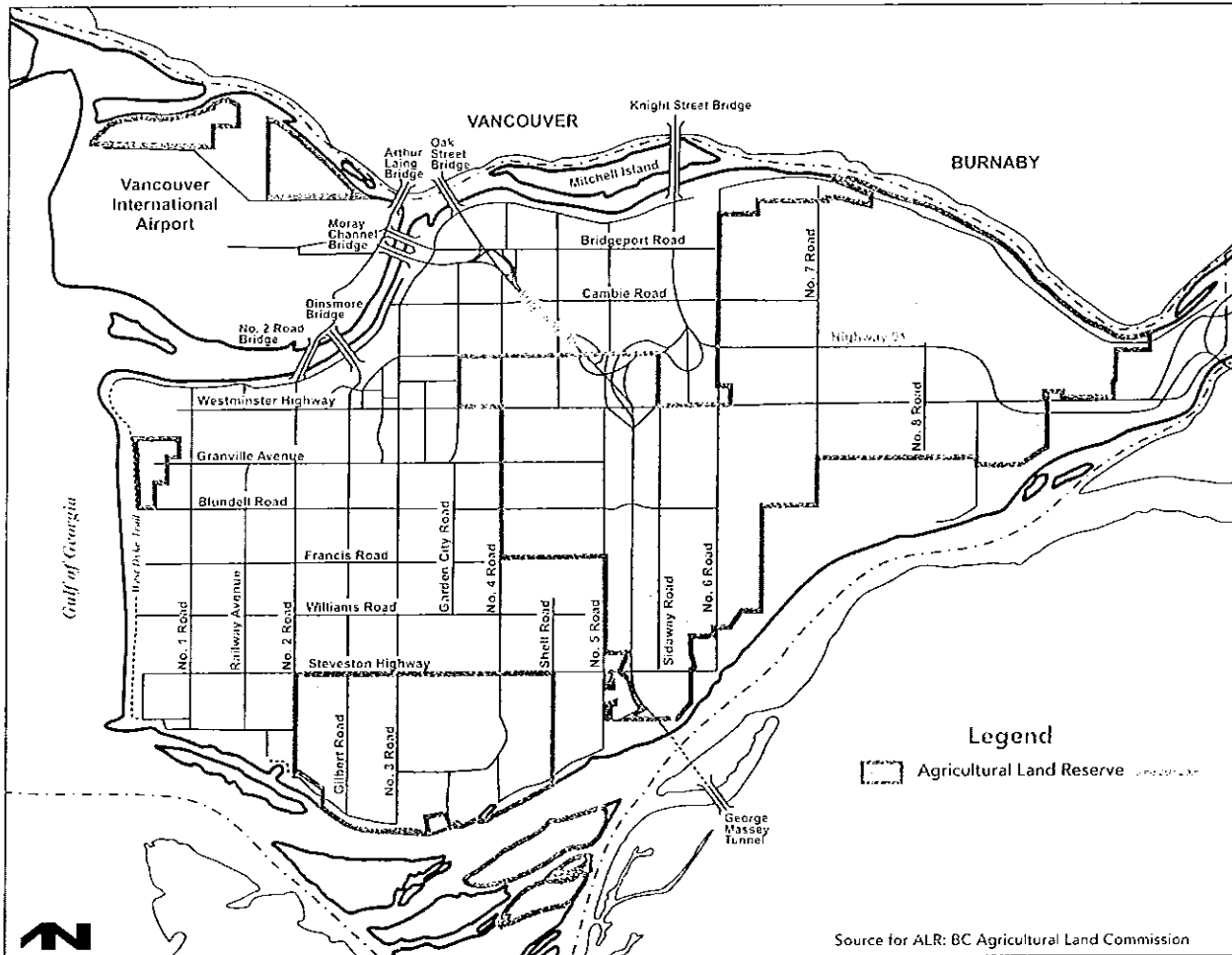
CITY OF RICHMOND
APPROVED for content by originating dept.
APPROVED for legality by Solicitor

MAYOR

CORPORATE OFFICER

SCHEDULE A TO BYLAW NO. 8094

Agricultural Land Reserve
City of Richmond



SCHEDULE B to BYLAW NO. 8094

Notice of Soil Removal or Fill Deposit
Existing Farm Operations - Agricultural Land Reserve

Notice to remove soil

Notice to deposit fill

Owner: _____

Address: _____

Telephone: (B) _____ (C) _____

Fax: _____ Email: _____

Address of Property, or Legal Description _____

Current Use of Property: _____

Adjacent Uses: North: _____ East: _____
South: _____ West: _____

Purpose of Project (reference *Guidelines for Farm Practices Involving Fill (BC Ministry of Agriculture and Lands)*)

Volume: _____ cubic metres Depth _____ metres

Declaration: I We declare that:

- the information provided in this document is true and correct, to the best of my/our knowledge, and
- that any fictitious or misleading information that I/we provide may be a violation of the City of Richmond Soil Removal and Fill Deposit Regulation Bylaw No 8094 and punishable by a fine of up to \$10,000.

