4R Nutrient Stewardship Certification Standards Manual

Requirements for Certification of Nutrient Service Providers in Ontario

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TABLE OF CONTENTS

INTRODUCTION

The fertilizer industry has established the 4R Nutrient Stewardship framework in cooperation with government, researchers, customers, farm organizations, conservation groups and the public. Adjustments in the crop nutrient source and application rate, timing, and placement method will support agricultural productivity while also helping to improve the water quality of the Great Lakes, specifically Lake Erie and its contributing watersheds.

The **Right Source** means ensuring a balanced supply of essential plant nutrients including granular fertilizers, liquid fertilizers and/or manures.

The **Right Rate** is applying just enough fertilizer to meet the needs of the plant while accounting for the nutrients already in the soil.

The **Right Time** means applying fertilizer when the plant will get the most benefit and avoiding times when fertilizer can be lost to the environment.

The **Right Place** is where the plants can easily use fertilizer and where it is less likely to be lost to the water or air.

4R Nutrient Stewardship best management practices (BMPs) must be customized to fit each farm's unique climatic, soil, cropping and operational conditions. This is achieved, as needed, with professional input from recognized and qualified specialists such as Certified Crop Advisors (CCAs) who work with farmers to assess their situations and develop management plans.

Continuous improvement can be achieved by employing science that optimizes the economic, social and environmental performance of BMPs utilized in implementing the voluntary 4R Nutrient Stewardship Certification program in Ontario.

The 4R Certification standards were created by the 4R Ontario Steering Committee in close collaboration with the Nutrient Stewardship Council, the Ohio Agri-Business Association and The Fertilizer Institute in the U.S. to ensure alignment between cross-border efforts to implement 4R Nutrient Stewardship and minimize nutrient losses under the 4R Certification program. The standards are reflective of the best available science, technology and regulatory requirements for Ontario conditions. Members of the 4R Ontario Steering Committee represent a diversity of stakeholders including Fertilizer Canada; the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA); the Ontario Agri Business Association (OABA); the Grain Farmers of Ontario; the Ontario Federation of Agriculture; the Christian Farmers Federation of Ontario; Conservation Ontario; The Nature Conservancy – Ohio; the Ministry of the Environment and Climate Change; the International Plant Nutrition Institute; the Ontario Certified Crop Advisor Board of Ontario; and Ontario agri-retailers.

In implementing this 4R Certification program, the 4R Ontario Steering Committee sought feedback to ensure a consistent, recognized program for agricultural retailers, agricultural service providers, and certified professionals to help ensure that 4R Nutrient Stewardship goals are adopted and that in turn lead to long term positive impacts on water quality. While these standards do not apply to individual growers, on-farm adoption of the recommendations made by Nutrient Service Providers (NSPs) that become certified under the standards is critical to meeting the goal of improved water quality.

In addition to general principles of 4R Nutrient Stewardship, the standards have incorporated specific criteria for the purpose of addressing regional priorities for water quality, including references to regional soil fertility recommendations and requirements to prevent nutrient application on frozen ground.

The standards are intended to support the adoption of 4R Nutrient Stewardship by specifying best practices for nutrient recommendations and nutrient application. The standards also include an education component to ensure that new practices related to nutrient stewardship are adopted by the Nutrient Service Providers and shared with their grower customers.

The 4R Ontario Steering Committee members will continuously work with the research community to help identify the most effective conservation and nutrient management practices to ensure the standards stay up to date and provide the most current research available.

GOALS

The 4R Nutrient Stewardship Certification standards were drafted as part of a voluntary initiative to improve the watershed conditions of the Western Lake Erie Basin. The standards were created to address the following goals:

- optimize crop uptake of nutrients and minimize nutrient losses;
- create long-term positive impacts on water bodies associated with agricultural production areas, including the reduction of eutrophication and incidence of harmful algal blooms, and helping to meet water quality standards;
- encourage sharing of the most up-to-date information about responsible nutrient stewardship with Nutrient Service Providers, growers, and other interested groups; and
- help the agricultural sector adapt to new research and technology in the area of nutrient stewardship.

SCOPE

The 4R Nutrient Stewardship program, of which these standards are a central component, is designed to recognize Nutrient Service Providers who have adopted the principles and practices of 4R Nutrient Stewardship. These standards translate 4R Nutrient Stewardship into a set of auditable criteria.

