Fertilizer

Registration

Guidance Document

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Inquiries regarding availability of this publication in alternative forms should be directed to the WSDA at (360) 902-1976 or Telecommunications Device for the Deaf (TDD) (800) 833-6388

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Why Do I Need To Register A Fertilizer in Washington State (includes specialty fertilizers)?

Commercial fertilizers are required to be registered in Washington State to protect the state's people, animals, environment and soil. The Washington State fertilizer adulteration laws were enacted in 1998 to protect human health and the environment by ensuring that all fertilizer distributed in Washington state meet standards for soil loading from nine heavy metals. This law required a database that allows fertilizer users and purchasers to know what heavy metal levels are reported for registered fertilizer products. The law includes review of micronutrient and waste derived fertilizers by Washington State Department of Ecology.

Washington State requires all commercial fertilizer products be registered with the Washington State Department of Agriculture (WSDA), Pesticide Management Division, Registration Services. WSDA registers products that make plant nutrient claims, are designed or intended for use as plant nutrients, are distributed as plant nutrients and that pass the WSDA-required review. WSDA Organic Food Program (OFP) also approves fertilizers for the organic grower. This process is applied for with OFP after the product is registered with WSDA Registration Services.

Most states require either a license and/or registration of fertilizer products prior to distribution within their state. You must contact each state where you will be distributing fertilizer. Registration with one state does not assure acceptance in other states.

Washington State Fertilizer Laws & Rules

Washington State's Fertilizer Law was originally adopted in 1967. The initial Commercial Fertilizer Act included regulating the distribution and quality of fertilizers in Washington State through registration. The law was updated several times, however, the most significant changes were added in 1998 with The Fertilizer Registration Act (SSB 6474). The updated law included monitoring the levels of nine metals in fertilizer products, requirements for specific labeling statements, and additional review of waste-derived and micronutrient fertilizers by the Washington State Department of Ecology (Ecology).

Fertilizer laws (Chapter 15.54 RCW) and rules (WAC 16-200-695 through 742) may be obtained from the Internet at http://agr.wa.gov/PestFert/Fertilizers/LawsRules.aspx, (Commercial Fertilizers - Washington State Dept. of Agriculture - WSDA) or from the fertilizer registration staff at the number listed in the **Contact Information** section of this guidance document.

Concern About Metals

Metals have been shown to have the potential to accumulate in soils after long-term fertilizer applications. Regulatory limits were established to prevent unsafe levels of nine metals from accumulating in the soil.

Due to public concerns, in 1998 the Washington State Legislature used the Canadian standards as the scientific basis for setting the maximum acceptable cumulative metal additions to soil. These standards are designed to prevent unsafe levels of nine heavy metals (arsenic, cadmium, cobalt, mercury, molybdenum, lead, nickel, selenium and zinc) from accumulating in

Washington State soils. Check the web site for the story of how Washington State developed the heavy metals requirement: http://agr.wa.gov/PestFert/Fertilizers/Metals.aspx.

Nutrient guarantees, metals levels, and company name, telephone number and address information is displayed as well as the product number, name and guarantees for fertilizer products registered in Washington State. Information may be obtained from the Internet at http://agr.wa.gov/PestFert/Fertilizers/. Choose **"Product Database"** then search by **Product** or by **Registrant.** The company information shows when the company name, or product name is selected and the user clicks on that selection.

How to Navigate the WSDA Product Database

When you are in Fertilizer Registration on the WSDA website there are choice bars on the left hand side. Select Product Database.
The database can be searched by the product name or the registrant name.
When the first letter of the product name is selected a list of other products beginning with that letter is shown, make the product selection by clicking on the name.
The information shown for the *product* is:

- Company name
- Company address
- Company contact person
- Company telephone, fax and email or website
- Product Name and Grade
- Nutrient guarantees on the label
- Heavy metals values for Washington State 9 heavy metals for the product

When the first letter of the registrant's (company name) name is selected, all of the registrants' names beginning with that letter will be shown. Select the company name.

The information shown for the *company (registrant)* is:

- Company name
- Company address
- Company contact person
- Company telephone, fax and email or website
- List of registered products for that company with the product and company numbers.

When the product is selected, the product information will display.