Date

Signature of Owner

Print name

SCHEDULE C to BYLAW NO. 8094

Application for Soil Removal / Fill Deposit
Proposed Farm or Non-Farm Operations - Agricultural Land Reserve

Application to remove soil

Application to deposit fill

Owner: Agent:
Address: Address:
Telephone: (B) Telephone: (B)
(C) (C)
(F) (F)
Email: Email:

Address of Property or Legal Description
Size of Property / Parcel: hectares
Current Use of Property:

Adjacent Uses: North: Total Project Area: hectares
East: Volume of Soil or Fill: cubic metres
South: Depth of Soil or Fill: metres
West: Duration of Project: weeks / months

Type of Soil / Fill Material (reference Guidelines for Farm Practices Involving Fill (BC Ministry of Agriculture and Lands))

Purpose of Project (reference Guidelines for Farm Practices Involving Fill (BC Ministry of Agriculture and Lands))

Proposed Reclamation Measures (for soil removal projects)

Application for Soil Removal / Fill Deposit Proposed Farm or Non-Farm Operations - Agricultural Land Reserve

Has a Professional Agrologist reviewed the project and provided a written report? Yes No
(If yes, please attach a copy of the report)
(If no, please explain why) _____

Has a Professional Engineer reviewed the project and provided a written report? Yes No
(If yes, please attach a copy of the report)
(If no, please explain why) _____

Are you hereby undertaking to provide a security deposit as outlined in Section 4.2.1 of the City's Soil Removal and Fill Deposit Regulation Bylaw No 8094 (deposit is required to be in place before any permit is issued) Yes No

Have all requirements been met under the following City Bylaws:

Boulevard and Roadway Protection and Regulation Bylaw No. 6366 Yes No

Tree Protection Bylaw No. 8057 Yes No

Public Health Protection Bylaw No. 6989 Yes No

(If yes for any, please attach confirmation)
(If no for any, please explain why) _____

Please attach the following documents:

- Copy of Submission to Agricultural Land Commission
- Certificate of Title or Title Search Print
- Map or sketch of parcel showing the proposed project
- Map of Routing and Schedule for Vehicular Traffic
- Any photographs
- Other Documents as Required under Section 4.1

Declaration: I/We declare that:

- the information provided in this document is true and correct, to the best of my/our knowledge, and
- that any fictitious or misleading information that I/we provide may be a violation of the City of Richmond Soil Removal and Fill Deposit Regulation Bylaw No 8094 and punishable by a fine of up to \$10,000.

Date

Signature of Owner

Print name

Strengthening Farming FACTSHEET

Attachment 2



Ministry of
Agriculture and Lands

Order No. 820.200-1
December 2006

GUIDELINES FOR FARM PRACTICES INVOLVING FILL

This Factsheet describes farm practices involving soil and/or woodwaste fill, and the rationale/references for these practices. The Factsheet also includes suggestions to local governments as to the type of notice they may require, in order to balance the needs of a viable agricultural industry with the local governments' ability to take action against property owners who violate a bylaw, Agricultural Land Commission requirements, or other provincial and federal regulations.

Be Advised:

- The Agricultural Land Commission (ALC) Act defines "fill" as any material brought on land in the ALR. Except where exempted by regulation, the placement of fill in the ALR is a non-farm use activity and is illegal without approval or authorization of the ALC. The exemptions provided in the ALC Regulations, however, allow filling where necessary for farm uses, and other permitted uses, provided that the filling activity does not (a) cause danger on or to adjacent land, structures or rights of way, or (b) foul, obstruct or impede the flow of any waterway. For 'specified' farm uses a notification process is additionally set out in the Regulations.
- Fill to raise the soil surface elevation to address on-farm soil drainage issues typically requires an application to the ALC.
- Farmers are advised that a plan should be prepared prior to any fill use. The plan should describe the purpose as well as explain why the placement of fill is necessary for the farm use, or for a permitted use. It should include information on the location and area to receive fill, the volume, quality, and method of placement of the fill material, as well as any potential drainage impacts or requirements.
- Farmers should also check with their local governments in advance for any restrictive covenants, zoning, regulations or permit requirements that would prohibit/limit the use of fill.

Recommended Local Government Notice

Local governments are encouraged to exempt or waive permit requirements and fees for farm uses that are consistent with these farm practice guidelines. However, individual local government approaches vary, and specific requirements may be identified by a local government upon receipt of a notification. A sample local government fill notice is appended to this factsheet.

Definitions of Terms use in this Guideline

The terms “woodwaste” and “soil” are used repeatedly throughout this Factsheet in reference to “fill” materials that are suitable and appropriate for particular farm uses on agricultural land. The commonly accepted definition of these two “fill” materials is given below.

Woodwaste*:

Code of Agricultural Practice for Waste Management (under EMA) “Woodwaste includes hog fuel, mill ends, wood chips, bark and sawdust, but does not include demolition waste, construction waste, tree stumps, branches, logs or log ends.”

Note:

- While “woodwaste” is the term used in the regulations, it is actually a wood byproduct and not a waste material.
- Most woodwaste used for agricultural purposes may include bark material.

Farm Practices Description, BCMAFF, January 2004 “Woodwaste deposits must not exceed a total depth of 30 cm, which should be achieved by applying layers that do not exceed 15 cm per year. The volume and manner in which woodwastes are applied must follow good agronomic practices for the soil type, climatic area and crop to be grown.”

Note:

- Woodwaste storage would obviously exceed the 30 cm depth.

Soil**:

The definition in the Agricultural Land Commission Act is “includes the entire mantle of unconsolidated material above bedrock other than minerals as defined in the *Mineral Tenure Act*.”

Note:

- A local government bylaw definition may wish to only include clay, silt, sand, gravel, cobbles or peat.
- Soil is typically a mixture of mineral material, organic (living and decaying) matter, air and water that is capable of supplying nutrients, moisture, and can serve as a growth medium for plants.

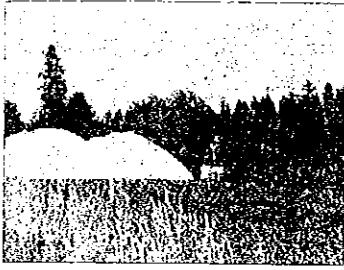
Guidelines

a) Applying woodwaste* as a soil conditioner at planting (e.g. for new plantings of blueberries or cranberries)

i) Berry Production Guide, BCMAFF, 2005-2006

- In blueberries, plants grown on mineral soil will benefit from the application of sawdust before planting.
- Woodwaste (shavings or sawdust) is used as a soil amendment to improve the tilth of raised planting beds on mineral soils. Build raised beds after the sawdust is incorporated.
- Good drainage can be promoted by incorporating a small amount of sawdust in the beds before planting.
- Before transplanting on mineral soils, apply a 5 to 10 cm layer of sawdust over the planting bed and incorporate into the top 15 to 20 cm.
- The optimum soil pH for blueberries is 4.5 to 5.2. Sawdust, incorporated into the soil when beds are formed, lowers the soil pH slightly and also increases the organic matter content.



