

## Minimum Requirements for Nutrient Management Plan (NMP) Reports

**Background:** Minimum requirements for NMP reports help provide assurance to the client (producer) and the public that expectations of nutrient management plans required under the Agricultural Environmental Management Code of Practice are met. This checklist is supplemental to training required to develop NMPs and serves only as a guide in the preparation and review of plans. The requirements should not restrict the ability to customize the NMP for the client's needs, nor do the requirements restrict the ability to add information beyond the core components of an NMP. The NMP report should allow the farm to easily implement their NMP and document the information which has led to the NMP recommendations.

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### 1. Cover page

The cover page identifies the farm name, owner, contact information, and the date that the plan was completed. Individuals preparing a nutrient management plan should include their name and contact information on this page

### 2. Emergency procedures document

The emergency procedures in the event of an emergency spill of liquid or solid manure. It also includes important phone numbers, such as Emergency Management British Columbia (EMBC), and is intended to be filled out with other relevant phone number, such as equipment operators, electricians, the fire department, and neighbours.

### 3. Application Schedule Summary

The parts of this summary include:

- Nutrient source
  - This would mainly be manures and synthetic fertilizers. However, it should include other materials used to supply nitrogen and phosphorus for crops, as per the definition of in the Agricultural Environmental Management Code of Practice.
  - The state of the nutrient (solid, liquid) should be included
- Application timing
  - The month or season of application should be included in the application schedule summary. Timing that reference crop production stages (ex. after the first cut of a forage crop, before planting, after harvest) may be referenced in addition to a season or month.
- Application rate and method

### 3. Farm Description

The farm description pages primarily describe the structures, animals, and property that are located on the farm and are involved in nutrient generation, transportation, and storage. This includes:

- Address of the farm, ownership status, and number of employees
- A statement or map that states whether or not the farm is in a vulnerable aquifer recharge area, phosphorus affected area, and/or a high-precipitation area
- A farmstead and cropping area description that describes:
  - The total farm size
  - The total area that managed for crop production
  - The total area that is able to be spread with manure or fertilizer. This would be the total area that is managed for crop production minus areas that are setback from watercourses, buffer strips, etc. If this does not significantly alter the area for crop production, instead include a statement to note this detail
- The type and number of livestock or poultry kept on farm
- Description of the manure handling and storage systems, which includes:
  - Dimensions of any structures
  - Liquid manure storage from October to end of March
    - Assessment of the amount of liquid manure planned to be in storage as of the beginning of October and the estimated amounts generated from October to the end of March
    - The storage capacity of the liquid manure storage system
    - Note if there is enough capacity for the anticipated no spread periods
      - November 1 to end of February in high precipitation areas
      - Time period where ground is likely to be frozen or snow covered
  - Time period and locations of any temporary manure storage
- A cropping summary that briefly describes cropping practices, rotations, etc. on the farm
- A summary of irrigation practices
  - Identify fields that receive irrigation, including the method
- A manure application summary that describes the application methods and equipment used on the farm
- Farm maps (maps, or map elements may be combined as long as each item is contained is contained somewhere in the map section of an NMP)
  - Property map
    - An overview of the entire property with a scale that allows for the identification of any structures, and water courses
  - Building map
    - A current view of the farm that identifies where both manure storage and animal housing is located. This should include permanent structures as well as locations of temporary manure storages or temporary animal housing.
    - The corresponding setbacks to drinking water sources, water courses, and property boundaries should be included

- The location of any outdoor agricultural composting piles, agricultural by-product storage, feedlots, confined livestock areas, seasonal feeding locations
- Field map
  - Identifies and outlines each field
  - Describes each field with a field ID (such as a name or number)
  - The size of each field is noted, preferably in a table
  - Waterbodies and locations where setbacks are required for fields that receives nutrient applications
- Soil and surface feature map
  - Shows the soils and general slope direction of each field
  - Includes a table that has the soil name, texture, drainage class
- Application notes
  - Any nutrient application setbacks (minimum required setbacks, and any recommended additional setbacks) and application risks should be noted

#### **4. Nutrient Inventory**

This part of the plan will report the origin and destination of all nutrients that are generated or imported to the farm. As part of the nutrient inventory, the following items should be included:

- Annual nutrient generation and use
  - The amount of liquid manure, solid manure, fertilizers, and other soil amendments that are generated annually. If available, manure management records can be used to determine the amount of manure that is typically generated annually or semi-annually.
  - The annual amount of the above items that will be land applied
- Manure import and export
  - The total annual amount of manure that will be imported and exported

#### **5. Field Summaries**

Field summaries describe the nutrient balances of each field receiving nutrients on the farm. The BC Nutrient Management Calculator can assist in determining nutrient balances for each field, but determining application timing and application method is the responsibility of the planner. Items included in each field summary are:

- For each field, the crop(s) and target yield.
- Nutrient Sources, their recommended rate and timing of application
- For each field, the planned agronomic balances of N, P<sub>2</sub>O<sub>5</sub>, and K<sub>2</sub>O. The agronomic nitrogen balances should have a target of zero (within a reasonable margin).
- For each field, the planned crop removal balances of N, P<sub>2</sub>O<sub>5</sub> and K<sub>2</sub>O.
- Notes which outline adjustments to book-values used in the development of recommendations.

#### **6. Plan Recommendations**

The purpose of this section is to guide the producer or consultant on actions that will assist in performing further testing and maintaining records. Plan recommendations should include:

- Tentative dates for follow-up soil or nutrient testing or completing a follow-up Nutrient Management Plan

- Strategies to meet agronomic objectives
- Guidance to meet regulatory requirements, including record keeping

### **7. Disclaimer**

The plan writer notes that they are not responsible for deviations from the plan, the best available information was used, responsibility for meeting regulatory requirements is the producer's, etc.

### **8. Appendices**

- All laboratory test reports to support the values used in nutrient balance calculations should be included. This includes soil, manure, compost, and/or plant tissue analysis.
- External resources, such as soil information, or production guidance should be included