How To Register Commercial Fertilizer in Washington State

Background

1. Definition of Commercial Fertilizer: RCW 15-54.270(4) defines commercial fertilizer as a substance containing one or more recognized plant nutrients (see table 4 for listing of secondary and micronutrients recognized as fertilizer nutrients) and that is used for its plant nutrient content or that is designated for use or claimed to have value in promoting plant growth, and shall include limes, gypsum and manipulated animal and vegetable manures.
2. All fertilizer registrations in Washington State are on a two-year cycle. (Ex: The 2008-2010 cycle expires on June 30, 2010). The fee per product is $50. Prior to the expiration date of your product registration, you will be sent a product renewal application. **The renewal notification is sent to the address listed on the Washington State official fertilizer database.** Notify the department if your company has changed addresses.
3. The department's goal is to process new product registrations within 60 days of receipt of a **completed** application (use of the checklist on the back of form 4300A, 4300B and 4300C will help ensure a complete submission).
   - If an application is incomplete, the company is sent a Notice of Incomplete Application (NIA) by certified mail or email requesting missing fees or required registration information such as laboratory reports (containing the digestion method, metals analyses methods and minimum detection limits). Missing labels or labels without the required internet statement, or incorrect formatting are the most common reasons for the issuance of an NIA. This notice can add considerable time to the registration process.
   - Registration forms, labels and all <u>other</u> required information listed on the registration checklist are reviewed by registration specialists for compliance with Washington State laws and rules including metals and labeling standards.
   - Waste-derived and micronutrient products will take longer due to required review by the Department of Ecology, Department of Health and Department of Labor & Industries. This can take up to 90 days. Waste-derived and micronutrient fertilizers (see definitions section) are reviewed by the Department of Ecology (Hazardous Waste & Toxics Reduction Program) to determine if the proposed product passes a set of criteria for review of hazardous waste (see Ecology review section for more information). The Department of Health reviews labeling and metals levels for hazards to people and the Department of Labor & Industries reviews labeling for worker protection.
4. The WSDA-issued company number is used to track registration information. All companies are assigned a unique number <u>when they apply for registration.</u> If you currently have products registered, you can find your company number on the last Registration Certificate issued by the department or on the Washington State official fertilizer database. If you are submitting products for the first time, the department will issue your company a WSDA number (this number is different from your UBI number.)
5. If a product successfully passes all reviews, it is registered by WSDA and the company receives a registration certificate. If the product cannot be registered, you will be sent a letter notifying you. You are encouraged to review this certificate for inaccuracies in your information and contact us if changes are required.

New Product Registration Checklist

1. The following items must be submitted to the department to register new product(s).
   - **Application for Registration of Commercial Fertilizers,** Form 4300A (see Figure 1.)
   - **Remittance** of $50.00 per product.
   - **Commercial Fertilizer Product Registration,** Form 4300B (see Figure 2.)
   - **Copies of laboratory analyses** of the nine heavy metals for each product. The methods of analyses, digestion method, and minimum detection limits must be noted on the laboratory reports and be one of those listed by the department. (Table 1.)
   - **Product Label:** Enclose the most current label for each product. **Labels are required to have an Internet Statement on them see Internet Statement Fact Sheet (**a copy is located at the end of this booklet**).**
   - **Ecology Questionnaire** for all new products; put the product name(s) on the questionnaire. More than one product may be represented on the questionnaire.
2. Instructions for completion of the forms are printed on the reverse side of each form**.** Please use the most current two-year registration form. The form number is printed on the top.

Renewal Product Registration Checklist

1. Renewal Pre-notification: Product renewal forms will be sent to the address on file prior to the expiration date of your product registration. All registrations are on a two-year cycle.
2. The following items must be submitted to the department to renew product(s).
   - **Application for Re-Registration of Commercial Fertilizers,** (see Figure 1.)
   - **Commercial Fertilizer Product Registration**, Form 4300B (see Figure 2), for any changes in metals levels or guaranteed analyses.
   - **Remittance** of $50.00 per product; add $10.00 late fee per product if submitted after June 30.
   - **Fertilizer Product Renewal List**; enter a checkmark next to the products you are renewing. Leave the others blank.
   - **Product Label:** Enclose any labels that have been revised since last year. **Labels are required to have the Washington State Internet Statement on them.**
   - **Ecology Questionnaire** for all products. You may group like products together on one Ecology Questionnaire form.
3. Instructions for completion of the forms are printed on the reverse side of each form. Please use the most current two-year registration form. The form number is printed on the top.
   - If you received an Ecology memo last registration period, please provide the requested information with your application.

Form 4300A - Application For Registration of Commercial Fertilizer

1. The *Application For Registration of Commercial Fertilizer* form 4300A (Figure 1) is used by the registrant to list company information. This includes at the minimum, the number of products being registered, the funds submitted, and the responsible person's printed name and signature.

2. The application must include all information listed in the registration checklists. If the application is incomplete you will be sent a Notice of Incomplete Application, explaining what needs to be done to complete the application.
3. If you are applying for the first time, do not complete the box, "WSDA Issued Company Number." This number is not the same as your UBI number!
4. If you have products registered with the State and are submitting a new product, do not complete the line, "If renewed after July 1." This line is for late renewal products are submitted after the renewal date.

