

**PROVINCE OF BRITISH COLUMBIA**  
**REGULATION OF THE MINISTER OF**  
**ENVIRONMENT AND CLIMATE CHANGE STRATEGY**

*Environmental Management Act*

Ministerial Order No. M039

I. George Heyman, Minister of Environment and Climate Change Strategy, order that

(a) *effective February 28, 2019,*

(i) *the Code of Agricultural Practice for Waste Management, April 1, 1992, as attached to B.C. Reg. 131/92, is repealed,*

(ii) *the Code of Practice for Agricultural Environmental Management is made as set out in the attached Appendix 1,*

(iii) *the Code of Practice for the Slaughter and Poultry Processing Industries, B.C. Reg. 246/2007, is amended by repealing the definition of “agricultural operations” and substituting the following:*

**“agricultural operation”** has the same meaning as in the Code of Practice for Agricultural Environmental Management; , *and*

(iv) *the Waste Discharge Regulation, B.C. Reg. 320/2004, is amended as set out in the attached Appendix 2, and*

(b) *the Code of Practice for Agricultural Environmental Management is amended as set out in the attached Appendix 3, effective on the dates as set out in that Appendix.*

November 26, 2018

Date

  
Minister of Environment and Climate Change Strategy

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*(This part is for administrative purposes only and is not part of the Order.)*

**Authority under which Order is made:**

Act and section: *Environmental Management Act*, S.B.C. 2003, c. 53, ss. 22, 138 and 139; *Water Discharge Regulation*, B.C. Reg. 320/2004, s. 11

Other: *OIC 557/92; M176/2007; OIC 723/2004*

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## APPENDIX 1

# CODE OF PRACTICE FOR AGRICULTURAL ENVIRONMENTAL MANAGEMENT

### *Contents*

#### **PART 1 – DEFINITIONS AND APPLICATION**

- 1 Definitions
- 2 Agricultural operations to which this code applies

#### **PART 2 – WHETHER REGISTRATION REQUIRED**

- 3 Exemptions from section 6 (2) and (3) of the Act
- 4 Deemed registration for use of boiler or heater
- 5 No registration required if small capacity

#### **PART 3 – EMISSIONS REQUIREMENTS**

##### **Division 1 – General Provisions Respecting Emissions**

- 6 Air contaminants from forced air ventilation
- 7 When odours are not air contaminants

##### **Division 2 – Emissions from Boilers and Heaters**

- 8 Application
- 9 Fuel restrictions
- 10 Opacity limits
- 11 Particulate matter limits
- 12 Taking corrective action
- 13 Director may impose minimum stack height
- 14 Record-keeping requirements

#### **PART 4 – SETBACK REQUIREMENTS**

- 15 Definition
- 16 How to measure setbacks
- 17 Setback requirements
- 18 Exception for existing structures
- 19 Director may impose greater setbacks

#### **PART 5 – HIGH-RISK AREAS AND CONDITIONS**

- 20 Definitions
- 21 Application
- 22 Requirement to maintain protective base
- 23 Permanent storage in vulnerable aquifer recharge areas
- 24 Earthen storage basins
- 25 Temporary field storage and outdoor agricultural composting piles
- 26 Irrigation
- 27 Restrictions on applying nutrients
- 28 Livestock or poultry
- 29 Burial pits
- 30 High-risk conditions

#### **PART 6 – COLLECTION, STORAGE AND USE REQUIREMENTS**

##### **Division 1 – Agricultural By-Products**

- 31 Application

- 32 Allowable storage and use of solid agricultural by-products
- 33 Allowable storage and use of liquid manure
- 34 General storage requirements
- 35 General requirements for permanent storage structures
- 36 Permanent storage structures for liquid manure
- 37 Temporary field storage
- 38 On-ground under-pen storage

**Division 2 – Agricultural Composting**

- 39 Application
- 40 General agricultural composting process requirements
- 41 Requirements for composting structures
- 42 Requirements for outdoor agricultural composting piles
- 43 Distribution of manure or agricultural compost

**Division 3 – Wood Residue**

- 44 Application
- 45 Allowable storage of wood residue
- 46 General storage and land application requirements
- 47 Uses of wood residue

**Division 4 – Nutrient Application and Management**

- 48 Application
- 49 Prohibitions for applications to land
- 50 Prohibitions on applying compost to land
- 51 General requirements for applications to land
- 52 General requirements for applications other than to land
- 53 Requirement to test soil
- 54 Nitrate test
- 55 Phosphorus test
- 56 When nutrient management plan is required
- 57 Preparation of nutrient management plan
- 58 Exemptions or modifications to nutrient management plans
- 59 Implementation of nutrient management plan
- 60 Director's powers respecting application of nutrient sources

**PART 7 – LIVESTOCK AND POULTRY REQUIREMENTS**

**Division 1 – Livestock and Poultry Areas**

- 61 Application
- 62 Confined livestock or poultry areas
- 63 Feedlots
- 64 Seasonal feeding, grazing and temporary holding areas
- 65 Record-keeping requirements

**Division 2 – Slaughter, Mortalities and Processing Waste**

- 66 Application
- 67 Allowable disposal
- 68 General requirements
- 69 Storage
- 70 Transport
- 71 Agricultural composting processes
- 72 Outdoor agricultural composting piles
- 73 Land applications of wastewater and agricultural compost
- 74 Disposal by burial
- 75 Disposal by incineration

76 Record-keeping requirements

**PART 8 – OTHER MATTERS**

- 77 Agricultural products
- 78 Treatment of contaminated runoff, leachate and wastewater
- 79 General record-keeping requirements
- 80 General powers of director
- 81 Exercise of director's powers
- 82 Accessibility of maps

**SCHEDULE A**

**SCHEDULE B**

**PART 1 – DEFINITIONS AND APPLICATION**

**Definitions**

1 In this code:

“**Act**” means the *Environmental Management Act*;

“**agricultural by-product**”

- (a) includes, subject to paragraph (b),
  - (i) materials that are produced for the purposes of an agricultural operation but are incidental or secondary to the primary product of the agricultural operation,
  - (ii) manure,
  - (iii) soiled animal bedding,
  - (iv) dropped or spoiled feed or silage,
  - (v) agricultural vegetative debris,
  - (vi) the product of an agricultural composting process,
  - (vii) used mushroom-growing substrate, and
  - (viii) soilless media, and
- (b) does not include
  - (i) mortalities,
  - (ii) wastes from hatcheries or dairy processing,
  - (iii) digestates from anaerobic digestion, or
  - (iv) materials produced or used in accordance with the Organic Matter Recycling Regulation;

“**agricultural composting process**” means a process, other than a process conducted in accordance with the requirements of the Organic Matter Recycling Regulation, whereby agricultural by-products, wood residue, mortalities or processing waste, or a combination of any of them, are

- (a) mixed or layered, and
- (b) managed to decompose aerobically with either periodic turning or forced aeration;

“**agricultural land base**” means the following:

- (a) if an agricultural operation occurs on a single parcel of land, that parcel;
- (b) if an agricultural operation occurs on more than one parcel of land and each parcel is owned, rented or leased by the same person, the combined area of those parcels;

**“agricultural operation”** means an agricultural operation to which this code applies under section 2 [*agricultural operations to which this code applies*];

**“agricultural product”** means

- (a) livestock, poultry and insects,
- (b) plants, including trees, and fungi, whether grown in a field or an enclosed space, and
- (c) the primary products of a thing referred to in paragraph (a) or (b);

**“agricultural vegetative debris”**

- (a) includes, subject to paragraph (b),
  - (i) cuttings and prunings of 7 cm or less in diameter, and leaves, from trimming and pruning activities,
  - (ii) corn cobs, corn husks, straw, stalk, seed hulls and other crop residue from harvest activities, and
  - (iii) weeds, and
- (b) does not include wood residue or other by-products from wood processing;

**“animal unit”** means a live weight of

- (a) 455 kg (1 000 lb) of either livestock or poultry, or
- (b) any combination of livestock and poultry that equals 455 kg;

**“biomass”**

- (a) means, subject to paragraph (b), plant or plant-based materials that
  - (i) have no more than 20% moisture content,
  - (ii) are or come from agricultural vegetative debris, seeds or clean wood, and
  - (iii) have been processed for use in producing energy, and
- (b) does not include materials containing
  - (i) coal or petroleum products,
  - (ii) pharmaceutical, medicinal or medical biological materials,
  - (iii) manure, or
  - (iv) paper or paper products;

**“capacity”**, in relation to a boiler or heater, means the maximum rate of energy output from the boiler or heater measured in megawatts of thermal energy;

**“commercial fertilizer”** means a chemical mixture manufactured for use as fertilizer that does not contain

- (a) raw or unprocessed manure, or
- (b) gypsum or other liming materials;

**“composting structure”** means a structure constructed and used for agricultural composting processes;

- “confined livestock area”** means an outdoor area, other than a grazing area, seasonal feeding area or temporary holding area, where livestock are confined by structures or topography;
- “confined poultry area”** means an outdoor area, other than a grazing area or seasonal feeding area, where poultry are confined by structures or topography;
- “contaminated runoff”** means runoff that contains suspended or dissolved nutrients, pathogens or other substances after contact with agricultural by-products, leachate or other organic matter or pesticides;
- “drinking water source”** has the same meaning as in the *Drinking Water Protection Act*;
- “equipment”** includes machinery and vehicles used for the purposes of an agricultural operation;
- “existing”** means a structure, confined livestock area, confined poultry area, equipment or a part of any of these, as applicable, that
- (a) was present or operated on the person’s agricultural land base before February 28, 2019, and
  - (b) has not been modified;
- “experienced person”** means a person having at least 4 years’
- (a) experience in carrying out agricultural operations, or
  - (b) experience and post-secondary training in agricultural sciences combined;
- “feedlot”** means a confined livestock area in which livestock are
- (a) confined solely for the purpose of growing or finishing, and
  - (b) fed other than by grazing;
- “fertilizer”** means organic or inorganic material of natural or synthetic origin, other than liming materials, that is added to supply one or more plant nutrients;
- “grazing area”** means pasture that is not confined by structures, or rangeland, where livestock or poultry feed primarily by directly consuming plants growing on the pasture or rangeland;
- “groundwater”** means water that naturally occurs below the surface of the ground;
- “leachate”** means concentrated liquid originating from agricultural by-products, wood residue or other organic matter;
- “liquid manure”** means raw or untreated liquid excreta from livestock or poultry, whether or not it is mixed with
- (a) wastewater, or
  - (b) animal bedding, feed or other solids;
- “livestock”** means mammals reared or kept for the purposes of an agricultural operation;
- “manure”** includes liquid manure and solid manure;
- “modified”** means a structure, confined livestock area, confined poultry area, equipment or part, as applicable, used in a person’s agricultural operation that