The 4R Nutrient Stewardship Certification program is voluntary, and applies to Nutrient Service Providers working in the Lake Erie watershed region and all of Ontario, including agricultural retailers, agricultural service provides, and certified professionals. Grower customers of the Nutrient Service Providers are not included under the scope of the standards.

STRUCTURE AND IMPLEMENTATION

The standards are divided into the following main sections:

1. Training and Education
2. Recommendations
3. Application
4. Documentation

Sections 1 and 2 apply to all types of Nutrient Service Providers pursuing certification in the program. Parts of Section 3 may not be applicable for those Nutrient Service Providers that either only make recommendations for nutrient use or only carry out nutrient application.

Each group consists of auditable evaluation criteria, which form the basis of the standards. There are a total of 37 auditable evaluation criteria. Of that total: 6 address training and education, 12 address nutrient recommendations, 10 address nutrient application and 9 address maintenance of proper documentation.

In most cases, a Nutrient Service Provider will offer nutrient recommendations or nutrient application services or both to multiple farms. Please see the following section for standard specific compliance required for certification in the first cycle of implementation (2018-2020).

Using the standards as the normative reference, audits will be conducted by third-party auditors to determine whether a specified agricultural retailer, agricultural service provider, or Certified Crop Advisor (CCA), acting as a Nutrient Service Provider, has met the requirements of the standards. The degree of conformance to the standards will be assessed by the auditor, who will evaluate each auditable evaluation criterion, as: Comply, Not Comply, or Not Applicable.

The 4R Certification program will be on a two year audit cycle and is scheduled for implementation in Fall 2018.

PUBLIC COMMENT PERIOD

Recognizing that the success of the Ontario 4R Certification program and the long-term quality of Lake Erie is of interest to a variety of stakeholders, the 4R Steering Committee released the proposed standards to the public for a 45-day consultation period.

All comments received were reviewed and incorporated as appropriate. The 4R Ontario Science & Technical Committee and the 4R Ontario Steering Committee made the greatest effort to address concerns and adjust the standards where possible.

We would like to thank all Fertilizer Canada members, stakeholders and Ontario agri-retailers who provided feedback on the Ontario 4R Certification Audit Standards during the 45-day comment period to Feb. 28, 2018. The finalized standards will require alterations to current practices, and member feedback allowed us to ensure these changes are not only feasible but mutually beneficial to optimizing nutrient availability and reducing nutrient loss.

In order to balance program adoption with credibility, the 4R Ontario Steering Committee has proposed incremental improvement in per cent compliance. The proposed compliance increase over the next cycles of implementation are described below.

STANDARD REQUIREMENTS

Ontario 4R Certification Standards	
T	Training
R	Recommendation
A	Application
D	Documentation

Req No.	Requirement	Evidence	Compliance 1st Cycle 2018-2020	*Proposed* Compliance 2nd Cycle 2020-2021	*Proposed* Compliance 3rd Cycle 2021-2023
T1	Nutrient Service Providers, sales, and application staff have undergone an initial training and staff are able to demonstrate knowledge about 4R Nutrient Stewardship and the 4R Certification program.	All applicable staff have undergone an initial 4R training. Evidence should include: meeting agendas, staff sign-in education log, training materials indicating 4R concepts and topics covered. Staff should be interviewed to answer key 4R concepts (Right Source @ Right Rate, Right Time, Right Place). Note: 4R Educational information and sample presentations are available at eLearning.fertilizercanada.ca & 4r.fertilizercanada.ca.	100%	100%	100%
T2	Certified professionals must have current certification in good standing.	All certified professionals (CCA, CNMP) on staff should have a copy of current credentials (electronic or hard copy). Evidence should include current credential certificate with full name and certification cycle date(s).	100%	100%	100%
T3	Nutrient Service Provider staff members who are certified professionals making nutrient stewardship recommendations must attend 4R training. This is demonstrated through a minimum of 5 hours of documented 4R Nutrient Stewardship training per year. Knowing that all recommendations are signed off by a CCA.	If the staff person is a CCA then proof of 10 applicable CEU credits is sufficient. Alternatively, for non-CCA staff members training evidence should include: listing of applicable training sessions attended including meeting agendas, training materials covered indicating 4R concepts and verification of attendance.	100%	100%	100 %
T4	Nutrient Service Provider non-Certified sales and application staff must attend 4R training. This is demonstrated through a minimum of 2 hours of documented 4R Nutrient Stewardship training per year.	All applicable staff has undergone applicable 4R training. Evidence should include listing of applicable training sessions attended including meeting agendas; training materials covered indicating 4R concepts and verification of attendance.	100%	100%	100%