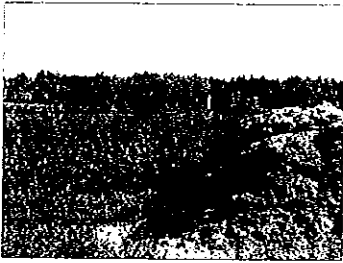


ii) Crop Profile for Cranberries in British Columbia
BCMAL, 2006

- Some growers, especially those who do not have ideal peat, may layer sand or sawdust over mineral soils in order to plant vines. This practice has been used very successfully to encourage vine establishment.
- In BC cranberries are grown primarily on peat soils. They are also grown on mineral soils with higher organic matter and in fields top dressed with sand or sawdust. They prefer an acidic pH of about 4.0 to 5.0 in the root zone.

iii) EFP Reference Guide, 2005

- Apply woodwaste as a soil conditioner only to mineral soils having a carbon-nitrogen ratio (C:N) of 30:1 or lower. Note: This C:N ratio does not apply to organic soils.



iv) Code of Agricultural Practice for Waste Management
(under EMA)

- Part 7, Section 20: Wood waste may only be used for (a) plant mulch, soil conditioner, ground cover, on-farm access ways, livestock bedding and areas where livestock, poultry or farmed game are confined or exercised, b) berms for cranberry production, or c) fuel for wood fired boilers.

v) ALR Use, Subdivision and Procedure Regulation
(under ALC Act)

- The storage and application of fertilizers, mulches and soil conditioners are designated farm uses and are specifically referred as 'permitted farm uses' under the Regulations. The placement of these types of 'fill' materials is exempted from the requirements for a non-farm use application to the Commission. The necessity for land applying these 'fill' materials requires that their placement is for an agronomic purpose and at an agronomically determined rate. These activities are permitted subject to not causing danger on or to adjacent lands or fouling, obstructing or impeding the flow of any waterway. These activities, which include land application of woodwaste as a mulch or soil conditioner, may be regulated but must not be prohibited by any local government bylaw except a bylaw under section 917 of the Local Government Act.



vi) BC Cranberry Growers' Association

- Up to one foot per acre of woodwaste may be used to develop a new field on mineral soils.
Note: The use of soil amendments/composted organics is not part of a fill bylaw.

Typical Amounts Used

- For blueberries: 25 to 50 units per hectare, @ 5.7 cubic metres/unit.
- For cranberries: Up to 30 cm in depth, or 740 cubic metres/ha.



b) Applying an organic mulch (e.g. woodwaste', coco fibre, etc.) to crops of blueberries, cranberries or strawberries

i) Berry Production Guide, 2005-2006

- Strawberries and blueberries are the two berry crops that most likely benefit from the use of mulches. In blueberries, woodwaste (shavings or sawdust) is used as mulch around established plants for improved weed, soil moisture, and temperature control.





- In strawberries, straw or wood chips can be used between crop rows to control weeds, reduce moisture loss by evaporation and protect from winter injury (BC Interior locations).
- In U-pick strawberry operations, wood chips or sawdust mulch can help in soil management and in keeping picker's feet clean.
- Other ways to promote good drainage include covering raised beds with sawdust mulch.
- Blueberries often grow more vigorously and produce better yields if they are mulched. Apply 5 to 10 cm of sawdust to the surface of the bed the first year and every 2 to 3 years to maintain the mulch. The roots tend to grow into the mulch so as it decomposes the plant roots may become exposed if the sawdust layer is not maintained.

ii) Code of Agricultural Practice for Waste Management (under EMA)

- Part 7, Section 20: as noted above in section (a) of this factsheet, indicates that woodwaste may be used as plant mulch.



iii) Waste Discharge Regulation

- Section 3(5) (a): The use of industrial wood residue as plant mulch is exempt from section 6(2) and 6(3) of the *Environmental Management Act* (i.e. the prohibition against introducing waste into the environment).

iv) ALR Use, Subdivision and Procedure Regulation (under ALC Act)

- The storage and application of fertilizers, mulches and soil conditioners are designated farm uses for the purposes of the Act. For an agronomic purpose, the use of these types of materials, including organic mulches, may be regulated but must not be prohibited by any local government bylaw except a bylaw under section 917 of the *Local Government Act*.

v) EFP Reference Guide, 2005

- Limit the total outdoor depth of woodwaste for all crop areas to 30 cm (suggested).

vi) BC Cranberry Growers' Association

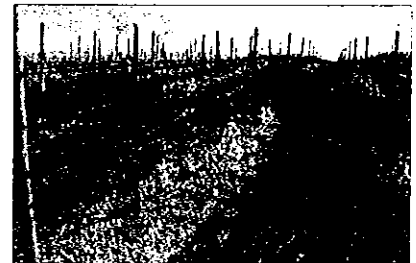
- Woodwaste may be use to fill low areas in existing fields.

Typical Amounts Used

- For blueberries: 15 to 30 cm deep, 0.9 to 1.2 m wide, per row, (Note: typical row spacing is 3 metres).
- For cranberries: Up to 15 cm deep.

Additional Recommended Local Government Notice

- No notice required if re-applying mulch to existing plantings.