Figure 1. Application for Fertilizer Registration (Form 4300A)

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Washington State Department of Agriculture
Pesticide Management Division
PO Box 42591 Olympia WA 98504-2591
Tel: 360-902-2025
Email: Fertreg@agr.wa.gov

CASHIER USE ONLY

APPLICATION FOR REGISTRATION OF COMMERCIAL FERTILIZER

Form 4300A

PLEASE USE CHECKLIST ON BACK TO ENSURE A COMPLETE APPLICATION

COMPANY NAME	WSDA ISSUED COMPANY NUMBER
MAILING ADDRESS	COMPANY NAME ON LABEL (If different than Company Name on application)
CITY, STATE, ZIP CODE	STREET or P O BOX ADDRESS ON LABEL
TELPHONE NUMBER	CITY ADDRESS ON LABEL
FAX	STATE ADDRESS ON LABEL / ZIP CODE ON LABEL
E-MAIL	INTERNET ADDRESS ON LABEL
WEB SITE ADDRESS	

APPLICANT SIGNATURE & REMITTANCE ADVISEMENT

Number of products at $50.00 each: _____ products x $50.00 = $ _____
(Fee covers current two-year registration cycle.) 7103

Make check payable to: *Washington State Department of Agriculture* **TOTAL FEES: $**_____

Checks returned by the bank will be charged a handling fee of $25.00. *(RCW 62A.3.515 (a) and 62A.3.520)*

Company Registrar Name _____ Title _____
PLEASE PRINT

Signature _____ Date _____

FOR DEPARTMENT USE ONLY

Date to ECY: _____ Product #: _____ Initial_____

Date from ECY – Incomplete: _____ Product #: _____ Initial_____

Date from ECY: _____ Product #: _____ Initial_____

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Fertilizer New Product Registration Checklist

Submit originals to WSDA and keep copies for your file.

Your company will receive a WSDA Fertilizer Registration Certificate as confirmation of product registration. You will be sent a product renewal form before the expiration date of your product registration.

- ❑ **Form 4300A,** "Application for Registration of Commercial Fertilizers." Include company name and address. If address on the label is different than address on the application, complete the section on the application for label address information.
- ❑ **Remittance** of $50.00 per product.
- ❑ **Form 4300B** "Commercial Fertilizer Product Registration" or
  - ❑ Form 4300C "Fertilizer Registration for Packaged Single Chemical Compounds."
- ❑ **Copies of laboratory analyses** of the nine metals for each product.
  Be certain the laboratory has noted the required preparation and analytical methods on the metal report submitted to WSDA.
- ❑ **Product label:** Enclose the label to be distributed in Washington.
  Be sure the label includes a WSDA approved internet statement.
- ❑ **Ecology Questionnaire:** Must be complete and submitted with new products.
  If Ecology Questionnaire is marked YES for point 1 or 2, TCLP must be included. For products made only of organic ingredients, instead of TCLP analysis, a report of the total level of arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver will be accepted. This is not the same laboratory test as needed for WSDA.

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Form 4300B - Commercial Fertilizer Product Registration

1. The *Commercial Fertilizer Product Registration* form 4300B (Figure 2) is used by registrants to list each fertilizer product submitted for registration. This form must include the **exact** product name as depicted on the submitted label, grade, maximum application rate and metals concentrations for each product registered.
2. **Product Name and Grade:** The product name should be exactly as it appears on the product label, including the grade. Incomplete or incorrect product names listed on the 4300B form could result in inadvertent compliance action.
3. **Application Rate:** The maximum application rate, when available from the product's label, is listed here as the maximum amount of product that is labeled to be applied to a defined square footage area per year. If you have questions about how to calculate your product's maximum application rate, first see the example provided in the Metals Calculation section of this guidance document. If the product does not have an application rate on the label, leave this section blank. The metals calculation will be performed using the default nutrient levels listed in rule.
4. **Guaranteed Analysis:** Under Guaranteed Analysis %, enter only the percentages of nutrients guaranteed on the product label. Values stated here must match the grade and guarantees found on the label.
5. **Guaranteed Maximum Metals Concentration:** Fill out each box under the company (CO.) guaranteed maximum metals concentration (ppm). Use the actual detected metal level from the laboratory sheet or use a greater number to account for variations in the metals levels of more than one source. If a laboratory analysis for a product indicates **ND (not detected), BDL (below detection level) or MDL (minimum detection limit)** in the "found" column, this means that the true level of that metal was below the minimum level that could be measured by that laboratory.
   - Do not put ND, BDL, MDL, 0 or a blank in the metals-levels boxes on the 4300B form. Use the detection limit value. If, for example, the selenium level is reported MDL, use the value from the lab report for the minimum detectable level.
   - You can use a value greater than this number if you want to build in a numerical buffer, or you may use a less than symbol (<) to indicate this is a minimum detection limit.
   - Remember that the parts per million (ppm) level of each metal is calculated with the rate of application in a year's time to determine if the product will pass the metals soil loading standards established in Washington.
6. Your application will take longer to process and/or you will receive a Notice of Incomplete Application if you do not follow these instructions. The application will not be processed if the laboratory analysis (using the required methods) is not included to substantiate the metals levels you report on the form.