- (a) was present or operated on the person's agricultural land base before February 28, 2019, and
- (b) is modified on or after February 28, 2019 in a manner that,
  - (i) in the case of a roof and pen structure, increases the total square area of the structure's footprint by 10% or more from its original total square area,
  - (ii) in the case of a confined livestock area or confined poultry area, increases the total square area by 10% or more from its original total square area, or
  - (iii) in the case of any other structure or equipment, other than a boiler or heater, increases its capacity by 10% or more from its original capacity;

**"mortalities"** means livestock or poultry that have died from causes other than slaughter and are not fit for human consumption;

**"new"** means a structure, confined livestock area, confined poultry area, equipment or part, as applicable, that was constructed on or first brought to the person's agricultural land base on or after February 28, 2019;

**"nitrate test"** means a test for residual levels of nitrates in soil conducted in accordance with section 54 [*nitrate test*];

**"nutrient"** means a chemical element that is essential for the growth or development of livestock, poultry, insects, plants, trees or fungi;

**"nutrient management plan"** means a nutrient management plan prepared in accordance with section 57 [*preparation of nutrient management plan*];

**"nutrient source"** means any of the following things that are a source of nitrogen or phosphorus:

- (a) fertilizers and soil conditioners;
- (b) agricultural by-products;
- (c) mixtures produced using agricultural composting processes or digestates from anaerobic digestion;
- (d) wastewater or irrigation water;
- (e) reclaimed water within the meaning of, and treated, provided and used in accordance with, the Municipal Wastewater Regulation;
- (f) any materials produced in accordance with the Organic Matter Recycling Regulation;
- (g) soil amendments within the meaning of, and used in accordance with, the Code of Practice for Soil Amendments;
- (h) any other source of nitrogen or phosphorus;

**"on-ground under-pen storage"** means the collection and uncontained storage of manure and soiled bedding from fur bearing animals under the animals' pen after the manure and soiled bedding drop from the pen to the ground;

**"outdoor agricultural composting pile"** means the following, formed for the purpose of an agricultural composting process into a pile or windrow but not contained in a structure:

- (a) wood residue, a mixture of agricultural by-products, or both;
- (b) mortalities, processing waste or both;

**“particulate matter”** means the total filterable particulate matter in emissions;

**“permanent storage structure”**

- (a) means, subject to paragraph (b), a structure designed and built for storing, before their use or disposal,
  - (i) agricultural by-products or agricultural products,
  - (ii) wood residue, or
  - (iii) natural or synthetic materials used for the purposes of an agricultural operation, whether or not produced by the agricultural operation, and
- (b) does not include equipment used to transport or dispose of, or to apply to land, the things listed in paragraph (a);

**“phosphorus test”** means a test for levels of phosphorus in soil conducted in accordance with section 55 [*phosphorus test*];

**“phosphorus-affected area”** means surface water, or land that is next to or hydraulically connected to surface water, that

- (a) is located within the boundaries of an area shown on a map listed in Schedule A [*Phosphorus-Affected Areas*], and
- (b) has been, or may be, adversely affected by high phosphorus loading due to the sensitivity of the receiving environment;

**“poultry”** means birds reared or kept for the purposes of an agricultural operation;

**“precipitation”** includes rain, snow and hail;

**“processing waste”** means solid waste, semi-solid waste and wastewater, as those terms are defined in the Code of Practice for the Slaughter and Poultry Processing Industries;

**“property boundary”** means the following:

- (a) if an agricultural operation occurs on a single parcel of land, the outside legal boundary of that parcel;
- (b) if an agricultural operation occurs on more than one parcel of land, the outside legal boundary of
  - (i) the combined parcels, in the case of parcels that are adjacent to each other, or
  - (ii) each parcel, in the case of parcels that are not adjacent to any other parcel;

**“protective base”** means a layer

- (a) of soil that
  - (i) is at least 30 cm thick, and
  - (ii) has a saturated hydraulic conductivity that is less than or equal to  $10^{-7}$  cm/s, or
- (b) of any material that does not allow leaks or for liquids to soak through;

**“qualified professional”** means a person who



- (a) is registered in British Columbia with the person's appropriate professional association, acts under that professional association's code of ethics and is subject to disciplinary action by that professional association, and
- (b) through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within the person's area of expertise as it relates to this code;

**"runoff"** means any of the following, if flowing along the surface of the ground:

- (a) water from equipment, washing or other sources;
- (b) precipitation;
- (c) meltwater from snow, hail or ice;

**"seasonal feeding area"** means an area, other than a confined livestock area, confined poultry area, grazing area or temporary holding area,

- (a) used for forage or other crop production, and
- (b) used seasonally for feeding livestock or poultry that are sustained primarily by supplemental feed;

**"seasonal high water table"** means the 10-year average highest level to which, at any time during a year, the water table below the surface of the ground rises;

**"self-sealing layer"** means a layer of soil, or mixed soil and manure, that forms between the manure pack and the underlying soil in a confined livestock area, creating a barrier that does not allow leaks or for liquids to soak through;

**"semi-solid waste"** means blood, fat, oil and grease that is separated from processing water;

**"soil conditioner"** means organic or inorganic matter that has beneficial effects on the biological, chemical or physical properties of soil;

**"solid"**, except in the context of semi-solid waste, means a material that

- (a) contains more than 18% solid matter by mass, and
- (b) will not flow when piled;

**"solid manure"** means raw or untreated solid excreta from livestock or poultry, whether or not mixed with animal bedding, feed or other solids;

**"solid waste"** has the same meaning as in the Code of Practice for the Slaughter and Poultry Processing Industries;

**"strong, divergent windy conditions"** means conditions in which wind travels at a speed that enables the wind to pick up and carry dust and solids from agricultural by-products or wood residue;

**"temporary field storage"** means the storage of solid agricultural by-products or wood residue outside in a field, but not in a structure, before their use or disposal;

**"temporary holding area"** means an outdoor holding area on rangeland where livestock are confined by structures while being collected from a grazing area;

**"vector"** means an organism that is capable of transmitting a pathogen from one animal, place or thing to another;

**"vulnerable aquifer recharge area"** means land

- (a) that is located within the boundaries of an area shown on a map listed in Schedule B [*Vulnerable Aquifer Recharge Areas*], and
- (b) from which surface water may infiltrate the ground to reach an aquifer that
  - (i) is, due to the nature of the overlying soil layers, highly or moderately vulnerable to pollution or contamination from the land surface, or
  - (ii) is, or is at risk of being, adversely affected by nitrates;

**“wastewater”**, except in Division 2 [*Slaughter, Mortalities and Processing Waste*] of Part 7, includes the following:

- (a) wastewater from flush barns and mushroom growing barns and pads;
- (b) wastewater from washing, grading or packaging agricultural products;
- (c) milk house wastewater and milk-based waste;
- (d) used or recycled water from irrigation or fertigation;

**“watercourse”** includes

- (a) an area of land that perennially or intermittently contains surface water, other than
  - (i) puddles,
  - (ii) groundwater and dugout ponds for livestock watering, and
  - (iii) furrows, grassed waterways and other temporary ponded areas that are normally farmed, and
- (b) drainage ditches that lead to an area described in paragraph (a);

**“wood residue”** means wood or a wood product that

- (a) is chipped or ground,
- (b) originates from
  - (i) wood processing,
  - (ii) the clearing of land, if the majority of the greenery is removed and no soil is present, or
  - (iii) trimming or pruning activities,
- (c) has not been treated or coated with chemicals, including preservatives, glues, paints, varnishes, oils or finishing materials,
- (d) does not contain a foreign substance harmful to humans, animals or plants when combusted,
- (e) has not been exposed to salt water, and
- (f) has not been used for or recovered from construction or demolition activities.

**Agricultural operations to which this code applies**

- 2 (1) For the purpose of minimizing the introduction of waste into the environment and preventing adverse impacts to the environment and human health, this code requires persons to use environmentally responsible and sustainable agricultural practices when carrying out agricultural operations described in subsection (3).
- (2) This code applies to an agricultural operation described in subsection (3) that is carried out in British Columbia

- (a) on
    - (i) an agricultural land base that is owned, rented or leased, and managed, by the person who carries out the agricultural operation, and
    - (ii) land that is not zoned for residential purposes, and
  - (b) primarily for the purpose of distributing agricultural products to other persons, whether
    - (i) directly or indirectly,
    - (ii) with or without a fee, or
    - (iii) on a commercial or non-commercial basis.
- (3) Subject to subsection (4), the following are agricultural operations for the purposes of this code:
- (a) rearing and keeping livestock or poultry, and growing and harvesting agricultural products, for
    - (i) consumption or use by humans, including as food, fibre or fuel,
    - (ii) use as animal feed,
    - (iii) use as breeding stock or to produce seedlings or flowers,
    - (iv) use in landscaping or for ornamental purposes, in the case of plants, or
    - (v) work or recreational purposes, in the case of horses;
  - (b) storing
    - (i) nutrient sources and agricultural by-products, and
    - (ii) the primary products of livestock, poultry, insects, plants and fungi;
  - (c) carrying out agricultural composting processes;
  - (d) applying nutrient sources to land;
  - (e) washing, grading or packaging agricultural products, if carried out on the same agricultural land base as the livestock or poultry were reared or kept or the agricultural products were grown or harvested;
  - (f) disposing of or incinerating mortalities and processing wastes, if carried out on the same agricultural land base as the livestock or poultry were reared or kept;
  - (g) operating equipment in relation to
    - (i) an activity referred to in this subsection, or
    - (ii) other activities in relation to agriculture, other than processing primary products beyond the activities described in paragraph (e).
- (4) The following are not agricultural operations for the purposes of this code:
- (a) aquaculture and activities described in subsection (3) that are carried out in respect of aquaculture;
  - (b) soil blending operations that bring manure, sand or other materials onto a parcel of land for the purpose of producing soil for use other than on that parcel.

## PART 2 – WHETHER REGISTRATION REQUIRED

### Exemptions from section 6 (2) and (3) of the Act

- 3
- (1) Subject to subsection (2) of this section, a person who carries out an agricultural operation is not required to be registered under section 4 of the Waste Discharge Regulation for the purpose of being exempted from section 6 (2) and (3) of the Act.
  - (2) A person must be registered, and registration must be effective, under section 4 of the Waste Discharge Regulation before doing either of the following activities:
    - (a) using a boiler or heater for the purposes of an agricultural operation, unless section 4 [*deemed registration for use of boiler or heater*] or 5 [*no registration required if small capacity*] of this code applies;
    - (b) operating a nursery for forest tree seedlings.
  - (3) If a person holds a permit that authorizes the introduction of waste into the environment in relation to operating a nursery for forest tree seedlings, the permit is replaced by this regulation.