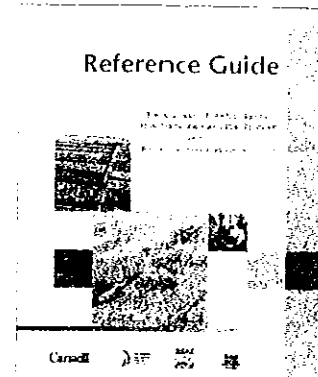
c) Applying woodwaste* as a ground cover

i) Code of Agricultural Practice for Waste Management (under EMA)

- Part 7, Section 20: as noted above in section (a) of this factsheet, indicates that woodwaste may be used as a ground cover.

ii) EFP Reference Guide, 2005

- Limit the total outdoor depth of woodwaste for all crop areas to 30 cm (suggested).



iii) ALR Use, Subdivision and Procedure Regulation (under ALC Act)

- Fertilizer, mulch and soil conditioner uses, that include storage and land application, and the placement of woodwaste as a ground cover on soil, are permitted farm uses for the purposes of the Act. For an agronomic purpose, the use of these materials may be regulated but must not be prohibited by any local government bylaw except a bylaw under section 917 of the *Local Government Act*.

Typical Amounts Used

- For landscaped areas around buildings, or weed suppression on berms, up to 15 cm per year.

Additional Recommended Local Government Notice

- No notice required if re-applying over existing ground cover.

d) Using woodwaste*/soil** for berms and on-farm access roads (e.g. on cranberry farms)

i) Berry Production Guide, BCMAFF, 2005-2006

- The use of woodwaste as described by the "*Code of Agricultural Practice for Waste Management*" is allowed on on-farm access ways and for berms in cranberry production.

ii) Code of Agricultural Practice for Waste Management (under EMA)

- Part 7, Section 20: as noted above in section (a) of this factsheet, indicates that woodwaste maybe used for on-farm access ways and berms for cranberry production.

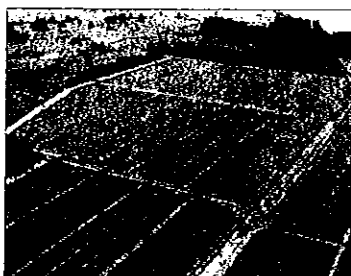
iii) Code of Agricultural Practice for Waste Management (under EMA)

- Part 4, Section 8 (2): Solid agricultural waste may be stored on a field for more than 2 weeks if the agricultural waste is located at least 30 m from any watercourse or any source of water used for domestic purposes. Note: To ensure that field storage of manure is meeting setback requirements from watercourses, farmers may need to construct temporary access roads to manage manure storage sites.



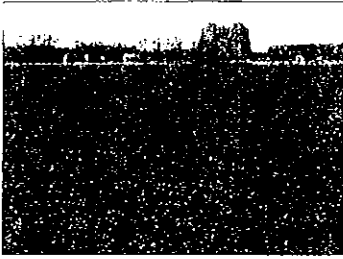
iv) Crop Profile for Cranberries in British Columbia, BCMAL, 2006

- Fields are usually surrounded by roadways, which also act as dikes. The top of the dike should be wide enough to accommodate all equipment, including heavy trucks, and firm enough to support them at least 0.5 m higher than the maximum water level expected in the bed for harvest. Flood harvesting relies on the natural buoyancy of the fruit. The bed is flooded with 20 to 30 cm of water, depending on the evenness of the bed, vine growth, and method of harvest. Booms are used to trap the floating berries and direct them to a corner of the bed, where they are lifted into trucks by elevators.



v) BC Cranberry Growers' Association

- Cranberry fields are long term (greater than 50 year) investments. It takes 7 years after planting for a field to reach the financial break-even point. Cranberry field berms act as dykes and as roads, and are required for two types of farm traffic. Main roads must bear the weight of a fully loaded semi-trailer truck (e.g. 25,000 kg of cranberries for a total weight of 43,000 kg). Secondary roads/berms must be able to bear the weight of a pick-up truck. A typical berm will have a bottom width of 9 to 10.5 m narrowing to 3.5 to 5 m at the top. Some larger berms may be as wide as 7.5 m at the top. The berm profile typically consists of a layer of soil/woodwaste/structural fill at the bottom, topped with an optional geotextile fabric, followed by an 45 cm layer of coarse material (e.g. rock or broken concrete), and then topped with a 15 cm layer of fine material (e.g. crushed rock (e.g. "3/4 inch minus") or ground asphalt). Note: Sand is too pervious, and woodwaste breaks down over time. The minimum total height is 1 m, and there is no maximum height.
- The overall footprint of berms is decreasing as the quality of the roads is improved and older roads are removed.
- Similar material and construction is used for irrigation reservoirs.



vi) ALR Use, Subdivision and Procedure Regulation (under ALC Act)

- Berming, as a land development work, is designated a farm use that includes the construction, maintenance and operation of a driveway necessary for that farm use. This is interpreted to include building on-farm access roads on the top of berms. The placement of fill necessary for this type of land development work is also considered to be a designated farm use. To be necessary requires that the amount of fill brought on to the land for building the berms and roads shall be commensurate with the scale, scope and needs of the farm operation, as well as the parcel area and soils on the property.

Typical Amounts Used

- There is no typical amount of material per hectare for cranberry berms/roads, as their construction is site-dependent.
- Fill placed 6 metres wide and up to 60 cm deep would be typically suitable for other types of farm roads. The length and location of the road would vary, depending on the site.