Figure 2. Commercial Fertilizer Product Registration (Form 4300B)

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Commercial Fertilizer Product Registration (4300B Form)

A Completed Form 4300A **Must** Accompany This Form

PLEASE REFER TO INSTRUCTIONS ON BACK TO ENSURE A COMPLETE FORM

COMPANY INFORMATION		
COMPANY NAME	WSDA COMPANY NUMBER	DATE

TWO (2) PRODUCTS PER SHEET

DEPARTMENT USE ONLY

WSDA Fertilizer Product Reg. Number	Application Rate	PM WD MN	WSDA/EPA Pesticide Reg. No.	Pesticide File No.
		☐ ☐ ☐		

PRODUCT INFORMATION

PRODUCT NAME (As it appears on the label; include N,P,K, if applicable)

MAXIMUM LABELED RATE OF APPLICATION: (USE ONLY IF THE LABEL CONTAINS APPLICATION DIRECTIONS)

Maximum Rate of _____ (lbs, gals, oz.) _____ (acre or sq. ft.) _____ Times a year (Assume a 7-month growing season) (EX: 2X/Mo = 14 Times)
If a liquid, enter pounds per gallons here _____

GUARANTEED ANALYSIS (%)

										LIME			GYPSUM
N		Ca		B		Cu		Mo					
P_2O_5		Mg		Cl		Fe		Na		$CaCO_3$	$MgCO_3$	$CaCO_3$(eq)	$CaSO_4.2H_2O$
K_2O		S		Co		Mn		Zn					

GUARANTEED MAXIMUM METALS CONCENTRATION (PPM)

As	Cd	Co	Hg	Mo	Ni	Pb	Se	Zn

ND, BDL, MDL, ZERO OR BLANK IS NOT PERMITTED.

ECOLOGY INFORMATION

1. Is this product derived in whole or in part from solid waste? Yes ☐ No ☐
2. Is this product a micro-nutrient fertilizer? Yes ☐ No ☐
3. If this product is a repack of a currently registered product, enter the WSDA Reg. No. _____
4. If you answered YES to the question 1 or 2, you may be required to submit an ECOLOGY QUESTIONNAIRE for the product. Refer to instructions on the back.

DEPARTMENT USE ONLY

WSDA Fertilizer Product Reg. Number	Application Rate	PM WD MN	WSDA/EPA Pesticide Reg. No.	Pesticide File No.
		☐ ☐ ☐		

PRODUCT INFORMATION

PRODUCT NAME (As it appears on the label; include N,P,K, if applicable)

MAXIMUM LABELED RATE OF APPLICATION: (USE ONLY IF THE LABEL CONTAINS APPLICATION DIRECTIONS)

Maximum Rate of _____ (lbs, gals, oz.) _____ (acre or sq. ft.) _____ Times a year (Assume a 7-month growing season) (EX: 2X/Mo = 14 Times)
If a liquid, enter pounds per gallons here _____

GUARANTEED ANALYSIS (%)

										LIME			GYPSUM
N		Ca		B		Cu		Mo					
P_2O_5		Mg		Cl		Fe		Na		$CaCO_3$	$MgCO_3$	$CaCO_3$(eq)	$CaSO_4.2H_2O$
K_2O		S		Co		Mn		Zn					

GUARANTEED MAXIMUM METALS CONCENTRATION (PPM)

As	Cd	Co	Hg	Mo	Ni	Pb	Se	Zn

ND, BDL, MDL, ZERO OR BLANK IS NOT PERMITTED.

ECOLOGY INFORMATION

1. Is this product derived in whole or in part from solid waste? Yes ☐ No ☐
2. Is this product a micro-nutrient fertilizer? Yes ☐ No ☐
3. If this product is a repack of a currently registered product, enter the WSDA Reg. No. _____
4. If you answered YES to the question 1 or 2, you may be required to submit an ECOLOGY QUESTIONNAIRE for the product. Refer to instructions on the back.

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4300B – Page 2

COMMERCIAL FERTILIZER PRODUCT REGISTRATION INSTRUCTIONS FOR 4300B FORM

(Please read all instructions before completing this form)

A completed 4300B form is required for registration. An incomplete form may result in the rejection of your application.

☐ **COMPANY INFORMATION:**

- Company Name: Enter the name of the company as it appears on the form 4300A.
- WSDA Company Number: The company number is assigned by WSDA. If you are applying for the first time, leave this box blank. If you already have products registered in Washington and are adding additional products, please place your assigned company number in the box. You can find your company number on your current registration certificate.
- Date: Enter the date you prepared the registration forms.

☐ **DEPARTMENT USE ONLY:** Please do not write in this area.

☐ **PRODUCT INFORMATION:**

- Product Name: Enter the complete name found on the product label. Include the grade (N, P, K) if it is part of the name.
- Maximum Labeled Rate of Application: If the product label includes application rates, complete this section using the highest rate and maximum number of applications allowed during a growing season (a growing season in Washington is assumed to be 7 months.) Example: If a product's directions for use state "Apply 1-3 lbs/1,000 sq. ft. once each month," the calculation would be 3lbs x 1,000 sq. ft. x 7. Leave this section blank if the label has no directions for use.