### Deemed registration for use of boiler or heater

- 4
- A person is deemed to be registered under section 4 of the Waste Discharge Regulation, and is subject to that section, if the person was registered on February 27, 2019, under the Code of Agricultural Practice for Waste Management, April 1, 1992, as attached to the Agricultural Waste Control Regulation, B.C. Reg. 131/92, and as it read on that date.

### No registration required if small capacity

- 5
- A person is not required to be registered under section 4 of the Waste Discharge Regulation if the person uses only boilers and heaters that
- (a) have a capacity of 0.15 MW or less, and
  - (b) are labelled in accordance with any of the following standards, as amended from time to time:
    - (i) the Canadian Standards Association standard CSA-B415.1-10, “Performance testing of solid-fuel-burning heating appliances”;
    - (ii) the United States Environmental Protection Agency standard Code of Federal Regulations, Title 40, Part 60,
      - (A) §60.5475 Subpart QQQQ, “Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces”, or
      - (B) §60.536 Subpart AAA, “Standards of Performance for New Residential Wood Heaters”.

## **PART 3 – EMISSIONS REQUIREMENTS**

### **Division 1 – General Provisions Respecting Emissions**

#### **Air contaminants from forced air ventilation**

- 6** A person who carries out an agricultural operation must ensure that emissions of air contaminants from forced air ventilation systems used in the agricultural operation do not enter a watercourse or cross a property boundary.

#### **When odours are not air contaminants**

- 7** For the purposes of paragraph (d) of the definition of “air contaminant” in section 1 (1) of the Act, an odour does not interfere with the normal conduct of business if
- (a) the odour is produced in carrying out an agricultural operation in accordance with normal agricultural practices, and
  - (b) ammonia, sulphur and other harmful compounds associated with the odour do not settle out of the air into a watercourse or across a property boundary at a level that would cause injury, interference, discomfort or damage as described in paragraphs (a) to (c), (e) or (f) of that definition.

### **Division 2 – Emissions from Boilers and Heaters**

#### **Application**

- 8** This Division applies to a person who uses a boiler or heater for the purposes of an agricultural operation, whether or not the person is required to be registered under section 4 of the Waste Discharge Regulation.

#### **Fuel restrictions**

- 9** A person must use only the following as fuel for a boiler or heater:
- (a) biomass, including biomass that has been compressed, dried and processed into uniform, discrete pellets, pucks, bricks or other units and commonly referred to as manufactured fuel;
  - (b) natural gas;
  - (c) propane;
  - (d) low-sulphur fuel that is
    - (i) No. 2 heating oil, or
    - (ii) diesel fuel for use in Canada in on-road vehicles;
  - (e) biogas, a gas derived from the anaerobic decomposition of organic matter;
  - (f) landfill gas, a mixture of gases generated by the decomposition of municipal solid waste within the meaning of Part 3 of the Act.

#### **Opacity limits**

- 10** (1) A person who uses biomass as fuel for a boiler or heater to carry out an agricultural operation must visually assess the opacity of emissions from the boiler or heater at least once each day the boiler or heater is operating, during the period

- (a) that begins at least 60 minutes after the boiler or heater is started, and
  - (b) that ends when shutdown procedures begin.
- (2) If a boiler or heater has a capacity of 1 MW or less, the person using the boiler or heater must
- (a) ensure that opacity levels do not exceed 20%, and
  - (b) immediately take corrective action to reduce emissions if the assessment under subsection (1) indicates that the opacity level exceeds or is about to exceed 20%.
- (3) If a boiler or heater has a capacity of more than 1 MW, the person using the boiler or heater must
- (a) ensure that opacity levels do not exceed 10%, and
  - (b) act in accordance with section 12 [*taking corrective action*] if the assessment under subsection (1) of this section indicates that the opacity level exceeds or is about to exceed 10%.
- (4) If more than one boiler or heater is connected to a single stack and the combined capacity is more than 1 MW, subsection (3) applies.

**Particulate matter limits**

- 11** (1) A person who uses biomass as fuel for a boiler or heater that has a capacity of more than 1 MW to carry out an agricultural operation must test emissions of particulate matter from the boiler or heater as follows:
- (a) testing must be done within 6 months after
    - (i) installing the boiler or heater,
    - (ii) modifying a boiler or heater that had a capacity of 1 MW or less to increase its capacity to more than 1 MW, or
    - (iii) modifying the capacity of a boiler or heater described in subparagraph (i) or (ii) by more than 25%;
  - (b) testing must be done during the period that begins on October 1 and that ends on April 30 of the next year,
    - (i) within the first year that the boiler or heater is operating, and
    - (ii) every second year afterwards, unless paragraph (a) (ii) or (iii) applies;
  - (c) testing must be done when the boiler or heater is fuelled by biomass only and operating
    - (i) under normal operating conditions,
    - (ii) under standard conditions of 20°C, 101.3 kPa dry gas and 8% oxygen, and
    - (iii) at 75% or more of its capacity;
  - (d) testing must be done during the period
    - (i) that begins at least 60 minutes after the boiler or heater is started, and
    - (ii) that ends when shutdown procedures begin;
  - (e) unless a different method is specified by a director, testing must be done using a method set out in the British Columbia Field Sampling Manual or

the British Columbia Environmental Laboratory Manual, as amended from time to time.

- (2) A person using a boiler or heater must
  - (a) ensure that particulate matter emission levels do not exceed
    - (i) 50 mg/m<sup>3</sup>, for a boiler or heater that has a capacity of more than 1 MW but equal to or less than 3 MW, or
    - (ii) 35 mg/m<sup>3</sup>, for a boiler or heater that has a capacity of more than 3 MW, and
  - (b) act in accordance with section 12 [*taking corrective action*] if testing under subsection (1) of this section indicates that the particulate matter emissions level exceeds or is about to exceed the applicable limit set under paragraph (a) of this subsection.
- (3) If more than one boiler or heater is connected to a single stack and the combined capacity is more than
  - (a) 1 MW, subsection (2) (a) (i) applies, or
  - (b) 3 MW, subsection (2) (a) (ii) applies.

#### **Taking corrective action**

- 12 If an opacity limit under section 10 (3) (a) [*opacity limits*] or a particulate matter emissions limit under section 11 (2) (a) [*particulate matter limits*] is exceeded, the person using the boiler or heater must do all of the following:
  - (a) immediately notify a director;
  - (b) begin immediately to take corrective action to reduce the opacity level or the emissions to or below the applicable limit;
  - (c) assess opacity levels or test particulate matter emissions, as applicable,
    - (i) immediately on completing the corrective action to confirm that limits are no longer being exceeded,
    - (ii) again within 6 months after corrective action was taken, and
    - (iii) at least once more in the next period that begins on October 1 and that ends on April 30 of the next year.

#### **Director may impose minimum stack height**

- 13 A director may set a minimum stack discharge height for a boiler or heater fuelled by biomass, and, if set, the stack discharges from the boiler or heater must be no less than the height set.

#### **Record-keeping requirements**

- 14 A person who uses biomass as fuel for a boiler or heater must keep records and supporting documentation respecting all of the following:
  - (a) the type and quantity of fuel burned by the boiler or heater;
  - (b) all inspections and maintenance of the boiler or heater;
  - (c) for each assessment and test conducted under this Part,
    - (i) the date and results of the assessment or test, and

- (ii) the corrective actions, if any, taken under this Part.

## PART 4 – SETBACK REQUIREMENTS

### Definition

- 15** In this Part, “**setback**” means the distance between
- (a) a structure or place where an activity is performed for the purposes of an agricultural operation, and
  - (b) a drinking water source, a watercourse or a property boundary.

### How to measure setbacks

- 16** (1) In this section, “**high water mark**” has the same meaning as in the Riparian Areas Regulation.
- (2) For the purpose of measuring a setback, measurements must be taken horizontally from the outer edge or limit of a structure or place where an activity occurs to the following:
- (a) in the case of a drinking water source
    - (i) that is groundwater, the outer edge of the well, reservoir or other structure used to collect the water, or
    - (ii) that is not groundwater, the top of its bank or its high water mark, as applicable;
  - (b) in the case of a watercourse, the top of its bank or its high water mark, as applicable;
  - (c) the property boundary.
- (3) Despite subsection (2), if a setback is to be measured from a diversion point, measurements must be taken in a radius from the outer edge of the end of the pipe or other structure used to pump water out of a watercourse.

### Setback requirements

- 17** A person who, for the purposes of an agricultural operation, performs an activity described in column 1 of the following table must ensure a setback of at least the distances, in m, set out opposite the activity in columns 2 to 4:

Item	Column 1 Activity	Column 2 Drinking water source (m)	Column 3 Watercourse, other than a drinking water source (m)	Column 4 Property boundary (m)
1	Storing agricultural by-products using (a) a permanent storage structure, on-ground under-pen storage or temporary field storage of < 2 weeks	30	15	4.5



Item	Column 1 Activity	Column 2 Drinking water source (m)	Column 3 Watercourse, other than a drinking water source (m)	Column 4 Property boundary (m)
	(b) temporary field storage of $\geq 2$ weeks	30	30	4.5
2	Carrying out agricultural composting processes using			
	(a) a composting structure	30	15	4.5
	(b) an outdoor agricultural composting pile	30	30	4.5
3	Storing wood residue in a permanent structure or as temporary field storage, or applying wood residue to land in a layer measuring 30 cm deep or more	30	15	Not on the property boundary
4	Applying wood residue to land in a layer measuring less than 30 cm deep	30, from a well or diversion point,  3, in any other case	3	Not on the property boundary
5	Applying nutrient sources, other than wood residue or irrigation water, to land	30, from a well or diversion point,  3, in any other case, or if commercial fertilizer is used	1.5, if commercial fertilizer or sub-surface injection is used  3, in any other case	Not on the property boundary
6	Rearing or keeping livestock or poultry using a confined livestock area or a confined poultry area having			
	(a) $< 10$ animal units in which animals are fed	30	5	1.5
	(b) $\geq 10$ animal units in which animals are fed	30	30	1.5
	(c) any number of animals, none of which are fed	30	5	Not applicable
7	On-ground feeding locations or mobile feeding bins used in a seasonal feeding area	30	30	4.5

Item	Column 1 Activity	Column 2 Drinking water source (m)	Column 3 Watercourse, other than a drinking water source (m)	Column 4 Property boundary (m)
8	Dealing with mortalities or processing wastes using			
	(a) a composting structure	30	15	4.5
	(b) an outdoor agricultural composting pile or a burial pit	30	30	4.5
	(c) an incinerator	15	15	7.5

**Exception for existing structures**

- 18 Despite section 17 [*setback requirements*], the setbacks set out in column 4 of the table to that section do not apply to an existing permanent storage structure, or existing on-ground under-pen storage, if stored contents cannot escape.