Ontario 4R Certification Standards					
Req No.	**Requirement**	**Evidence**	**Compliance 1st Cycle 2018-2020**	***Proposed* Compliance 2nd Cycle 2020-2021**	***Proposed* Compliance 3rd Cycle 2021-2023**
T5	Nutrient Service Provider has conveyed informational materials on 4R Nutrient Stewardship to all grower customers on an annual basis.	Evidence should include: proof of distribution of materials via mailing/ email list, meeting description and evidence of 4R information dissemination, or other reasonable forum on an annual basis.	100%	100%	100%
T6	Nutrient Service Provider has sponsored, hosted or directly provided a local training session on 4R Nutrient Stewardship that is available for all grower customers.	Evidence should include: meeting agendas, training materials covered indicating 4R concepts.	100%	100%	100%
R1	Soil (analysis) tests are conducted by an OMAFRA accredited lab which include, at minimum: organic matter, Phosphorus (Olsen), Potassium, and pH.	Review of soil testing records on file, can be hard copy or electronic. All 4 items must be indicated on the records.	100%	100%	100%
R2	Soil tests are conducted at least once every 4 years.	Review of records on file, can be hard copy or electronic. Most recent soil test result may not be older than 4 years old.	50%	100%	100%
R3	Nutrient recommendations utilize the soil test history of the field, including results from the most recent soil test.	Review of records on file, can be hard copy or electronic. Current soil test results must be equal to or less than 4 years old. If it is a new field, crop insurance township averages, drainage, and soil type may be used.	100%	100%	100%
R4	Soil tests are taken at an appropriate depth from relatively uniform areas no larger than 25 acres.	Evidence should include: soil sampling guidance document, applicable staff training. Review soil sampling maps to verify acres sampled are smaller than 25 acres increments	100%	100%	100%
R5	If manure is applied, its content of total and available nutrients is based on either OMAFRA's database average for the specific manure type, or using sampling and analysis following recognized guidelines.	Evidence should include: manure sampling guidance document, applicable staff training. Review manure nutrient analysis records (hard copy or electronic), use of OMAFRA or Nutrient Management Act (NMA) values if no manure sample is taken.	100%	100%	100%

Ontario 4R Certification Standards					
Req No.	**Requirement**	**Evidence**	**Compliance 1st Cycle 2018-2020**	***Proposed* Compliance 2nd Cycle 2020-2021**	***Proposed* Compliance 3rd Cycle 2021-2023**
R6	Nutrient recommendations and/or application appropriately address minimum setbacks from all known sensitive areas, such as tile inlets, well heads, gullies, and water bodies specified in applicable national, provincial, or local laws.	Evidence should include: minimum environmental set back reference document based on federal/provincial requirements, process to ensure local/municipal requirements are documented and adhered to, and any/all sensitive areas are denoted on field maps. Note: Information on (4rcertified.ca) will relate to national and provincial regulations. Any local laws will not be updated regularly on the site	25%	50-75%	100%
R7	For all nutrient recommendations and/or application, the inclusion of a minimum setback distance near known sensitive areas, such as tile inlets, well heads, gullies, and water bodies is documented and discussed with the grower customer.	Evidence should include: process to ensure that grower customers are asked to self-identify environmentally sensitive areas on their farms/fields (documented via formal request and receipt of information from grower to retailer).	25%	50-75%	100%
R8	All sources of nutrients are accounted for in the 4R Nutrient Stewardship Plan, including but not limited to commercial fertilizers, manure/litter, biosolids, cover crops, and the previous crop.	Nutrient recommendations indicate all sources of nutrients in the recommendation records. Credits are given to all sources of fertilizer applied and there is a reduction in commercial fertilizer recommended.	100%	100%	100%
R9	Crop yield goals are discussed with the grower and are based on previous crop yield history.	Evidence should include: process to ensure that grower dialogue involving crop yield goals are documented. Information as part of documentation may include: Review of records on file, previous yield history, township averages, or local adaptive management research.	50%	75%	100%
R10	Recommended nutrient application rates are at or below limits specified by nutrient application recommendations recognized by a government or academic institution that reflects growing conditions consistent with those of the customer. Recommendations may also allow for adaptive management based on documented on-farm data showing reasonable expectation of improved crop yield with a reasonable expectation of no increased risk to water quality by utilizing 4R principles.	Records will be compared to credible government or academic sponsored nutrient recommendations first. If above these rates, data from adaptive management research must be presented justifying the different recommendation. Field averages will be used to evaluate these criteria. The Nutrient Management Act is considered a government recognized recommendation source.	100%	100%	100%