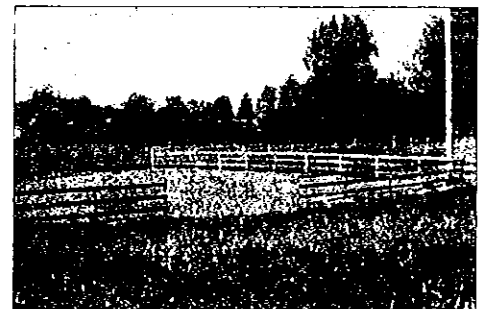
Additional Recommended Local Government Notice

- No notice is required if maintaining an existing road or berm and volume to be used is less than 200 m³.

e) Using woodwaste⁺/soil^{**} for livestock bedding/livestock pens/exercise yards/riding arenas/turnout yards/containment pens/feedlots

i) Code of Agricultural Practice for Waste Management (under EMA)

- Part 7, Section 20: as noted above in section (a) of this factsheet, indicates that woodwaste may be used for livestock bedding.



ii) Waste Discharge Regulation (under EMA)

- Section 3(5) (b) and (c): The use of industrial wood residue as foundation material for animal bedding, and in sports areas is exempt from section 6(2) and 6(3) of the Environmental Management Act.

iii) EFP Reference Guide, 2005

- Limit the total outdoor depth of woodwaste for all livestock areas to 30 cm (suggested).



iv) Horses in the Community...a Yea or a Neigh?

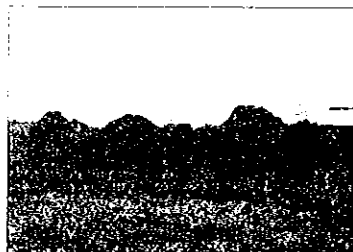
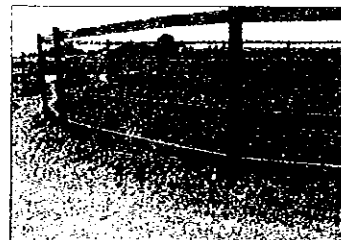
BCMAL Factsheet, 2005

- A common problem to horse holdings in the wetter areas of BC is excess water and mud. This often results in damp stalls, hoof disease, wet feed, wet bedding and poor drainage in pastures, turn out paddocks, and exercise areas.
- Planning and hard work are required to maintain an outdoor riding arena or track that has clean, safe footing, is fairly easily maintained, that holds up in all kinds of weather and does not cause pollution. Riding arenas located on high dry land have proven to be the most trouble free and maintainable. Earth moving equipment may be required to level the site and create diversion ditches.
- Leveling the site beforehand eliminates the practice of leveling with woodwaste as a landfill and creating a potential source of contaminated runoff. Woodwaste use must not exceed a total depth of 45 cm and the maximum application rate at any one time should not exceed 15 cm. The best time to top-up woodwaste is in April or May. Look at alternate footing materials to replace woodwaste where wet land is a problem. Sand, combinations of sand and woodwaste, ground up rubber from tires and a host of products are intended to improve the riding arena footing.

v) Building an Environmentally Sound Outdoor Riding Ring

BCMAL Factsheet, 2005

- The average size ring is approximately 21 m x 42 m. The minimum recommended size is 20 m x 36 m.
- The factsheet describes in detail the types of materials that may be used, including geotextile membrane, aggregate, sand, woodwaste, or organic materials.
- Select a convenient well-drained site. Remove all vegetation and topsoil. Crown the ring with a 2% slope from centre and form a swale around the outside. Compact the sub-base. Add a base of uniform dense graded aggregate; dampen and compact to 10 to 15 cm. Add a 5 to 7.5 mm cushion of sand, sawdust or a combination of sand and organic material.
- Note: Sawdust and shavings are also used in livestock barns (e.g. poultry, dairy) for bedding, and for trucks/trailers transporting livestock.



vi) ALR Use, Subdivision and Procedure Regulation (under ALC Act)

- Livestock operations and horse riding facilities (if the stables do not have more than 40 permanent stalls) are farm uses that include the construction, maintenance and operation of structures necessary for these uses. This is interpreted to include livestock pens/exercise yards/riding arenas and outdoor riding rings/turnout yards/containment pens/feedlots, etc.
- The placement of fill necessary for these farm uses is also considered to be a designated farm use. To be necessary it is required that the amount and type of fill used for the above structures shall be commensurate with the scale, scope and

needs of the livestock/equestrian facility, as well as the parcel area and soils on the property.

Typical Amounts Used

- 400 m² for three horses is a typical paddock area required, and a typical maximum depth is 30 cm.
- A typical riding ring size is described above.
- Amounts and fill materials used will be site dependent.

Additional Recommended Local Government Notice

- No notice required for bedding materials to be used in existing livestock barns, pens, yards or riding arenas.

l) Bringing in soil** (and possibly woodwaste*) for the building of berms for horizontal light abatement for greenhouses, for aesthetics, or as an urban/rural buffer

i) BCGGA and UFG Good Neighbour Guidelines for Lighting Greenhouses

- Greenhouses should have sidewall light abatement measures (for example curtains/screens, berms, trees etc.) for all walls that expose houses and streets to light emissions.
- Note: Greenhouses may be able to use soil previously excavated for buildings on the property.
- Note: Hedges may also be planted on top of berms, and mulched with woodwaste or spent growing media. Light abatement structures (i.e., berms plus plantings and/or fencing) would typically be at least 3 m high.

ii) BC Cranberry Growers' Association

- Berms may be built along the edge of property lines to contain sprinkler drift, spray drift, liquid fertilizer drift, to reduce visibility and protect equipment from theft. The profile would be similar to profile described in d) above. Hog fuel or gravel would be added on the top if the berm was also intended to be used as a road. Otherwise, cedar hedges may be planted on top.

iii) ALR Use, Subdivision and Procedure Regulation (under ALC Act)

- Berms, as a land development work, are a designated farm use that includes the construction, maintenance and operation of a structure necessary for that farm use. This is interpreted to include berms for building light abatement structures including the planting of hedges on top of the berms and fencing as a means of screening light from greenhouses. The placement of fill necessary for the farm use is also considered to be a designated farm use. To be necessary it is required that the amount and type of fill used for the berms shall be commensurate with the scale, scope and light abatement needs of the farm operation, as well as the parcel area and soils on the property.