**Director may impose greater setbacks**

- 19 Despite any other provision of this Part and without limiting section 7 of the Waste Discharge Regulation, a director may impose a greater setback than is otherwise required under this Part, or impose a setback where none is otherwise required under this Part, if the director has reason to believe that contaminated runoff, leachate or solids are or may be entering a drinking water source or watercourse, or crossing a property boundary.

## PART 5 – HIGH-RISK AREAS AND CONDITIONS

**Definitions**

- 20 (1) In this Part:
- “**high-precipitation area**” means an area that has, on average, precipitation of 600 mm or more in total during the period that begins on October 1 and that ends on April 30 of the next year;
- “**high-risk area**” means any of the following:
- (a) a high-precipitation area;
  - (b) a vulnerable aquifer recharge area;
  - (c) a phosphorus-affected area;
  - (d) an area identified by a director as having permanent or usual geographic, topographic, weather-related or other features that present a high risk for adverse impacts on the environment or human health;
- “**high-risk condition**” means any of the following:
- (a) strong, divergent windy conditions;
  - (b) storm events, or periods of short-term intense or high rainfall;
  - (c) seasonal high water tables or flooding;

- (d) the degree to which a field used for an agricultural operation slopes toward a watercourse, if sufficient to cause contaminated runoff;
  - (c) a condition identified by a director as having temporary, intermittent or irregular topographic, weather-related or other features that present a high risk for adverse impact on the environment or human health.
- (2) For the purposes of subsection (1), a director may identify an area as a high-risk area or a condition as a high-risk condition
- (a) on the director's own initiative, or
  - (b) on application, made in the form and manner required by the director, by a person.

#### **Application**

- 21 (1) This Part applies to a person who carries out an agricultural operation in a high-risk area or under conditions that are, or may become, high-risk conditions.
- (2) If there is any inconsistency between a provision of this Part and any other provision of this code, the provision of this Part applies.

#### **Requirement to maintain protective base**

- 22 A person who is required under this Part to have a protective base must do all of the following:
- (a) maintain the base to prevent leakage and keep a record of all maintenance;
  - (b) assess the protective base for leakage at least once every 6 months;
  - (c) take corrective action to stop any leakage found on assessment and prevent further leaks;
  - (d) for each assessment conducted under paragraph (b), keep a record of
    - (i) the date and results of the assessment, and
    - (ii) the corrective actions taken under paragraph (c), if any.

#### **Permanent storage in vulnerable aquifer recharge areas**

- 23 (1) A person who uses a modified or new permanent storage structure in a vulnerable aquifer recharge area must ensure
- (a) that there is a protective base under the storage structure, and
  - (b) that, if the structure is used to store liquid manure,
    - (i) the structure is designed by a qualified professional who has considered what is needed to protect aquifers located in the vulnerable aquifer recharge area, and is constructed according to that design,
    - (ii) either
      - (A) the structure has a vertical distance of at least 1 m from the bottom of the protective base to the seasonal high water table, or
      - (B) leak detection measures demonstrate that the structure is not leaking, and

(iii) the person keeps the design plans and a statement signed by the qualified professional indicating that the structure was constructed as designed.

(2) A person who uses modified or new on-ground under-pen storage in a vulnerable aquifer recharge area must ensure that there is a protective base under the storage.

#### **Earthen storage basins**

**24** Despite section 23 (1) [*permanent storage in vulnerable aquifer recharge areas*], a person who began, before February 28, 2019, to store liquid manure in an earthen basin dug into the ground in a vulnerable aquifer recharge area must do all of the following:

- (a) have a qualified professional assess the storage basin for leaks of stored materials
  - (i) before February 28, 2021, and
  - (ii) until a protective base is installed, at least every 5 years after the last assessment or more often if the qualified professional believes it to be necessary;
- (b) if any leaks are found on assessment under paragraph (a),
  - (i) take immediate corrective action to stop the leaks and to prevent further leaks, and
  - (ii) take steps as soon as reasonably practicable to install a protective base on the bottom and sides of the storage basin;
- (c) keep a record of
  - (i) the date and results of each assessment conducted under paragraph (a), and
  - (ii) all actions taken under paragraph (b), if any;
- (d) whether or not any leaks are found on assessment under paragraph (a), have a protective base on the bottom and sides of the storage basin before February 28, 2029, or an earlier date required by a director.

#### **Temporary field storage and outdoor agricultural composting piles**

- 25** (1) A person who uses temporary field storage or an outdoor agricultural composting pile in a high-precipitation area must cover the stored materials or the pile during the period that begins on October 1 and that ends on April 1 of the next year.
- (2) A person who uses temporary field storage for 2 weeks or more, or an outdoor agricultural composting pile, in a vulnerable aquifer recharge area must not locate the storage or pile directly on or over soil that has a saturated hydraulic conductivity of more than  $10^{-3}$  cm/s, commonly referred to as coarse-textured soil.

#### **Irrigation**

**26** A person who irrigates land in a vulnerable aquifer recharge area must ensure that the quantity and timing of irrigation does not exceed crop needs.

### **Restrictions on applying nutrients**

- 27** (1) A person must not apply nutrient sources to land
- (a) in a high-precipitation area during the period that begins on November 1 and that ends on February 1 of the next year,
  - (b) during strong, divergent windy conditions, unless the nutrient sources are applied
    - (i) below the soil surface, or
    - (ii) under a crop canopy having a height of at least 8 cm,
  - (c) during storm events, or periods of short-term intense or high rainfall, or
  - (d) during any high-risk conditions that are identified by a director under this Part and are relevant to the application of nutrient sources to land.
- (2) A person must not apply nutrient sources, other than wood residue, to land in a high-precipitation area during February, March or October unless the nutrients are needed by, and will be available to, the intended crop.
- (3) Without limiting subsection (2), a person may apply nutrient sources to bare soil in a high-precipitation area in the fall only if the following conditions are met:
- (a) a crop is planted before the winter non-growing season begins;
  - (b) the application is to medium or fine-textured soils with a low risk of leaching;
  - (c) the nutrients will not enter a watercourse or go below the seasonal high water table.

### **Livestock or poultry**

- 28** (1) A person responsible for a feedlot that will hold 10 animal units or more must comply with all applicable requirements of this section.
- (2) If the feedlot is located in a vulnerable aquifer recharge area but not in a high-precipitation area, the feedlot must have a protective base.
- (3) If the feedlot is located in a high-precipitation area, any part of the feedlot that is not covered by a roof must have a protective base if the feedlot
- (a) is also located in a vulnerable aquifer recharge area, or
  - (b) is a new or modified feedlot.
- (4) If the feedlot is located in either a vulnerable aquifer recharge area or a high-precipitation area, there must be a vertical distance of at least 1.2 m from the bottom of the feedlot's protective base or self-sealing layer to the seasonal high water table.

### **Burial pits**

- 29** A person who buries mortalities, solid waste or semi-solid waste in a burial pit located in a vulnerable aquifer recharge area
- (a) must not bury in a single pit more than 1 tonne of materials, and
  - (b) must ensure that there is a vertical distance of at least 2 m from the bottom of the pit to either the bedrock or the seasonal high water table.

### **High-risk conditions**

- 30 A person who carries out an agricultural operation, whether in a high-risk area or not, must do all of the following:
- (a) monitor the agricultural operation for impending high-risk conditions;
  - (b) assess the effectiveness of existing measures and controls to prevent contaminated runoff, leachate and solids from entering a drinking water source or watercourse, or crossing a property boundary;
  - (c) if existing measures or controls are inadequate, take corrective action before high-risk conditions materialize.

## **PART 6 – COLLECTION, STORAGE AND USE REQUIREMENTS**

### **Division 1 – Agricultural By-Products**

#### **Application**

- 31 This Division applies to a person who stores or uses agricultural by-products for the purposes of an agricultural operation.

#### **Allowable storage and use of solid agricultural by-products**

- 32 A person may store and use solid agricultural by-products, or carry out an agricultural composting process, only as follows:
- (a) solid agricultural by-products that are produced on the person's agricultural land base may be stored, and an agricultural composting process carried out, on that agricultural land base;
  - (b) solid agricultural by-products that are not produced on the person's agricultural land base may be stored, and an agricultural composting process carried out, on that agricultural land base only if the agricultural by-products or the products of the agricultural composting process are subsequently used only in agricultural operations carried out on that agricultural land base;
  - (c) solid agricultural by-products may be stored only in a permanent storage structure or as temporary field storage;
  - (d) manure and bedding from fur bearing animals may be stored in on-ground under-pen storage for no more than 7 months.

#### **Allowable storage and use of liquid manure**

- 33 (1) A person may store liquid manure only as follows:
- (a) liquid manure may be stored on a person's agricultural land base only if the liquid manure is subsequently used in agricultural operations carried out on the agricultural land base on which the liquid manure was produced or stored;
  - (b) subject to subsection (2), liquid manure may be stored only in a permanent storage structure.

- (2) In an emergency affecting an agricultural operation, the person responsible for the agricultural operation may store liquid manure in a form of containment that is not a permanent storage structure if all of the following conditions are met:
  - (a) the person notifies a director immediately of the emergency;
  - (b) within 5 days of notifying a director of the emergency, the person notifies a director of the person's plan to move the liquid manure to a permanent storage structure, or to apply the liquid manure to land, in a manner that complies with this code;
  - (c) the person implements the plan in accordance with the notification under paragraph (b) and any directions of, or modifications required by, the director;
  - (d) the stored liquid manure does not overflow;
  - (e) the structure is monitored for leaks and corrective action is taken immediately if any leaks are found.

#### **General storage requirements**

- 34 A person who stores agricultural by-products must ensure all of the following:
  - (a) that any leachate generated during storage is collected or contained until it can be used in applying nutrients to land;
  - (b) that runoff is diverted away from the storage structure or storage area;
  - (c) that the storage structure or storage area is maintained so as to prevent contaminated runoff, leachate, wastewater and solids from escaping;
  - (d) if contaminated runoff, leachate, wastewater or solids escape from storage, they do not enter a watercourse, cross a property boundary, or go below the seasonal high water table;
  - (e) that air contaminants from stored agricultural by-products do not cross a property boundary;
  - (f) that agricultural by-products are stored in a manner that will deter the attraction of, and access by, domestic pets, wildlife and vectors.