Ontario 4R Certification Standards					
Req No.	**Requirement**	**Evidence**	**Compliance 1st Cycle 2018-2020**	***Proposed* Compliance 2nd Cycle 2020-2021**	***Proposed* Compliance 3rd Cycle 2021-2023**
R11	If urea or UAN is broadcast on bare ground or is not applied to a growing crop, it must be incorporated within 24 hours. It is recommended to be applied with enhanced efficiency N sources.	Evidence should include: application guidance document, and acknowledgment that grower information has been conveyed (i.e. in fertilizer recommendations).	100%	100%	100%
R12	Discussion on nitrogen management includes options of split application, nitrification inhibitors and slow release technologies.	Evidence should include: application guidance document, and acknowledgment that grower information has been conveyed (i.e. in fertilizer recommendations).	100%	100%	100%
A1	Application records shall not exceed recommendations for custom applied acres. Within an acceptable margin of error for calibrated equipment.	Review of records on file, can be hard copy or electronic. Nutrient recommendations and applied scale ticket or as-applied map (5% margin of error).	50%	75%	100%
A2	Phosphorus injection, subsurface banding, or broadcasting with immediate incorporation are the recommended placement methods unless the risk of phosphorus loss to surface water has been demonstrated to be low according to a provincially approved phosphorus index risk assessment procedure.	Expectation that language of this requirement will evolve over time with incorporation of the most recent, science-based methods. Evidence should include: application guidance document, acknowledgement that grower information has been conveyed (i.e. fertilizer recommendations).	100%	100%	100%
A3	Crop nutrient applications are neither made nor recommended to be made on frozen or snow covered ground.	Evidence should include application guidance document, acknowledgement that grower information has been conveyed (i.e. fertilizer recommendations) and applied maps indicate adherence to document. Note: Frozen ground is defined: when soil conditions are such that tillage or nutrient incorporation and/or injection after application are not possible at the time of nutrient application, and will not be possible within the next 48 hours as a result of frozen conditions. Snow-covered ground is defined: when soil cannot be seen because of snow cover.	100%	100%	100%

Ontario 4R Certification Standards					
Req No.	**Requirement**	**Evidence**	**Compliance 1st Cycle 2018-2020**	***Proposed* Compliance 2nd Cycle 2020-2021**	***Proposed* Compliance 3rd Cycle 2021-2023**
A4	Total application of Phosphorus not to exceed the quantity needed for the next two years of planned crops. If a prescribed material is used - must follow the NMA Technical Standard.	Records will be compared to a recognized recommendation source. Field averages will be used to evaluate this criteria. Records of individual soil test will be compared to the credible recommendation source or equivalent tool. Crop nutrients regulated under the NMA must follow Technical Standard of the NMA.	75%	100%	100%
A5	Nutrients are applied according to a written nutrient recommendation that has been prepared within the prior three years.	Records of application will be compared to the recommendations on file. Only applicable to the full service customers.	100%	100%	100%
A6	All nutrient application equipment must be calibrated, at least annually.	Evidence should include: calibration guidance document, applicable staff training, records indicating equipment service date and any maintenance/service required. To be completed at a minimum annually.	100%	100%	100%
A7	Broadcast applications of crop nutrients without immediate incorporation are neither made nor recommended unless a documented local weather forecast (verifiable private or government generated) indicates less than a 50% chance of a rainfall event involving more than 25mm (one inch) of rain beginning in the next 12 hours.	Evidence should include application guidance document, acknowledgement that grower information has been conveyed (i.e. fertilizer recommendations) and applied maps indicate adherence to guidance document. Note: The current weather forecast for the nearest town available to the fields is printed as a record within 12 hours of application. If the chance of precipitation exceeds 50%, the forecast total amount must be less than 25 mm (one inch). A consistent source of weather forecasts is required.	100%	100%	100%
A8	Where in-field variability in crop nutrient need or environmental risk is identified and variable rate application is warranted, site specific nutrient application is used.	Review of records on file, can be hard copy or electronic. Maps must be provided. Consideration is targeted towards fields that are 25 acres or larger.	50%	75%	100%