☐ **GUARANTEED ANALYSIS %:**

- Enter a value for each nutrient guaranteed on the product label. The value must match the value on the label. Do not list values for nutrients not guaranteed on the label.
- The value must be entered as a percentage. Parts per million (ppm) and other methods of measurement are not allowed.
- All limes must include guarantees for calcium and/or magnesium carbonate ($CaCO_3$ and/or $MgCO_3$) and calcium carbonate equivalent ($CaCO_3$eq).
- Gypsum must include guarantees for calcium sulfate ($CaSO_4.2H_20$) and sulfur.

☐ **GUARANTEED MAXIMUM METALS CONCENTRATION (PPM):**

- A value must be entered for each of the nine metals. It must be reported in parts per million (ppm) and must be equal to or greater than (≥) the value found on your laboratory report.
- **If the laboratory report indicates ND (non-detect), BDL (below detection limit), or MDL (minimum detection limit),** you must enter a value equal to or greater than (≥) the ND, BDL, or MDL.
- To account for variability in source material as well as sampling and analytical variation, many companies choose to report values higher than those found on the laboratory report. This is acceptable as long as the reported value allows the product to meet the established metals standards.

☐ **ECOLOGY INFORMATION:**

1. Solid waste is defined in chapter 70.95 and 70.105, but does not include biosolids or biosolid products regulated under chapter 70.95J RCW or waste water regulated under 90.48 RCW.
2. A micronutrient fertilizer is defined as a fertilizer that guarantees B, Cl, Fe, Mn, Mo Na, or Zn, but does not guarantee N, P, K, Mg or S.
3. A repack means that the product is not changed in any manner other than being repackaged under a different label.
4. Except as provided in 4A, if you answer YES to question 1 or 2, you must submit a completed ECOLOGY QUESTIONNAIRE for the product.
   - 4a. If you answered YES to question 1 or 2 AND the product is a repack of a product currently registered by WSDA, you are not required to submit an ECOLOGY QUESTIONNAIRE as long as you have entered the appropriate WSDA registration number in the space provided.

☐ **FERTILIZER/PESTICIDE OR FERTILIZER/FEED PRODUCTS**: Dual products require registration as both.

Registration information and forms can be found on the WSDA web site at the following locations: http://agr.wa.gov/FoodAnimal/AnimalFeed/Forms.aspx or http://agr.wa.gov/PestFert/Forms/default.aspx. Information can also be obtained by writing to the address below or calling (360) 902-2025.

Mailing Address:
Washington State Department of Agriculture
Agriculture
Pesticide Management Division
PO Box 42591
Olympia, WA 98504-2591

Physical Address:
Washington State Department of

1111 Washington St. SE
Olympia WA 98504

IF YOU HAVE ANY QUESTIONS CONCERNING FERTILIZER REGISTRATION, please contact WSDA at (360) 902-2025 or by e-mail at **fertreg@agr.wa.gov**. Our fax number is (360) 902-2093.

Metals Information

Metals Analyses

1. What method must I use to digest and analyze the total metals contained in my commercial fertilizer sample? You must prepare and analyze your commercial fertilizer using U.S. Environmental Protection Agency ("EPA") sample preparation digestion method 3050B (except when preparing a sample for analysis of mercury, see Table 1*).
2. You must analyze your commercial fertilizer for the total concentration of each of the nine metals in each product using one or more of the EPA analysis methods listed in Table 1 (see below). All methods are described in EPA's SW-846, Third Edition.

Table 1. Sample Preparation and Analysis Methods for Total Metals for WSDA

Metal	**Inductively Coupled Plasma (ICP)**	**Atomic Absorption**	**Inductively Coupled Plasma Mass Spectroscopy (ICP/MS)**
Arsenic (As)	6010, 6010A, 6010B	7060A, 7061A	6020
Cadmium (Cd)	6010, 6010A, 6010B	7131A, 7130	6020
Cobalt (Co)	6010, 6010A, 6010B	7201, 7200	6020
Lead (Pb)	6010, 6010A, 6010B	7420, 7421	6020
Molybdenum (Mo)	6010, 6010A, 6010B	7480	6020
Nickel (Ni)	6010, 6010A, 6010B	7520, 7521	6020
Selenium (Se)	6010, 6010A, 6010B	7740, 7741A	6020
Zinc (Zn)	6010, 6010A, 6010B	7951, 7950	6020
Mercury (Hg)		7470A, 7471A	
Sample** Preparation	3050B	3050B	3050B

** Sample preparation method 3050B cannot provide for an analysis of mercury, so when you prepare a sample for analysis of mercury, you must use the sample preparation method established for analysis method 7470A to analyze your sample, and the sample preparation method established for analysis method 7471A when using method 7471A to analyze your product.

- In accordance with WAC 16-200-7062(2), WSDA has determined that the following methods are acceptable alternatives for analyzing fertilizers for cadmium, cobalt and zinc. The alternative methods for cadmium, cobalt and zinc are, respectively, EPA 7130, EPA 7200, and EPA 7950. The proposed limits of detection are <1mg/Kg for cadmium, <1mg/Kg for cobalt and <5mg/Kg for zinc. The digestion/preparation method for the alternative analytical methods will remain the same: EPA 3050B.