#### **General requirements for permanent storage structures**

- 35 A person who uses a permanent storage structure must ensure that the structure has sufficient capacity to store agricultural by-products until they are
  - (a) applied as a fertilizer or soil conditioner, or
  - (b) transported away from the agricultural land base.

#### **Permanent storage structures for liquid manure**

- 36 (1) A person who stores liquid manure in a permanent storage structure must ensure that the structure is one of the following:
  - (a) an existing permanent storage structure;
  - (b) a modified permanent storage structure and the modification was
    - (i) designed by a qualified professional who considered the entire structure and this code, and
    - (ii) constructed according to that design;

- (c) a new permanent storage structure that was designed by a qualified professional and constructed according to that design.
- (2) A person who stores liquid manure in a modified or new permanent storage structure must keep the design plans and a statement signed by the qualified professional indicating that the structure was constructed as designed.
- (3) A person who stores liquid manure in a permanent storage structure must ensure all of the following:
  - (a) that the level of stored liquid manure reaches no more than 30 cm below the top of the structure;
  - (b) that the structure has a protective base;
  - (c) that the protective base is maintained to prevent leakage;
  - (d) that the stored liquid manure does not leak from the structure or overflow.

**Temporary field storage**

- 37 (1) A person who uses temporary field storage to store solid agricultural by-products must ensure all of the following:
- (a) that field storage is not located
    - (i) in any area in which there is standing water or water-saturated soil, or
    - (ii) on any low-lying area of a field prone to annual seasonal flooding, during the flood season or when flooding is imminent;
  - (b) that field storage is monitored at least once each week to ensure compliance with this code;
  - (c) that, before the end of the growing period, but no later than 7 months after storage begins, all field-stored solid agricultural by-products are
    - (i) used,
    - (ii) moved to a permanent storage structure, if permitted under section 32 (a) or (b) [*allowable storage and use of solid agricultural by-products*], or
    - (iii) transported away from the agricultural land base;
  - (d) that vegetation is grown on the storage location after the field-stored solid agricultural by-products are used, moved or transported in accordance with paragraph (c), either in the current or next growing season;
  - (e) that, if field storage is for a period of more than 2 weeks, temporary field storage does not occur in the same location again for at least 3 years.
- (2) A person who uses temporary field storage must keep a record of all of the following:
- (a) the type and source of the materials being stored;
  - (b) the location of the temporary field storage;
  - (c) the weekly results of monitoring conducted under subsection (1) (b).

**On-ground under-pen storage**

- 38 (1) Without limiting section 34 [*general storage requirements*], a person who uses on-ground under-pen storage must ensure



- (a) that runoff is diverted away from stored materials, and
  - (b) that, if contaminated runoff, leachate, solids or agricultural by-products escape from storage, steps are taken immediately to collect and contain them.
- (2) A person who uses on-ground under-pen storage must keep a record of the steps taken, if any, under subsection (1) (b).

## **Division 2 – Agricultural Composting**

### **Application**

- 39** This Division applies to a person who carries out an agricultural composting process for the purposes of an agricultural operation, other than to dispose of mortalities and processing wastes.

### **General agricultural composting process requirements**

- 40** A person who carries out an agricultural composting process must ensure all of the following:
- (a) that any leachate generated during the agricultural composting process is collected or contained;
  - (b) that runoff is diverted away from the agricultural composting process;
  - (c) that the agricultural composting process is maintained so as to prevent contaminated runoff, leachate and solids from escaping;
  - (d) that, if contaminated runoff, leachate or solids escape from the agricultural composting process, they do not enter a watercourse, cross a property boundary or go below the seasonal high water table;
  - (e) that air contaminants from the agricultural composting process do not cross a property boundary;
  - (f) that the agricultural composting process will be carried out in a manner that will deter the attraction of, and access by, domestic pets, wildlife and vectors.

### **Requirements for composting structures**

- 41** A person who uses a composting structure must ensure both of the following:
- (a) that the structure has a protective base;
  - (b) that the protective base is maintained to prevent leakage.

### **Requirements for outdoor agricultural composting piles**

- 42** (1) A person who uses outdoor agricultural composting piles must ensure all of the following:
- (a) that the pile is not located
    - (i) in any area in which there is standing water or water-saturated soil, or
    - (ii) on any low-lying area of a field prone to annual seasonal flooding, during the flood season or when flooding is imminent;

- (b) that the pile is monitored at least once each week to ensure compliance with this code;
  - (c) that the pile does not remain for a period of more than 12 months;
  - (d) that no other pile is erected in the same location for at least 3 years.
- (2) A person who uses outdoor agricultural composting piles must keep a record of all of the following:
- (a) the type and source of the materials being composted;
  - (b) the location of the pile;
  - (c) the weekly results of monitoring conducted under subsection (1) (b).

**Distribution of manure or agricultural compost**

- 43 (1) This section applies to a person who
- (a) keeps 5 or more animal units, and
  - (b) distributes from an agricultural land base any manure or the product of an agricultural composting process.
- (2) A person who distributes manure or the product of an agricultural composting process in units of 5 m<sup>3</sup> or less must keep an annual record of the following:
- (a) the total amount distributed, expressed in m<sup>3</sup>;
  - (b) the dates that distribution began and ended;
  - (c) the type of agricultural by-product distributed.
- (3) A person who distributes manure or the product of an agricultural composting process in units of more than 5 m<sup>3</sup> must keep, for each distribution, a receipt that
- (a) is signed by the receiver, and
  - (b) shows all of the following:
    - (i) the amount distributed, expressed in m<sup>3</sup>;
    - (ii) the date of distribution;
    - (iii) the type of agricultural by-product distributed;
    - (iv) the name and business contact information of the receiver.
- (4) A person who distributes a product resulting from an agricultural composting process must not describe the product as “compost” or “composted”.

**Division 3 – Wood Residue**

**Application**

- 44 This Division applies to a person who collects, stores or uses wood residue for the purposes of an agricultural operation.

**Allowable storage of wood residue**

- 45 A person may store wood residue only as follows:
- (a) in a permanent storage structure;
  - (b) as temporary field storage for a period of no more than 12 months.

### **General storage and land application requirements**

- 46** A person who stores wood residue or applies wood residue to land must ensure all of the following:
- (a) that storage is not located, or wood residue is not applied to land,
    - (i) in any area in which there is standing water or water-saturated soil, or
    - (ii) on any low-lying area of a field prone to annual seasonal flooding, during the flood season or when flooding is imminent;
  - (b) that wood residue, contaminated runoff, leachate, solids and dust do not enter a watercourse, cross a property boundary or go below the seasonal high water table;
  - (c) in the case of storage,
    - (i) that leachate does not escape from the storage, and
    - (ii) that runoff is diverted away from the storage.

### **Uses of wood residue**

- 47** (1) A person must not use wood residue
- (a) for the construction of berms,
  - (b) as an envelope for tile drains,
  - (c) as fill or to level a site,
  - (d) to create an access way through a watercourse, or
  - (e) for any other purpose, other than a purpose permitted under subsection (2).
- (2) Unless it would not be permitted under subsection (1) (a) to (d), a person may use wood residue for the following purposes:
- (a) as plant mulch or for horticultural bedding;
  - (b) as soil conditioner or ground cover;
  - (c) as a component of growing media;
  - (d) for composting with agricultural by-products;
  - (e) in confined livestock areas or confined poultry areas, or in areas where livestock and poultry are exercised;
  - (f) as animal bedding;
  - (g) to create an access way on an agricultural land base;
  - (h) as fuel for wood-fired boilers.

## **Division 4 – Nutrient Application and Management**

### **Application**

- 48** This Division applies to a person who applies nutrient sources for the purposes of an agricultural operation.

### **Prohibitions on applications to land**

- 49** (1) A person must not apply nutrient sources to land
- (a) on which there is standing water or water-saturated soil,

- (b) on ground in which the top 5 cm of soil is frozen so as to be impenetrable to manually-operated equipment,
  - (c) on a field having at least 5 cm of ice or snow over at least 50% of its area, or
  - (d) at a rate of application, under meteorological, topographical or soil conditions, or in a manner, that may cause nutrient sources or contaminated runoff, leachate or solids to enter a watercourse, cross a property boundary or go below the seasonal high water table.
- (2) A person must not apply to land a material described in any of paragraphs (c) to (g) of the definition of “nutrient source” unless the material is treated, provided, used or produced, as applicable, in accordance with this code and the applicable regulation referred to in those paragraphs.

**Prohibitions on applying compost to land**

- 50** (1) In this section, “foreign matter”
- (a) means, subject to paragraph (b), a contaminant that does not readily decompose during an agricultural composting process, and
  - (b) does not include silt, sand, rocks or stones, gravel less than 2.5 cm in diameter, or other mineral materials naturally found in soil.
- (2) A person must not apply to land the product of an agricultural composting process, or compost processed in accordance with the Organic Matter Recycling Regulation, if the product or compost contains any of the following:
- (a) animal flesh, or bones with visible flesh attached;
  - (b) more than 1% foreign matter by dry weight;
  - (c) any sharp foreign matter in a size or shape that could cause injury to a person who or an animal that comes into contact with it.

**General requirements for applications to land**

- 51** (1) A person who applies nutrient sources to land must ensure all of the following:
- (a) that nutrient sources and leachate produced by nutrient sources do not escape during transportation or piping;
  - (b) that nutrient sources are not discharged or applied directly into a watercourse, across a property boundary or below the seasonal high water table;
  - (c) that drift from nutrient sources sprayed onto land does not enter a watercourse, cross a property boundary or go below the seasonal high water table;
  - (d) that the total amount of available nitrogen in the soil, if applicable, and from all nutrient sources applied in one year of application, is equal to or less than the amount of nitrogen needed for optimum crop growth and yield.
- (2) A person who applies nutrient sources to land, other than land that is part of an agricultural operation having an agricultural land base totalling less than 2 ha, must make and keep records of all of the following in respect of each field to which the nutrient sources are applied:
- (a) the location and size of the field;
  - (b) the crop nutrient requirements of the field;

- (c) the crop yields of the field;
- (d) the date and location of each application of nutrients;
- (e) whether the nutrient sources were solids or liquids and the type of nutrient sources applied;
- (f) the calculated nutrient application rate;
- (g) the rate at which nutrients were actually applied;
- (h) the results of testing conducted under section 53 [*requirement to test soil*].