Typical Amounts Used

- The amount of material varies as the footprint and size of the berms vary.

Additional Recommended Local Government Notice

- No notice is required if constructing a new berm or maintaining an existing berm and the volume to be used is less than 200 m³.

g) Using woodwaste* as fuel for wood fired boilers

Note: This is not a fill practice; however it is included in this factsheet as the storage of woodwaste for use as fuel may be misconstrued as being used for fill.

i) Code of Agricultural Practice for Waste Management (under EMA)

- Part 7, Section 20: as noted above in section (a) of this factsheet, indicates that woodwaste may be used for fuel in wood fired boilers.



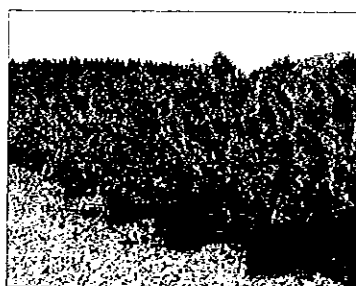
Typical Amounts Used

- Amounts vary, depending on the size of the storage facility and boiler requirements.

Additional Recommended Local Government Notice

- No notice required if a boiler is installed.

h) Using woodwaste*/gravel/sand for container nursery bed production or ball and burlap production



i) Nursery and Landscape Pest Management & Production Guide, BCMAFF, 2002

- Land suitable for nursery stock production should be devoid of low frost pockets.
- Conifers and broadleaf evergreens are dug, and balled and burlapped, which means that a quantity of soil is left around the roots and secured with burlap and twine. In order to conserve topsoil on the site, efforts should be made to replace soil removed in the root ball by the addition of amendments such as compost. On the Coast it is possible to overwinter some (bareroot) material in a (60 to 90 cm) deep bed of sawdust. Heeling in sawdust will prevent desiccation.
- Managing soil organic matter is integral to sound soil management and is a key to long-term productive field operations, particularly where significant quantities of topsoil are removed over time. As an example, straw and woodwaste can be beneficial to soil, however, when added directly to the soil, nitrogen can be 'tied-up'. In order to avoid this, urea or an ammonium salt should be added at the same time. Woodwaste should only be applied in the top 10 cm of soil.
- When used for a container bed, woodwaste should be less than 30 cm deep and should be placed back from any waterway including a drainage ditch.

ii) EFP Reference Guide, 2005

- For preparation of nursery beds, geotextile fabrics either alone or in combination with sand and gravel are recommended as alternatives to woodwaste.

iii) Nursery and Turf – Commodity Description, BCMAFF, January, 2003

- For container production, mulch is required to create a stable working and growing area. Nursery growers use a considerable amount of woodwaste for on-farm and access roads, soilless media and container beds.



iv) BC Landscape and Nursery Association

- For ball and burlap production, growers may create a temporary bed of woodwaste that may be 1.5 m deep. After selling the plants they will spread the material to add organic matter to the field. Nurseries may also store piles of sawdust mixes/soilless media.

Note: Because of disease issues, e.g. Sudden Oak Death Syndrome, the Canadian Food Inspection Agency may require the building of deeper nursery beds to prevent the formation of standing water.

v) ALR Use, Subdivision and Procedure Regulation
(under ALC Act)

- As a potential soil amendment, and where applied when collected, stored and handled in compliance with Part 7, Storage and Use of Woodwaste in the *Code of Agricultural Practice for Waste Management*, the use of woodwaste for container bed production is a designated farm use. To be necessary it is required that the amount of woodwaste applied to the land shall be commensurate with the scale, scope and container nursery bed needs of the farm operation, as well as the parcel area and soils on the property.

Note: In the ALR, the placement of soil** fill materials, for container nursery bed production requires an application to the ALC.

Typical Amounts Used

- Amounts and materials used will be site dependent.

Additional Recommended Local Government Notice

- No notice required if maintaining an existing nursery bed.

i) Applying sand or sawdust to cranberries

i) "Cranberries," April-May 2005

- A process called "sanding" may take place. Sanding applies a fresh layer of sand into the fields where the cranberry vines are located. The sand will then sink to the bottom of the vines – to provide a new rooting zone along the cranberry stems, as well as aid in disease control by burying old plant residues. It covers up the old woody growth of the cranberry vines and forces the plant to produce what is referred to as "upright" – the young stems with the fruit buds. This makes for a much healthier plant.

ii) Crop Profile for Cranberries in Washington, 2000

- Beds have been drained, cleared, leveled and covered with a one to two inch layer of sand before the field is planted to select vines. A thin layer of sand spread over the bed stimulates new root and vine growth, improves aeration and drainage of surface water, and levels out low spots to make dry harvesting easier.

iii) Crop Profile for Cranberries in British Columbia, BCMAL, 2006

- Some growers, especially those who do not have ideal peat, may layer sand or sawdust over mineral soils in order to plant vines. This practice has been used very successfully to encourage vine establishment.
- Sanding cranberry vines is a method of stimulating the production of new uprights and roots, and is a cultural method of pest control.
- In BC cranberries are grown primarily on peat soils. They are also grown on upland mineral soils with higher organic matter and in fields of sand or sawdust. They prefer an acidic pH of about 4.0 to 5.0 in the root zone.

Typical Amounts Used

- The initial application is 15 to 20 cm deep (when planting). Topdressing every few years would be 2.5 to 5 cm deep. Filling of holes in established fields would be 15 to 20 cm deep.

Additional Recommended Local Government Notice

- No notice required for existing fields.

j) Soil^{**} or woodwaste^{*} amendments for turfgrass production



i) Nursery and Turf – Commodity Description, BCMAFF January 2003

- Mineral and/or organic material, such as sand, sawdust, compost or manure, is sometimes placed on the field to replace the soil that was removed in previous harvests.
- Note: The use of soil amendments/composted organics is not part of a fill bylaw.

ii) ALR Use, Subdivision and Procedure Regulation (under ALC Act)

- Turf farms are a specified farm use for which a notification to the commission is required for the placement of fill.