- *EPA 3010 and EPA 3020 and subsequent updates approved by EPA are acceptable alternative digestion methods to 3050B for fertilizers formulated as a liquid.*

- *EPA 3051 and subsequent updates approved by EPA are acceptable alternative digestion methods to 3050B for fertilizers formulated as a solid.*

- *EPA 7061A and subsequent updates approved by the EPA are an acceptable alternative analytical methods for arsenic.*
- *EPA 6010C and subsequent updates approved by the EPA are acceptable alternative analytical methods to 6010, 6010A, and 6010B.*
- *EPA 7474 and subsequent updates approved by the EPA are acceptable alternative analytical methods to 7471A for mercury for fertilizers formulated as a solid.*
- *EPA 7471B and subsequent updates approved by the EPA are acceptable alternative analytical methods to 7471A for mercury in fertilizers formulated as a solid.*

Note: Other States may require additional metals analysis.

Metals Reporting

1. The metals data that are reported to WSDA on the Commercial Fertilizer Product Registration form (4300B) are used to determine if the product meets the Washington State standard for annual metals addition to soil. Just as with nutrient guarantees, the metals concentrations listed in the application must accurately represent what is in the product. **You may report a higher value than that found by the laboratory but not a lower value.**
2. Fertilizer compliance officials take random samples of fertilizer products, some of which are analyzed for their metals concentrations. Products found out of compliance are subject to enforcement action. Consider adding a "safety" buffer if your sources vary or you suspect metal level variability (as long as the actual metal level is lower than the reported level.)
3. The metals data you provide is entered into the WSDA database which is posted on the internet once the product is registered. Unregistered product data is not displayed.
4. The values of metals found must be reported in parts per million (ppm). Please convert parts per billion (ppb) to parts per million (ppm) if the results are reported by the lab in ppb.

Metals Calculations

1. To determine whether a commercial fertilizer meets the Washington State standard for metals, WSDA will use the following formula: [(Pounds of product applied per acre per year) x (metal content of product in ppm)]/ 1,000,000.
2. All nine metals in the product must meet the Washington State standards for the product to be registered (see Table 3)*. If specific label directions for use are not found on the labeling, the department will use the Washington State application rates found in WAC 16-200-7063,1 (Table 2).
3. The Washington State application rates were designed using normal agronomic rates that are representative of soil, crop rotation and climatic conditions in Washington State. These rates define typical nutrient addition over a four-year period. To ensure the maximum acceptable cumulative metals additions to soil are not exceeded, WSDA will assume the commercial fertilizer will be applied at the maximum rate as stated on the label or using the default rates below Table 2.
   - Using the above information, the registration specialist calculates the annual metals addition to soil. Calculated metals loading rates are compared to the Washington State

metals standards, (the maximum total metal loading for each metal - see Table 3). These standards are based on long-term (45 years) cumulative metals additions to soils, and are expressed as pounds of metal per acre per year.

- Because cobalt, molybdenum and/or zinc are also plant nutrients, higher concentrations of these metals are permitted, provided those nutrients are guaranteed on the product label. If a fertilizer product contains levels of cobalt, molybdenum and/or zinc at levels that do not meet the Washington State standard, and they are not guaranteed on the product's label, then the product would fail to meet the Washington State metals standards and be denied registration.
- Refer to Table 4 for minimum guarantees for secondary and micronutrients. The only exception is for hydroponic or continuous feed fertilizers; these types of products may guarantee nutrients at a lower level than Table 4 permits if hydroponic or continuous feed is the only use on the label. The listing order of the nutrients in Table 4 is the only order that is acceptable.

Table 2. Washington Application Rates

Nutrient	4 Yr. Cumulative Total
	Lbs/acre
Nitrogen (N)	1600
Phosphorous (as P2O5)	700
Potassium (as K2O)	1600
Boron (B)	12
Calcium (Ca)	800
Chlorine (Cl)	300
Copper (Cu)	10
Iron (Fe)	80
Magnesium (Mg)	400
Manganese (Mn)	40
Molybdenum (Mo)	4
Sulfur (S)	400
Zinc (Zn)	30
Lime (CaCO3 equivalent)	20,000
Gypsum (CaSO4)	16,000

Table 3. Washington State Metals Standards

Metals	Lbs./acre/yr.
Arsenic (As)	.297
Cadmium (Cd)	.079
Cobalt (Co)	.594
Mercury (Hg)	.019
Molybdenum (Mo)	.079
Nickel (Ni)	.713
Lead (Pb)	1.981
Selenium (Se)	.055
Zinc (Zn)	7.329

*The only way to determine this for your product is by the calculation; do not compare the values in Table 3 to your laboratory reported values.