**General requirements for applications other than to land**

- 52 (1) A person who applies nutrient sources to a crop but not to land must ensure all of the following:
- (a) that nutrient sources and leachate produced by nutrient sources do not escape during transportation or piping;
  - (b) that, in the case of nutrient sources applied to crops in containers,
    - (i) nutrient sources are not discharged or applied directly into a watercourse, across a property boundary or below the seasonal high water table, and
    - (ii) contaminated runoff, leachate, solids or drift from sprayed nutrient sources does not enter a watercourse, cross a property boundary or go below the seasonal high water table;
  - (c) that the total amount of available nitrogen from all nutrient sources applied in one year of application is equal to or less than the amount of nitrogen needed for optimum crop growth and yield.
- (2) A person who applies nutrient sources to a crop but not to land must make and keep records of all of the following in respect of each crop to which nutrient sources are applied:
- (a) the crop nutrient requirements;
  - (b) the calculated nutrient application rate;
  - (c) whether the nutrient sources were solids or liquids and the type of nutrient sources applied.

**Requirement to test soil**

- 53 (1) Subject to subsection (2), a person who applies nutrient sources to land must have the soil in each field tested as follows:
- (a) if the result of a nitrate test for the field is 100 kg N/ha or more, a nitrate test must be conducted again for that field the following year;
  - (b) if paragraph (a) does not apply, a nitrate test must be conducted at least once every 3 years;
  - (c) a phosphorus test must be conducted at least once every 3 years.
- (2) Subsection (1) does not apply if the land to which nutrient sources are being applied
- (a) is part of an agricultural operation having an agricultural land base totalling less than 2 ha,

- (b) is used to grow crops that are intentionally flooded for harvest, or
- (c) is composed of organic soils commonly referred to as peat or muck soils.

#### **Nitrate test**

- 54** A nitrate test must be conducted in accordance with one of the following:
- (a) a post-harvest nitrate test that measures the amount of nitrate-nitrogen left in soil and not used by the most recently harvested crop must be conducted
    - (i) using a representative sample, and
    - (ii) after the last harvest of the growing season but before the autumn rains typically begin;
  - (b) a test equivalent to a post-harvest nitrate test that will produce results representative of the amount of nitrate-nitrogen left in soil and not used by the most recently harvested crop.

#### **Phosphorus test**

- 55** (1) A phosphorus test must
- (a) measure the amount of available phosphorus in soil, and
  - (b) be conducted using a representative sample.
- (2) If phosphorus test results are obtained using a method other than that commonly referred to as the “Kelowna method”, the results must be converted to a value that is equivalent to the results that would have been obtained if the Kelowna method had been used.

#### **When nutrient management plan is required**

- 56** Subject to section 58 [*exemptions or modifications to nutrient management plans*], a person who applies nutrient sources to a field must have a nutrient management plan if all of the following conditions are met:
- (a) the field is part of an agricultural operation having an agricultural land base totalling 5 ha or more;
  - (b) the field is located in a vulnerable aquifer recharge area shown on Map B1, as listed in Schedule B;
  - (c) the result of a nitrate test for the field is 100 kg N/ha or more.

#### **Preparation of nutrient management plan**

- 57** (1) A nutrient management plan must be prepared
- (a) by a qualified professional if the result referred to in section 56 (c) [*when nutrient management plan is required*] is 150 kg N/ha or more, and
  - (b) by an experienced person, in any other case.
- (2) A person who prepares a nutrient management plan must
- (a) consider all nutrient sources available to the crop, including nutrients in the soil and nutrients applied to and removed from a field, and
  - (b) design the plan to achieve the following objectives:

- (i) to minimize the risk of nitrogen and phosphorus loss from a field to the environment;
- (ii) to achieve an agronomic nitrogen balance of 0 for a field.

**Exemptions or modifications to nutrient management plans**

- 58** (1) A person may apply to a director, in the form and manner required by the director, for
- (a) an exemption from the requirement to have a nutrient management plan, or
  - (b) a modification of a requirement of section 57 [*preparation of nutrient management plan*].
- (2) The director may grant an exemption or a modification if satisfied that the exemption or modification
- (a) is necessary because
    - (i) soil test results under section 53 [*requirements to test soil*] are unusually high due to a meteorological or other natural event, or
    - (ii) the person cannot comply with the requirement because no qualified professional or experienced person, as applicable, is reasonably available to the person, and
  - (b) will not jeopardize the achievement of the purposes of this code, as stated under section 2 (1) [*agricultural operations to which this code applies*].
- (3) The director may grant an exemption or a modification
- (a) with or without conditions, and
  - (b) for a period of up to one year.
- (4) A person who is granted an exemption or modification under this section must comply with all conditions, if any, imposed under subsection (3) (a).

**Implementation of nutrient management plan**

- 59** (1) A person who must have a nutrient management plan must do all of the following:
- (a) if the plan is prepared by a qualified professional, notify a director, in the form and manner required by the director, that a plan has been made or revised;
  - (b) implement the plan;
  - (c) keep a copy of the plan, the information on which it is based, including information from records made under section 51 (2) [*general requirements for applications to land*], and of any changes made to the plan, and make and keep records to demonstrate compliance with the plan.
- (2) A person who must have a nutrient management plan prepared must do the following:
- (a) review the plan at least once each year;
  - (b) if no significant change has been made to the person's agricultural operation within the year, make any necessary changes identified by the review.

- (3) A person who must have a nutrient management plan prepared must have a qualified professional or experienced person, as applicable under section 57 [*preparation of nutrient management plan*], review the plan and make any necessary changes identified by the review as follows:
  - (a) at least once every 5 years;
  - (b) on making any significant change to the person's agricultural operation.

**Director's powers respecting application of nutrient sources**

- 60** (1) Despite any other provision of this Division, a director may do one or more of the following if the director has reason to believe that the application of nutrient sources is or may be having an adverse impact on the environment or human health:
- (a) prohibit the application of nutrient sources in one or more areas
    - (i) during a specified period, and
    - (ii) until soil testing, water quality monitoring or other testing indicates that the prohibition is not needed to protect the environment or human health;
  - (b) require a person to have a qualified professional or an experienced person prepare or change a nutrient management plan.
- (2) A person must not contravene a prohibition made under subsection (1) (a).
- (3) A person who is subject to a requirement under subsection (1) (b) must comply with the requirement.

**PART 7 – LIVESTOCK AND POULTRY REQUIREMENTS**

**Division 1 – Livestock and Poultry Areas**

**Application**

- 61** This Division applies to a person who keeps livestock or poultry for the purposes of an agricultural operation.

**Confined livestock or poultry areas**

- 62** A person responsible for a confined livestock area or confined poultry area must ensure all of the following:
- (a) that livestock and poultry do not have direct access to a drinking water source or watercourse;
  - (b) that contaminated runoff, leachate, solids and air contaminants do not enter a watercourse, cross a property boundary or go below the seasonal high water table;
  - (c) that the accumulation of manure, animal bedding and feed within the area is managed so as to prevent contaminated runoff, leachate and solids from escaping;
  - (d) that if contaminated runoff, leachate or solids escape from the area, it is collected and contained.



### **Feedlots**

- 63** (1) A person responsible for a feedlot must ensure both of the following:
- (a) that the self-sealing layer that forms under the feedlot is maintained so as to prevent leachate from entering groundwater;
  - (b) that runoff is diverted away from the feedlot.
- (2) A person responsible for a feedlot that will no longer be used must decommission the feedlot by removing the manure pack that accumulated over the self-sealing layer and cleaning out the pens in a manner that
- (a) prevents leachate from entering groundwater or a watercourse, and
  - (b) allows nutrients from the manure to be stored and applied to land in accordance with this code.

### **Seasonal feeding, grazing and temporary holding areas**

- 64** (1) A person responsible for a grazing area, seasonal feeding area or temporary holding area in which livestock or poultry have direct access to a watercourse must ensure that effective controls are in place to minimize
- (a) trampling and erosion of soil into the watercourse, and
  - (b) contaminated runoff, leachate and solids entering the watercourse.
- (2) A person responsible for a grazing area must move livestock
- (a) from areas that are flooded or where flooding is imminent, and
  - (b) during the flood season from areas that are prone to annual seasonal flooding.
- (3) A person responsible for a seasonal feeding area must ensure that, while livestock are present, on-ground feeding locations and mobile feeding bins are
- (a) not located
    - (i) in areas that are flooded or where flooding is imminent, or
    - (ii) during the flood season in areas that are prone to annual seasonal flooding, and
  - (b) distributed evenly over the seasonal feeding area, in a manner that prevents the accumulation of manure near feeding locations or bins.
- (4) A person responsible for a temporary holding area must ensure that livestock or poultry are not held in the temporary holding area for a period of more than 72 hours.

### **Record-keeping requirements**

- 65** A person who keeps 5 or more animal units must make and keep records of all of the following:
- (a) the total number of animals;
  - (b) the total amount of manure, including bedding mixed with the manure, collected annually, expressed in m<sup>3</sup>, and divided according to the type of animal the manure is from and whether the manure is liquid or solid;
  - (c) the amount of manure, expressed in m<sup>3</sup>, managed by

- (i) distribution in accordance with section 43 [*distribution of manure or agricultural compost*], or
- (ii) application as fertilizer or a soil conditioner in accordance with Division 4 [*Nutrient Application and Management*] of Part 6.

## **Division 2 – Slaughter, Mortalities and Processing Waste**

### **Application**

- 66** (1) Subject to subsection (2), this Division applies to a person who does any of the following for the purposes of an agricultural operation:
- (a) stores, transports or disposes of mortalities or processing waste, other than transporting mortalities and processing waste to a facility or place regulated under another enactment for the purpose of disposal;
  - (b) applies wastewater, within the meaning of the Code of Practice for the Slaughter and Poultry Processing Industries, to land.
- (2) This Division does not apply to a person who disposes of multiple mortalities totalling 5 tonnes or more that died during a single event of
- (a) fire, flood or other disaster, or
  - (b) disease outbreak.

### **Allowable disposal**

- 67** (1) Subject to the limits set out in this section, a person may dispose of mortalities or processing waste on the person's agricultural land base through agricultural composting processes or by burial or incineration.
- (2) A person may dispose only of mortalities that died on the person's agricultural land base.
- (3) A person may dispose only of processing waste that comes from livestock or poultry that were reared, kept or slaughtered on the person's agricultural land base.
- (4) A person must not dispose, in a year, of processing waste that comes from the slaughter of 5 tonnes or more of livestock or 1.5 tonnes or more of poultry, determined on a live weight basis.