Ontario 4R Certification Standards					
Req No.	**Requirement**	**Evidence**	**Compliance 1st Cycle 2018-2020**	***Proposed* Compliance 2nd Cycle 2020-2021**	***Proposed* Compliance 3rd Cycle 2021-2023**
A9	Records of nutrient application include at minimum: • method of application; • time of application; • field map showing locations of application; nutrient source & rate • weather (temperature and precipitation) conditions at the time of application; and • weather forecast for the day of application	Review of records on file, can be hard copy or electronic.	50%	75%	100%
A10	No application of fall nitrogen other than co-applied with P sources or to meet fall planting N requirements. If a prescribed material is used - must follow the NMA Technical Standard.	Evidence should include application guidance document, acknowledgement that grower information has been conveyed (i.e. fertilizer recommendations) and applied maps indicate adherence to guidance document. Note: No application or recommendation for fall application of N other than for what is included in P sources or is used for winter wheat or cover crop.	100%	100%	100%
D1	Nutrient Service Providers will record a list of grower customers and number of acres in the following categories: full service, recommendation only, application only, and an estimate of all other acres.	Evidence should be verified and noted information must be provided to auditor prior to audit. Information to include a list of grower customers and acres per each in the following categories: full service, recommendation only, application only, and an estimate of all other acres.	100%	100%	100%
D2	Nutrient Service Provider maintains records related to all nutrient and application recommendations by Nutrient Service Provider.	Evidence should be verified and noted information must be provided to auditor prior to audit. Information to include review of select records on file such as fertilizer recommendations and applied scale ticket or as-applied map.	100%	100%	100%
D3	Records related to grower customers are kept confidential by the Nutrient Service Provider and are made available for review during an audit.	Evidence should include: Confidentiality statement with NSP and grower customers. Auditor agreement between auditor and NSP. Records are kept confidential by NSP as demonstrated with computer codes, file cabinets, or "safe" rooms or confidentiality agreement with the grower customer.	50%	75%	100%

Ontario 4R Certification Standards					
Req No.	**Requirement**	**Evidence**	**Compliance 1st Cycle 2018-2020**	***Proposed* Compliance 2nd Cycle 2020-2021**	***Proposed* Compliance 3rd Cycle 2021-2023**
D4	Nutrient Service Provider keeps onsite list and/or copies (either electronic or hard-copy) of relevant national, provincial, or municipal laws related to nutrient recommendations and application.	Evidence should include: listing of applicable federal/provincial regulatory requirements, process to ensure local/municipal requirements are documented and adhered to. Note: Information on (4rcertified.ca) will relate to national and provincial regulations. Any local laws will not be updated regularly on the site.	100%	100%	100%
D5	Records of individual fields that are accessible to the retailer and made available to the grower/customer include, at minimum: • field boundary, soil type • current soil test results, nutrient recommendations • crop yield goals used for making recommendations, and • rates applied to each field	Evidence should include guidance documents, acknowledgement that grower information has been conveyed. Review of records on file, can be hard copy or electronic.	50%	75%	100%
D6	Nutrient recommendations have been reviewed and acknowledged in writing by the grower/customer.	Evidence should include: nutrient recommendation acknowledgement that grower information has been conveyed (i.e. fertilizer recommendations). Signatures of grower customers on file.	50%	75%	100%
D7	Nutrient recommendations for each grower have been approved and signed by a Certified Professional.	Signatures of Certified Professional for each grower customer is on file, certifying that they approve the nutrient recommendation.	50% (not all locations have a CCA)	75% (each location has a CCA on staff)	100% (each location has a 4R Specialty CCA on staff)
D8	4R Nutrient Plans must include information about yield goals, known sensitive areas (e.g., surface water, inlets, wells, etc.), soil type delineation, setbacks, and soil test results.	Review of records on file, can be hard copy or electronic. There may be multiple field maps to ensure all the information is outlined.	25%	50%-75%	100%
D9	Field records related to monitoring of 4R implementation must include the watershed where the farms are located.	Identify by watershed name or supply GIS data layer and/or hard copy map.	50%	75%	100%