Sample Calculations

Product with specific directions for use

1. Rose & Flower Food, 10-12-15. The product's label provides the following instructions: Feed roses up to three times per year. Each application should consist of 5 to15 lbs. Rose & Flower food per 1000 square feet. Based on these directions, the maximum application rate is 15lbs/1000 square feet, 3 times a year. First the rate needs to be transformed into a rate per acre rather than the 1000 square feet provided.
   - One acre = 43560 square feet
   - Therefore: 43560 sq. ft/ 1000 sq. ft = 43.56 (Known as the Acre Factor)
   - This value, 43.56 is the multiplier to determine the total pounds of product per acre.
   - Therefore: 15 lbs X 43.56 = 653.40 lbs.
   - This yields: 653.40 lbs product/acre.
2. The label allows three applications per year, therefore the total rate would be: 653. 40 lbs acre, 3 times per year OR 1960.2 lbs/acre/year.
3. Now that the application rate is calculated, the metals loading can be calculated. In this example, the product contains 3 ppm of arsenic. [(1960.2 lbs/acre/year) x (3)]/1,000,000 = 0.0059 lbs. arsenic/acre/year.
4. This product meets the Washington State standard for arsenic because the calculated metals loading is 0.0059 lbs. arsenic/acre/year, less than the standard of 0.297 lbs. arsenic/acre/year.

Product without specific directions for use

1. Urea, 46-0-0. The product's label does not provide specific directions for use. Using the Washington State Application Rate found in Table 2 and the example of arsenic at 3 ppm, the loading for arsenic can be calculated as follows:
   - Four year cumulative total for nitrogen is 1600 lbs/acre or 1600 lbs/acre/4 years. This corresponds to a rate of 400 lbs/acre/year. Urea is 46% nitrogen. Thus, (400 lbs. nitrogen/acre/year)/0.46 = 870 lbs. product/acre/year.
   - Therefore the calculation is: [(870 lbs. product/acre/year) x (3 ppm)]/1,000,000 = 0.0026 lbs arsenic/acre/year.
2. In this example, the product also meets the Washington State standard for arsenic because the calculated metals loading is 0.0026 pounds arsenic/acre/year, less than the standard of 0.297 lbs. arsenic/acre/year.

Label Information

Label Requirements

1. All fertilizers require a label that describes the product. Packaged fertilizers require a label affixed to the package, while bulk fertilizers may be accompanied by a bill of lading that contains all of the labeling requirements or that has the label attached. Labeling is defined as: all written, printed, or graphic matter, or advertisement, brochures, posters, television and radio announcements used in promoting the sale of such fertilizer. Be aware that the claims and statements you make on your internet site are considered enforceable labeling.
2. All commercial fertilizer labels must contain the following information:
   - Product name, brand, and grade (N-P-K; only the grade is separated by dashes (-), all others use a plus sign (+).)
   - Guaranteed analysis and derivation or fertilizer sources statement
   - **Name and address of the registrant**, other statements such as "Manufactured for or by (name of company)" may be added.
   - Net weight (in United States units, metric units may also be displayed).
   - Approved Internet statement. Please see Internet Information Sheet at the end of this booklet. Note: Your label will not be accepted without this statement.
3. **Name, Brand**: Consistency in the listing of the Name and Brand of the product is important. Inconsistencies between the name given to WSDA and labeling in the marketplace can generate regulatory attention. The wording of the name of the product is taken from the 4300B form and entered into the WSDA database. If this differs from the exact wording on the actual label in use there may be initial confusion of the registration status of the product.
4. **Grade**: With some exceptions, the product's grade must be listed in whole numbers such as 1-2-3 and not fractional numbers such as 1.5-5.0-3.5. For exceptions, see "Grade" in the Definition section. "Grade" only represents Nitrogen (N)-Phosphate (P_2O_5)-and Potassium (K_2O) or more commonly know as N-P-K. When signifying any other nutrient with the grade, use pluses (+), the percentage amount and the elemental abbreviation. For example: Blue Bird 10-20-20+14S (*S for Sulfur)*+5Fe (Fe *for Iron)*+ 9Zn (Zn *for Zinc).* The elemental abbreviations are: Ca-Calcium, Mg-Magnesium, S-Sulfur, B-Boron, Cl-Chlorine, Co-Cobalt, Cu-Copper, Fe-Iron, Mn-Manganese, Mo-Molybdenum, Na-Sodium and Zn-Zinc.
5. **Guaranteed Analysis:** The guaranteed analysis is the MINIMUM level of nutrients guaranteed, round down, not up when formatting your level. This will help you keep from having a penalty deficient product when it is sampled by field staff. The guaranteed analysis lists all nutrients guaranteed in the product. All nutrients mentioned on the label must be guaranteed. **Zero** guarantees shall not appear in the guaranteed analysis section. List secondary nutrients (Ca, Mg, S) and then list micronutrients in the order stated in Table 4 after N-P-K. When nutrients other than N, P and K are guaranteed, they must be at or above the percentages listed in Table 4. The format for the guaranteed analysis is below:

Grade 5-10-15+1 Fe
Guaranteed Analysis:
Total Nitrogen (N)……..…….5%
1% ammoniacal nitrogen