### **General requirements**

- 68** A person who carries out an activity to which this Division applies must ensure all of the following:
- (a) that mortalities are not disposed of into, and are prevented from entering, a watercourse;
  - (b) that, if a mortality enters a watercourse, the owner of the mortality removes that mortality immediately;
  - (c) that processing waste does not enter a watercourse;
  - (d) that contaminated runoff, leachate, solids and air contaminants from the activity do not enter a watercourse, cross a property boundary or go below the seasonal high water table;

- (c) that odours and particulate matter from the activity are minimized;
- (f) that the activity will be carried out in a manner that will deter the attraction of, and access by, domestic pets, wildlife and vectors.

#### **Storage**

- 69** (1) A person who stores mortalities must ensure that the mortalities are stored in a manner that prevents
- (a) putrefaction, and
  - (b) leachate from escaping.
- (2) A person may store processing waste and leachate on an agricultural land base only in a structure
- (a) that is completely enclosed, and
  - (b) from which the processing waste and leachate cannot escape.

#### **Transport**

- 70** A person may transport mortalities and processing waste from an agricultural land base only in containers from which the mortalities and processing waste, and leachate from them, cannot escape.

#### **Agricultural composting processes**

- 71** (1) A person who disposes of mortalities or processing waste through agricultural composting processes must ensure all of the following:
- (a) that composting occurs only in a composting structure or in an outdoor agricultural composting pile;
  - (b) that contaminated runoff, leachate and solids from the compost do not enter a watercourse, cross a property boundary or go below the seasonal high water table;
  - (c) that air contaminants from the compost do not cross a property boundary;
  - (d) that composting will be carried out in a manner that will deter the attraction of, and access by, domestic pets, wildlife and vectors;
  - (e) that mortalities and processing waste are completely decomposed before application to land;
  - (f) that composted mortalities and processing waste are applied to land only on, and are not removed from, the agricultural land base on which the composting occurred.
- (2) A person must not dispose of more than 5 tonnes of mortalities or processing waste through agricultural composting processes in any 30-day period unless the person
- (a) notifies a director immediately on becoming aware that disposal is necessary and before disposal occurs, and
  - (b) complies with the requirements, if any, imposed by the director.

### **Outdoor agricultural composting piles**

- 72 A person who uses an outdoor agricultural composting pile to dispose of mortalities or processing waste through agricultural composting processes must ensure all of the following:
- (a) that the pile is not located
    - (i) in any area in which there is standing water or water-saturated soil, or
    - (ii) on any low-lying area of a field prone to annual seasonal flooding;
  - (b) that the pile does not remain for a period of more than 15 months;
  - (c) that no other pile is erected in the same location for at least 3 years.

### **Land applications of wastewater and agricultural compost**

- 73 (1) In this section, the following terms have the same meaning as in the Code of Practice for the Slaughter and Poultry Processing Industries:
- (a) specified risk material;
  - (b) wastewater.
- (2) A person who applies wastewater to land must ensure that the wastewater
- (a) contains no solid waste or visible tissue,
  - (b) is applied only on the agricultural land base on which the wastewater was generated, and
  - (c) is not applied to land used to grow crops for human consumption or to graze domestic ruminants.
- (3) A person who applies wastewater to land must comply with Division 4 [*Nutrient Application and Management*] of Part 6 as if the person were applying nutrient sources to the land.
- (4) A person who applies the product of an agricultural composting process to land must, if the product contains specified risk material, ensure that the product is not applied to land used to grow crops for human consumption or to graze domestic ruminants.

### **Disposal by burial**

- 74 (1) A person who buries mortalities, solid waste or semi-solid waste must ensure all of the following:
- (a) that no more than 2.5 tonnes are buried in a single burial pit;
  - (b) that burial pits are not located
    - (i) closer than 60 m apart, unless each pit has been unused for at least 10 years,
    - (ii) in or over soil that has a saturated hydraulic conductivity of more than  $10^{-3}$  cm/s, commonly referred to as coarse-textured soil,
    - (iii) in, or in the vicinity of, unstable soils that might cause the buried materials to escape the burial pit,
    - (iv) in any area in which there is standing water or water-saturated soil,
    - (v) in any low-lying area of a field prone to annual seasonal flooding, or

- (vi) in a field within a 200-year flood plain;
  - (c) that there is a vertical distance of at least 1.5 m from the bottom of the pit to either the bedrock or the seasonal high water table;
  - (d) that buried materials are covered immediately after burial with at least 0.6 m of soil.
- (2) A person who closes a burial pit must ensure that the pit is covered with at least 1 m of soil that is compacted and mounded in a manner that will
- (a) minimize the percolation of precipitation into the pit,
  - (b) divert runoff away from the pit, and
  - (c) deter the attraction of, and access by, domestic pets, wildlife and vectors.
- (3) A person who buries mortalities, solid waste or semi-solid waste must make and keep records of all of the following in respect of each burial pit:
- (a) the location of the pit;
  - (b) the type and amount, expressed in tonnes, of materials buried;
  - (c) the date the pit is closed, if applicable.

**Disposal by incineration**

- 75 (1) A person who incinerates mortalities, solid waste or semi-solid waste must ensure that the incinerator is
- (a) designed and manufactured specifically for the incineration of mortalities, and
  - (b) designed such that emissions of particulate matter from the incinerator, determined under standard conditions of an O<sup>2</sup> reference level of 11%, at 25°C and 101.3 kPa, do not exceed the following limits:
    - (i) for an existing incinerator, 180 mg/m<sup>3</sup>;
    - (ii) for a new incinerator that has a chamber capacity of
      - (A) less than 181 kg, 175 mg/m<sup>3</sup>, or
      - (B) 181 kg or more, 155 mg/m<sup>3</sup>.
- (2) A person who incinerates mortalities, solid waste or semi-solid waste must
- (a) visually assess the opacity of emissions from the incinerator at least once
    - (i) every 12 hours, and
    - (ii) during each burn cycle, and
  - (b) immediately take corrective action to reduce the opacity level to or below the following limit, as applicable, if the assessment indicates that the opacity level exceeds that limit:
    - (i) 20%, for
      - (A) an existing incinerator, or
      - (B) a new incinerator that has a chamber capacity of less than 181 kg;

- (ii) 10%, for a new incinerator that has a chamber capacity of 181 kg or more, assessed after the incinerator has reached its operating temperature.

**Record-keeping requirements**

- 76** A person who uses an incinerator must make and keep records respecting all of the following:
- (a) the type and quantity of mortalities, solid waste and semi-solid waste incinerated and the date of each incineration;
  - (b) all inspections and maintenance of the incinerator;
  - (c) the results of all opacity assessments conducted under section 75 (2) [*disposal by incineration*];
  - (d) if opacity limits under section 75 (2) are exceeded,
    - (i) the date on which the limit was exceeded,
    - (ii) the level of opacity, and
    - (iii) the corrective action taken.

**PART 8 – OTHER MATTERS**

**Agricultural products**

- 77** A person who manages, stores or uses agricultural products for the purposes of an agricultural operation must ensure that contaminated runoff, leachate and solids from the agricultural products do not enter a watercourse, cross a property boundary or go below the seasonal high water table.

**Treatment of contaminated runoff, leachate and wastewater**

- 78**
- (1) This section applies to a person who, as part of an agricultural operation, collects and stores contaminated runoff, leachate or wastewater and treats the stored materials to remove pathogens, suspended solids, nutrients, metals and chemicals.
  - (2) A person to whom this section applies and who uses an existing treatment system
    - (a) may discharge the treated product to land or water,
    - (b) must notify a director before February 28, 2021, that this section applies to the person, and
    - (c) must provide to the director any information the director requires respecting the treatment system.
  - (3) A person to whom this section applies and who uses a modified or new treatment system may discharge the treated product to land or water if the person does all of the following:
    - (a) notifies a director at least 60 days before modifying or installing the treatment system by providing to the director
      - (i) the designs and plans for the treatment system, as prepared by a qualified professional,

- (ii) the projected quality and rate of flow of the treated product, and
- (iii) any further information required by the director;
- (b) makes any changes to the designs and plans required by the director;
- (c) receives approval from the director for modification or construction of the treatment system to begin;
- (d) modifies or constructs the treatment system according to the designs and plans approved by the director;
- (e) provides the director with drawings of the treatment system, as modified or constructed, within 30 days of completing the modification or construction;
- (f) complies with the requirements and limits, if any, imposed by the director.

**General record-keeping requirements**

- 79** A person who must make or keep records under this code must
- (a) keep the records for at least 5 years, and
  - (b) submit the records to a director or an officer within 5 business days of being required by the director or officer.

**General powers of director**

- 80** (1) This section applies if a director has reason to believe that
- (a) a person has not complied with this code, or
  - (b) taking an action referred to in this section is necessary to ensure that the purposes of this code, as stated under section 2 (1) [*agricultural operations to which this code applies*], are being met.
- (2) In the circumstances set out in subsection (1) and without limiting the powers of a director under any other provision of this code, a director may do one or more of the following:
- (a) require a person to make or keep specified records or to provide specified information, in the form and manner required by the director;
  - (b) require a person to keep the records referred to in paragraph (a) for the period specified by the director, and produce the records to the director within the time required by the director;
  - (c) require assessments, tests, analysis or monitoring in respect of any activity carried out or structure or equipment used for the purposes of an agricultural operation;
  - (d) require a qualified professional to conduct assessments, tests, analysis or monitoring for the purposes of paragraph (c), and to prepare a report;
  - (e) specify the methodology to be used to conduct assessments, tests, analysis or monitoring for the purposes of paragraphs (c) and (d);
  - (f) require a person to take corrective action if a provision of this code is contravened;
  - (g) require a person who is complying with this code but whose agricultural operations are, or are likely, causing or contributing beyond a minimal extent to pollution, to take one or more actions to reduce or mitigate the effects of that pollution.

- (3) For greater certainty and without limiting section 7 of the Waste Discharge Regulation, a director may impose a requirement under subsection (2) of this section that is in addition to a requirement under this code or in circumstances in which this code does not otherwise impose the requirement.
- (4) A person who is subject to a requirement under subsection (2) must comply with the requirement.

**Exercise of director’s powers**

- 81** If a director exercises a power under this code, the director must do so in writing and give reasons for exercising the power.

**Accessibility of maps**

- 82** Each director must
  - (a) ensure that copies of the maps referred to in the Schedules are available
    - (i) on a website that is maintained by or on behalf of the ministry of the minister and is publicly and freely accessible, and
    - (ii) in the office of the administrator, and
  - (b) permit members of the public to access the maps during the director’s regular business hours and without charge.