TERMS AND DEFINITIONS

4R: An approach for best nutrient management practices developed globally by the fertilizer industry (IPNI, 2012). "4R" refers to the Right Source @ Right Rate, Right Time, Right Place. The philosophy of the 4R approach is to base nutrient recommendations and application on scientific principles, including site-specific considerations and adaptive management, with the goal of improved sustainability.

Adaptive Management: An ongoing process of developing improved practices for efficient production and resource conservation by use of participatory learning through continuous, systematic assessment. For the purposes of the Standard, the demonstration of adaptive management includes documented on farm data showing reasonable expectation of improved crop yield without increased risk of harm to water quality.

Agricultural Retailer: An entity that sells agricultural services or inputs.

Agricultural Service Provider: An entity that provides agronomic services related to agricultural production.

Auditable Evaluation Criteria: Normative statements that are used by auditors to evaluate compliance to a standard.

Certification: The process by which an accredited or authorized person or organization (often a third party) will follow established procedures to assess the conformity against an applicable performance standard. When adequate conformity to the standard has been verified, the accredited or authorized person or organization will attest in writing that a product, process or service conforms to specified requirements.

Certification Body: An independent, third-party organization that will follow established procedures for assessing conformity against an applicable standard to determine certification status of a product, process, or service (see also "Certification").

Certified Professional: An individual that has the designation of at least one of the following: Certified Crop Adviser (CCA), Canadian Nutrient Management Professional (CNMP).

Cover Crop: A crop grown for the protection and enrichment of the soil, which is usually established between periods of regular crop production (e.g., grasses, legumes, clover).

Corrective Action Plan: Plan prepared by a client Nutrient Service Provider and submitted in response to non-conformities (NCs) raised by the auditor, describing corrective actions taken, plan of action, person(s) responsible, and expected timeframe of completion.

Continuing Education Unit (CEU): One (1) CEU is defined as one (1) hour of quality contact time in training or other qualifying activity addressing the continuing education criterion. For the purposes of the Standard, a qualifying CEU must have been approved by a Certified Crop Adviser (CCA) board.

Crop Adviser: An individual who provides advice to grower customers about crop management and inputs.

Eutrophication: The enrichment of water bodies with nutrients that stimulates proliferation of aquatic plant life.

Frozen Ground: For the purposes of this Standard, frozen ground is when soil conditions are such that tillage or nutrient incorporation and/or injection after application are not possible at the time of nutrient application, and will not be possible within the next 48 hours as a result of frozen conditions.

Grower Customer: Individual growers or farmers who are clients of the Nutrient Service Provider and receive either a nutrient recommendation from the Nutrient Service Provider, or have nutrients applied by the Nutrient Service Provider.

Maintenance Limit: The upper limit of the maintenance range, a range of soil test levels within which the recommended rate aims to replenish crop removal. Soil test levels above the maintenance limit receive progressively lower rate recommendations, usually declining to zero at a level 10 to 20 ppm above the maintenance limit (for example, see Vitosh et al., 2012).

Nutrient Management Plan: A plan detailing a set of practices designed to maximize nutrient use efficiency and minimize nutrient losses. The criteria for nutrient management plans vary according to state (see NRCS, 2013)

Nutrient Stewardship: Planning and implementation of practices designed to manage crop nutrition for improved efficiency of crop production systems and optimization of nutrient use (see "4R").

Nutrient Service Provider: General term that refers to entities covered under the scope of the 4R Nutrient Stewardship Standard, including agricultural retailers, agricultural service providers, and certified professionals. For the purposes of the Standard, the relevant functions of Nutrient Service Providers are to provide nutrient recommendations and/or apply nutrients for grower customers.