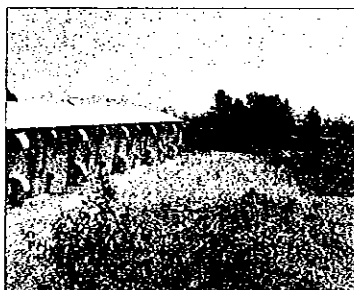
Typical Amounts Used

- 2.5 to 4 cm per crop; 1 crop harvested every 15 months.

Additional Recommended Local Government Notice

- No notice for existing turf fields using up to 4 cm of material per crop.

k) Farm buildings that take up less than 2% of the parcel



i) ALR Regulation Use, Subdivision and Procedure Regulation (under ALC Act)

- The construction, maintenance and operation of farm buildings, including, but not limited to any of the following: (i) a greenhouse; (ii) a farm building or structure for use in an intensive livestock operation or for mushroom production; (iii) an aquaculture facility, are designated farm uses for the purposes of the Act. They may be regulated but must not be prohibited by any local government bylaw except a bylaw under section 917 of the Local Government Act.
- For 'specified' farm uses, that includes the construction of greenhouses and farm buildings for an intensive livestock operation or for mushroom production, and where the fill 'footprint' exceeds 2 % of the property area, a notification process is additionally set out in the Regulations.

ii) ALC Policy: Placement of Fill or Removal of Soil: Construction of Farm Buildings

- The ALC, by policy, further sets limits for the placement of fill for particular farm uses (e.g. for construction of a single family residence the area is limited to 0.2 ha; for the construction of farm buildings the area is limited to 2 % of the parcel area).
- Where it has been determined through the building approval process that placement of fill or removal of soil is necessary for the construction of a farm building, of which the building area is less than 2% of the parcel, the acceptable volume of fill or soil removal is that needed to undertake the construction of the building.

- The over-riding principle is that the volume is reasonable and the quality of material is not deleterious to the agricultural quality of the land or the environment and all activity must be done in accordance with good agricultural practice.

iii) ALC Policy: Placement of Fill or Removal of Soils:
Construction of a Single Family Residence

- The ALC allows fill for a single family residence building of up to 0.2 ha, subject to the local government approval process, typically through a building permit.

Typical Amounts Used

- The amount of materials used will vary.

Recommended Local Government Notice

- Building construction is typically regulated by municipal bylaws, and formal applications must be made to the local government. Requirements vary by municipality. Geotechnical reports and/or fill plans may be required as part of this process. In many cases, a building permit must be issued before any filling can proceed.

l) Farm buildings that take up more than 2% of the parcel

i) ALR Regulation Use, Subdivision and Procedure Regulation (under ALC Act)

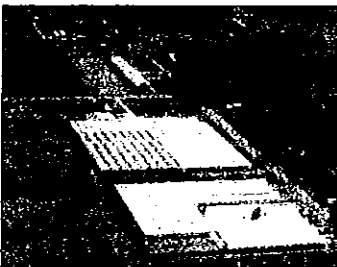
- Buildings for 'specified farm-uses' (e.g. greenhouses, farm buildings or structures for an intensive livestock operation or mushroom production) greater than 2% of the parcel area, the owner must submit a Notice of Intent to the ALC and applicable local government of their intention to remove soil or place fill at least 60 days beforehand. The ALC's CEO may request additional information within 30 days or receipt of the notice, and may order restrictions or set the terms and conditions for the conduct of that use.

Typical Amounts Used

- The amounts of materials used will vary.

Recommended Local Government Notice

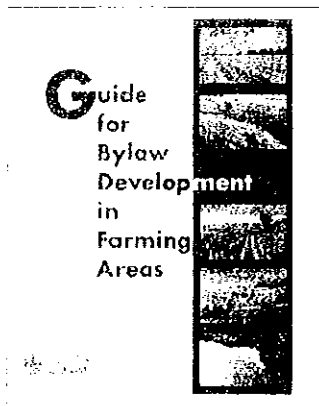
- Some local governments may require the approval of a building permit application before any filling can take place
- Building construction is typically regulated by municipal bylaws, and formal applications must be made to the local government. Requirements vary by municipality. Geotechnical reports and/or fill plans may be required as part of this process. In many cases, a building permit must be issued before any filling can proceed.
- Applicants should include copies of the completed ALC "notice of intent" with their building permit application.



m) Fill for parking, loading and turnaround areas

ii) ALR Use, Subdivision and Procedure Regulation (under ALC Act)

- Any activity designated as farm use for the purposes of the Act, including the construction, maintenance and operation of a building, structure, driveway, ancillary service or utility necessary for that farm use, may be regulated but must not be prohibited by any local government bylaw except a bylaw under section 917 of the *Local Government Act*. To be necessary, the amount and type of fill used for the above, which includes loading and turnaround areas and parking, shall be commensurate with the scale, scope and needs of the farm operation, as well as the parcel area and soils on the property.



- An application to the ALC is required where the proposed fill area on an individual parcel, for the above uses, exceeds 2% of the property area.

ii) **Guide for Bylaw Development in Farming Areas,**
BCMAFF, 1998

- Off-street parking spaces should be required for all commodities that undertake direct farm marketing. Produce stands/Nurseries: 1 parking space per 20 m² of direct farm marketing area; Greenhouses: 1 parking space per 15 m² of direct farm marketing area.

iii) **BC Cranberry Growers' Association**

- Areas for periodic staging and loading of large trucks, including semi-trailers, are required. Also required are areas to temporarily store/compost vine cuttings/trimmings. Parking is commonly required for workers during the harvest season.

iv) **BC Greenhouse Growers' Association**

- In order to accommodate staff/worker parking an area equivalent to about 400 m² per hectare greenhouse area under production may be required. Up to an additional 10% may be required for loading and turn around areas.