**SCHEDULE A**

**PHOSPHORUS-AFFECTED AREAS**

*[sections 1 and 20]*

**Phosphorus-affected areas**

- 1** For the purposes of this regulation, a phosphorus-affected area is the area inside the boundary shown on a map listed in the following table:

<b>Item</b>	<b>Column 1 Map Name</b>	<b>Column 2 Map No.</b>	<b>Column 3 Map Date</b>
1	Christina Lake Basin	A1(a)	February 28, 2019
2	Okanagan Lake Basin	A1 (b)	February 28, 2019
3	Shuswap Lake Basin	A1 (c)	February 28, 2019
4	Williams Lake Basin	A1 (d)	February 28, 2019
5	Cusheon Lake	A2 (a)	February 28, 2019
6	Maxwell Lake	A2 (b)	February 28, 2019
7	Nicola River	A2 (c)	February 28, 2019
8	St. Mary Lake	A2 (d)	February 28, 2019
9	Thompson River	A2 (e)	February 28, 2019
10	Vancouver Island Watercourses	A2 (f)	February 28, 2019
11	Weston Lake	A2 (g)	February 28, 2019
12	Campbell River (Surrey)	A3 (a)	February 28, 2019



Item	Column 1 Map Name	Column 2 Map No.	Column 3 Map Date
13	Chilliwack and Vedder Rivers, and Cultus Lake	A3 (b)	February 28, 2019
14	Coquitlam River	A3 (c)	February 28, 2019
15	Kanaka Creek	A3 (d)	February 28, 2019
16	Nicomekl River	A3 (e)	February 28, 2019
17	Pitt and Alouette Rivers	A3 (f)	February 28, 2019
18	Serpentine River	A3 (g)	February 28, 2019

## SCHEDULE B

### VULNERABLE AQUIFER RECHARGE AREAS

*[section 1, Part 5 and section 56]*

#### Vulnerable aquifer recharge areas

- For the purposes of this regulation, a vulnerable aquifer recharge area is the area inside the boundary shown on a map listed in the following table:

Item	Column 1 Map Name	Column 2 Map No.	Column 3 Map Date
1	Hullcar Aquifers	B1	February 28, 2019
2	Abbotsford	B2 (a)	February 28, 2019
3	Cobble Hill	B2 (b)	February 28, 2019
4	Langley	B2 (c)	February 28, 2019
5	Grand Forks	B2 (d)	February 28, 2019
6	Osoyoos	B2 (e)	February 28, 2019
7	Spallumcheen	B2 (f)	February 28, 2019
8	Chilliwack	B3 (a)	February 28, 2019
9	Coldstream	B3 (b)	February 28, 2019
10	Lumby	B3 (c)	February 28, 2019
11	Okanagan Falls	B3 (d)	February 28, 2019
12	Oliver	B3 (e)	February 28, 2019
13	Penticton	B3 (f)	February 28, 2019
14	Sicamous	B3 (g)	February 28, 2019
15	Sunnybrae	B3 (h)	February 28, 2019
16	Tappen	B3 (i)	February 28, 2019
17	Cranbrook	B4 (a)	February 28, 2019
18	Creston	B4 (b)	February 28, 2019
19	Montrose	B4 (c)	February 28, 2019
20	Nakusp	B4 (d)	February 28, 2019
21	Williams Lake	B4 (e)	February 28, 2019

## APPENDIX 2

- 1 Item 1 of the Table to Schedule 2 of the Waste Discharge Regulation, B.C. Reg. 320/2004, is repealed and the following substituted:*

COLUMN 1 INDUSTRIES, TRADES, BUSINESSES, OPERATIONS AND ACTIVITIES	COLUMN 2 CODE OF PRACTICE
1 Agricultural Operations	Code of Practice for Agricultural Environmental Management

## APPENDIX 3

- 1 Effective October 1, 2019, section 27 of the Code of Practice for Agricultural Environmental Management is amended*

*(a) by repealing subsection (2) and substituting the following:*

- (2) A person must not apply nutrient sources, other than wood residue, to land in a high-precipitation area during February, March or October unless both of the following conditions are met:
- (a) the nutrients are needed by, and will be available to, the intended crop;
  - (b) a risk assessment is made in accordance with subsection (4) before application begins. , *and*

*(b) by adding the following subsection:*

- (4) A person must prepare a risk assessment, in writing and in the form and manner required by a director,
- (a) for each field to which nutrient sources are to be applied, and
  - (b) considering the special circumstances of the high-precipitation area and any high-risk conditions.

- 2 Effective February 28, 2020, the following section is added:*

**Pesticides**

- 77.1** A person who uses pesticides for the purposes of an agricultural operation must do so in a manner that ensures that spray drift and contaminated runoff does not
- (a) enter a watercourse, or
  - (b) cross a property boundary except as permitted by the owner of the property into which the drift or runoff crosses.

- 3 Effective July 15, 2020, section 56 is repealed and the following substituted:*

**When nutrient management plan is required**

- 56** (1) Subject to section 58 [*exemptions or modifications to nutrient management plans*], a person who applies nutrient sources to a field must have a nutrient management plan if
- (a) the field is part of an agricultural operation having an agricultural land base totalling 5 ha or more,
  - (b) the result of a nitrate test for the field is 100 kg N/ha or more, and
  - (c) the conditions of either subsection (2) or (3) are met.
- (2) For the purpose of subsection (1) (c), a nutrient management plan is required if the field is located in a vulnerable aquifer recharge area shown on Map B1, as listed in Schedule B.
- (3) For the purpose of subsection (1) (c), a nutrient management plan is required if the field is
- (a) located in a vulnerable aquifer recharge area shown on a map having a number beginning with “B2”, as listed in Schedule B, and
  - (b) used for agricultural operations involving 5 animal units or more.
- 4** *Effective July 15, 2021, section 56 (3) (a) is amended by adding “or “B3”” after “beginning with “B2””.*
- 5** *Effective October 1, 2022, section 27 (2) (b) is amended by adding “, and the assessment indicates that the risk of contaminated runoff is low” after “before application begins”.*
- 6** *Effective July 15, 2023, section 56 is repealed and the following substituted:*

**When nutrient management plan is required**

- 56** (1) Subject to section 58 [*exemptions or modifications to nutrient management plans*], a person who applies nutrient sources to a field must have a nutrient management plan if
- (a) the result of a nitrate test for the field is 100 kg N/ha or more, and
  - (b) the conditions of any of subsections (2) to (4) are met.
- (2) For the purpose of subsection (1) (b), a nutrient management plan is required if the field is
- (a) part of an agricultural operation having an agricultural land base totalling 5 ha or more, and
  - (b) located in a vulnerable aquifer recharge area shown on Map B1, as listed in Schedule B.
- (3) For the purpose of subsection (1) (b), a nutrient management plan is required if the field is
- (a) part of an agricultural operation having an agricultural land base totalling 5 ha or more,
  - (b) located in a vulnerable aquifer recharge area shown on a map having a number beginning with “B2”, “B3” or “B4”, as listed in Schedule B, and

- (c) used for agricultural operations involving livestock or poultry.
- (4) For the purpose of subsection (1) (b), a nutrient management plan is required if the field is
  - (a) part of an agricultural operation having an agricultural land base totalling 30 ha or more,
  - (b) located in a vulnerable aquifer recharge area shown on a map having a number beginning with “B2”, “B3” or “B4”, as listed in Schedule B, and
  - (c) used for agricultural operations involving no livestock or poultry.

**7 Effective July 15, 2024, section 56 is repealed and the following substituted:**

**When nutrient management plan is required**

**56** Subject to section 58 [*exemptions or modifications to nutrient management plans*], a person who applies nutrient sources to a field that is part of an agricultural operation having an agricultural land base totalling 5 ha or more must have a nutrient management plan if either of the following circumstances apply:

- (a) the field is located in a vulnerable aquifer recharge area and the result of a nitrate test for the field is 100 kg N/ha or more;
- (b) the field is located in a phosphorus-affected area and the result of a phosphorus test for the field is 200 ppm or more.

**8 Effective July 15, 2024 section 57 is amended**

**(a) by repealing subsection (1) (a) and substituting the following:**

- (a) by a qualified professional if a result referred to in section 53 (1) is
  - (i) 150 kg N/ha or more, for a nitrate test, or
  - (ii) 300 ppm or more, for a phosphorus test, and ,

**(b) by adding the following subsection:**

- (1.1) Despite subsection (1) (b), if an agricultural operation spans multiple fields and a nutrient management plan must be prepared by a qualified professional for any one of the fields, the qualified professional must prepare the plan for the whole of the agricultural operation. ,

**(c) in subsection (2) (b) by adding the following:**

- (iii) if the result of a phosphorus test for a field is 200 ppm or more, to achieve an annual phosphorus application rate that is less than the total crop P removal plus up to a maximum of 90 kg P<sub>2</sub>O<sub>5</sub> (phosphate)/ ha per year so that soil phosphorus levels in a field are reduced over time until the result of a phosphorus test for the field is less than 200 ppm. , **and**

**(d) by adding the following subsection:**

- (3) For the purposes of subsection (2) (b) (iii), “crop P removal” means the total amount of phosphorus in that portion of a crop that is removed from a harvested area.

**9** *Effective July 15, 2025, the following section is added:*

**When nutrient application plan is required**

- 59.1** (1) A person who applies nutrient sources to a field must have a nutrient application plan if all of the following conditions are met:
- (a) the field is part of an agricultural operation having an agricultural land base totalling 5 ha or more;
  - (b) the field is not located in either a vulnerable aquifer recharge area or a phosphorus-affected area;
  - (c) the result of
    - (i) a nitrate test for the field is 150 kg N/ha or more, or
    - (ii) a phosphorus test for the field is 300 ppm or more.
- (2) A nutrient application plan must be prepared in the form and manner required by a director.
- (3) A person who must have a nutrient application plan may have a nutrient management plan prepared, instead, and section 59 (1) (b) and (c) [*implementation of nutrient management plan*] applies for this purpose.
- (4) A person who must have a nutrient application plan must do both of the following:
- (a) implement the plan;
  - (b) keep a copy of the plan, the information on which it is based, including information from records made under section 51 (2) [*general requirements for applications to land*], and of any changes made to the plan, and make and keep records to demonstrate compliance with the plan.

**10** *Effective July 15, 2026, section 56 (b) and 57 (2) (b) (iii) is amended by striking out “200 ppm” wherever it appears and substituting “100 ppm”.*

**11** *Effective July 15, 2029, section 57 (2) (b) (iii) is amended by striking out “maximum of 90 kg P<sub>2</sub>O<sub>5</sub>” and substituting “maximum of 40 kg P<sub>2</sub>O<sub>5</sub>”.*