Office Audit: Assessing conformance to a standard through review of documents and records without direct field observations. An office audit is typically conducted at the site of the program participant and entails both document review and interview (see also "Field Audit," "Office Audit").

Setback: The spatial zone established between the edge of a crop to an identifiable feature such as a water body for the purpose of protecting the feature from adverse impacts.

Snow-covered: For the purposes of this Standard, snow-covered ground is when soil cannot be seen because of snow cover .

Standard: In general, the normative reference by which a decision to award certification is made. For the purposes of this document, when capitalized, "Standard" refers to the specific guidelines and references established in the 4R Nutrient Stewardship program.

Variable Rate Application (VRA): Application of nutrient according to site-specific rate requirements, as opposed to uniformly throughout a field.

Additional Terms and Definitions - Technical Bulletin #01-2019

Customer and Facility Definitions

Generally, customers of Nutrient Service Providers (NSP) may fall under the following three categories:

- Full Service – soil sampling, crop recommendations, and custom-application for a grower customer is provided for at least 51% of their fields in the most recent growing season.
- Recommendation only – a grower customer is provided with a crop plan or guidance on recommended nutrient rates, purchases nutrients and either receives no custom application or custom application is on 50% or less of their fields in the most recent growing season by the NSP.
- Application only – a grower customer receives custom-application services on 50% or less of their fields in the most recent growing season, but no crop plans or guidance on recommended nutrient rates are provided by the NSP (i.e. nutrient recommendations are provided by a third party).

Main, Hub, Branch, and Satellite facility certifications

In many cases, NSPs may have multiple facilities in various locations, which may share capital and human resources between multiple facilities. These facilities may be:

- Main location – defined as the 'headquarters' of the agri-retailer company. This location may be a head office from an administration standpoint in addition to providing traditional agri-retail operations.

Note:
- Head offices that provide administration services only are beyond the scope of the Ontario 4R Nutrient Stewardship Certification program; and
- If an agri-retail location is a "stand alone" full service facility it will be deemed a main location.
  - Hub location – defined as the largest location in a region open year-round and under direct management, but also may provide "support" services to other facilities (See: branch and satellite location definitions).
  - Ranch location – defined as a location in a region open year-round, but is under direct management of the hub or main lcation.
  - Satellite location – defined as a location that is seasonally open facility under management of either the branch or main location.

It is strongly recommended that any agri-retail facility aiming to become Ontario 4R Nutrient Stewardship Certified (through passing a full audit) should complete a pre-audit at the specific location that is seeking certification so that the documentation, policies, procedures and infrastructure that are reviewed during the pre-audit are "in-house". Best practice is that the main or hub location of an NSP become Ontario 4R Nutrient Stewardship Certified first, to help company staff gain insight into the requirements of the audit process that can then be transitioned thereafter to satellite locations under management.

Percent compliance Interpretation:
In order to balance program adoption with credibility, the 4R Ontario Steering Committee has identified and proposed a number incremental improvements in percent compliance over the course of successive 2 year audit cycles. The proposed compliance increases over the next cycles of implementation are described in the Ontario 4R-Certification Standards Manual. Each 4R Certification standard requires auditable evidence through the review of records on file (hard copy or electronic) and has an associated percent compliance score based on implementation cycles.

As an example, standard A9 states: Records of nutrient application include at a minimum: (1) method of application, (2) time of application, (3) field map showing locations of application; nutrient source and rate , (4) weather (temperature and precipitation) conditions at time of application, and (5) weather forecast for the day of application.

NSPs should interpret the compliance rate as: percent of their grower customer fields in the audit sample contain all five identified records.

In the case of standard A9, all records are required for 50% of the grower customer samples (i.e. 5 out of 10 growers randomly selected meet all 5 requirements). Additionally, having 3 out of the required 5 application record criteria for all grower samples selected does not mean that the standard has met a 60% compliance percentage.

Interpretation of the compliance cycles:
For clarification, the pre-audit and audit compliance cycles are conducted independently of each other. That is, if an NSP conducts their pre-audit in a given compliance cycle (i.e. compliance cycle 1 2018-2020), but for any reason delays or decides to complete a full audit in a subsequent compliance cycle (i.e. compliance cycle 2 2021-2022), the facility will be audited against the percent compliance in effect for the current cycle at the time of the audit.