Typical Amounts Used

- Areas required will vary, depending on the commodity. For cranberries and greenhouses see the estimates listed above.
- Parking and loading areas should be appropriately sized and located so as to minimize removal of land from production.
- Local governments should be consulted prior to constructing such areas as some local government bylaws contain site coverage restrictions.

n) **Using woodwaste and sand for cranberry field drainage trenches**

i) **Crop Profile for Cranberries in British Columbia**
BCMAL, 2006

- Reservoirs and ditches are constructed to contain and move water for frost protection, irrigation and harvest, and to store water recovered from these operations. Some new fields are being constructed with perimeter drains which eliminate the need for a ditch around the fields inside the dike and allows for a greater usable crop area.

ii) **BC Cranberry Growers' Association**

- Drains are installed by digging a 60 cm deep trench (10 to 15 cm wide), placing a 75 to 100 mm perforated plastic drainage pipe, then filling with approximately 50 cm of woodwaste (usually aged cedar chips, not hog fuel), adding a geotextile cloth, and then topped with up to 15 cm of sand. The trenches would be placed approximately every 3 to 3.5 m throughout the field, in both new and existing fields.

Typical Amounts Used

- As described above.

Additional Recommended Local Government Notice

- No notice for existing fields.

Example:

NOTICE OF PROPOSED "FILL" ACTIVITY

Local Government: _____
Bylaw Number: _____
Fax form to: _____

Note: The information required by this form is collected under the Local Government Bylaw. This information may be available for review by any member of the public. If you have any questions about the collection or use of this information, please contact the Local Government.

Owner: _____	Agent: _____
Address: _____	Address: _____
Telephone: _____	Telephone: _____
Cell: _____	Cell: _____
Fax: _____	Fax: _____
E-mail: _____	E-mail: _____

Civic Address of Property: _____
Legal Description: _____
Size of Property / Parcel: _____ (hectares or dimensions)

Zoning of Property:	<input type="radio"/> Agricultural	<input type="radio"/> Residential	<input type="radio"/> Commercial	<input type="radio"/> Industrial
	<input type="radio"/> Other - specify: _____			
Current Use:				
Proposed Land Use: (if different than current use)				

Adjacent Uses: North _____	East _____
South _____	West _____

Type of Fill Material	<input type="radio"/> Topsoil	<input type="radio"/> Excavation soil	<input type="radio"/> Sand	<input type="radio"/> Gravel
	<input type="radio"/> Ditch-cleanings	<input type="radio"/> Woodwaste	<input type="radio"/> Soil Conditioner	<input type="radio"/> Mulch
	<input type="radio"/> Other - specify: _____			

Source of Fill materials:			
Volume: _____ cubic metres	Depth: _____ metres		
Total Project Area: _____	hectare or dimensions		
Duration of the Project: _____	weeks / months		

Purpose of Project: (refer to Factsheet "Guidelines for Farm Practices Involving Fill" BC Ministry of Agriculture and Lands as appropriate) _____
Proposed Reclamation Measures: (if applicable) _____

Has either a Professional Agrolgist and/or a Professional Engineer reviewed the project and provided a written report? Yes No (If Yes, please attach a copy of the report.)

Declaration and Consent: I/we declare that the information is to the best of my/our knowledge, true and correct. I/we consent to the use of the information provided in this notice and all supporting documents. Furthermore, I/we understand that the Local Government may take the necessary steps to confirm the accuracy of the information and documents provided.

Date Signature of Owner or Agent Print Name

METRIC CONVERSIONS

Metric	Imperial Equivalent	Metric	Imperial Equivalent
2.5 cm	1 inch	10.5 m	35 feet
4 cm	1.5 inches	20 m	65 feet
5 cm	2 inches	21 m	70 feet
7.5 cm (75 mm)	3 inches	36 m	120 feet
10 cm (100 mm)	4 inches	42 m	140 feet
15 cm	6 inches	15 square metres	160 square feet
20 cm	8 inches	20 square metres	215 square feet
30 cm	12 inches (1 foot)	400 square metres	4300 square feet
45 cm	18 inches	0.2 ha	0.5 acre
50 cm	20 inches	1 ha	2.47 acre
60 cm	24 inches (2 feet)	16.2 ha	40 acre
90 cm (0.9 m)	3 feet	40 ha	100 acre
1.2 m	4 feet	5.7 cubic metres	200 cubic feet (1 volumetric sawdust unit)
1.5 m	5 feet		
3.5 m	12 feet	1,230 cubic metres	1 foot depth over 1 acre
4.5 m	15 feet	18,300 cubic metres	23,900 cubic yards
5 m	16 feet	25 volumetric sawdust units per hectare	10 volumetric sawdust units per acre
6 m	20 feet	400 square meters per ha	1800 square feet per acre
7.5 m	25 feet	25,000 kg	55,000 pounds
9 m	30 feet	43,000 kg	95,000 pounds

Conversions in this table are rounded to a convenient number.

LIST OF ACRONYMS

ALC	Agricultural Land Commission
ALR	Agricultural Land Reserve
BCGGA	BC Greenhouse Growers' Association
BCMAFF	BC Ministry of Agriculture, Food and Fisheries
BCMAL	BC Ministry of Agriculture and Lands
EFP	Environmental Farm Plan
EMA	Environmental Management Act
UFG	United Flower Growers Co-Op Association

RESOURCE MANAGEMENT BRANCH

Ministry of Agriculture and Lands
1767 Angus Campbell Road
Abbotsford, BC Canada V3G 2M3
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December 18, 2006

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