1% nitrate nitrogen
1% water insoluble nitrogen
2% Urea Nitrogen
Available Phosphate (P_2O_5)……10%
Soluble Potash (K_2O)……..…..…..15%.
Iron (Fe)……..…...1%
1% chelated iron

Derived from: (list fertilizer source materials)

Table 4. Micronutrient Guarantee Minimums*

Element	%
Calcium (Ca)	1.0000
Magnesium (Mg)	.5000
Sulfur (S)	1.0000
Boron (B)	0.0200
Chlorine (Cl)	0.1000
Cobalt (Co)	0.0005
Copper (Cu)	0.0500
Iron (Fe)	0.1000
Manganese (Mn)	0.0500
Molybdenum (Mo)	0.0005
Sodium (Na)	0.1000
Zinc (Zn)	0.0500

*Only Hydroponic and other continuous feed fertilizers, when noted on the label, are exempt from minimum secondary nutrient and micronutrient guarantees.

6. A **warning** or **caution** statement may be required on the label for any commercial fertilizer containing more than 0.1% boron or more than 0.001% molybdenum. The following are example statements:
   - This fertilizer contains boron, which may be injurious to certain crops. Contact your local county agent or field consultant for specific information.
   - WARNING: This fertilizer carries added borax and is intended for use only on alfalfa. Its use on any other crops or under conditions other than those recommended may result in serious injury to the crops.
   - Molybdenum: CAUTION: This fertilizer is to be used only on crops which respond to molybdenum. Crops high in molybdenum are toxic to grazing animals (ruminants).
7. **Derivation Statement:** The derivation statement immediately follows the guaranteed analysis section. This statement provides the source for each nutrient guaranteed. This section should be listed as “Derived From” or “Sources of Nutrients Claimed” on your label. The fertilizer sources should be from recognized source materials, and no Brand names should be used. If claiming non plant food ingredients postion below GA with the heading “Non-Plant Food Ingredients.”
8. **Company name and address:** The company name and address of the company registering the product must be on the label. Other statements such as “manufactured for” may be added.
9. **Net Weight:** The net weight of the product must be in pounds or ounces. You may provide the metric measurement as well; however, the U.S. measurement must be on the label. If the product is a liquid, the net contents can be listed; however, the weight per gallon must also be provided.

10. **Washington State Internet Statement:** All fertilizer labels distributed in Washington State must contain one of the following statements.

    (a) Information received by the Washington state department of agriculture regarding the components in this product is available on the Internet at http://agr.wa.gov.

    (b) Information regarding the contents and levels of metals in this product is available on the Internet at http://agr.wa.gov.

    (c) Information regarding the contents and levels of metals in this product is available on the Internet at http://www.regulatory-info-xx.com.
    Each registrant must substitute a **unique** alphanumeric **identifier** for "xx". This statement may be used only if the registrant establishes and maintains the Internet site and the Internet site meets the following criteria:

        (i) There is no advertising or company-specific information on the site: and
        (ii) There is a clearly visible, direct hyperlink to the department's Internet site specified in (a) or (b) of this subsection.

    (d) Information regarding the contents and levels of metals in this product is available on the Internet at: http://www.aapfco.org/metals.htm.

Version (d) is recommended for registrants distributing in States other than Washington.

If you choose version (c), you must set up a web page that has a hyperlink to the WA State database. There can be no advertising or company-specific information on this site; only the hyperlink. To see an example, go to http://www.aapfco.org/metals.htm. It is the company's responsibility to maintain.

Any commercial fertilizer distributed in bulk, that is not a customer-formula fertilizer, must be accompanied by a label and supplied to the purchaser at the time of delivery. This includes truckloads and railcar loads, shuttles or bulk bags.

Each delivery of a customer-formula fertilizer mix (CFM) must contain those ingredients specified by the final purchaser. A CFM is only for the customer requesting the mix and should only be used by that customer, not resold to others. A CFM is only for use, not for retailing or reselling.

- The fertilizer must be accompanied by either a statement, invoice, a delivery slip, or a label if bagged, containing the following information:
    - The net weight; the brand; the guaranteed analysis which may be stated to the nearest tenth of a percent or to the next lower whole number;
    - The name and address of the registrant or licensee, or manufacturer, or both;
    - The name and address of the purchaser.
- The registrant or licensee must maintain a record of all invoices of customer-formula grade mixes for twelve months and must make them available to the department upon request.

Organic Claims

1. Product labels that contain organic claims must be consistent with the following definitions under the Commercial Fertilizer Rule (caution – adding the word "organic" to your product does not mean that it is approved for organic production):
   - **Organic-** a material containing carbon and one or more elements (other than hydrogen and oxygen) essential for plant growth. When the term "organic" is utilized in the label or labeling of any commercial fertilizer, it shall be qualified as either "**synthetic organic**" or "**natural organic**," with the **percentage** of each specified. The exception being if organic is used in the brand name in a manner that does not misrepresent the product.
   - **Natural organic** means a material derived from either plant or animal products containing carbon and one or more elements (other than hydrogen and oxygen) essential for plant growth.
   - **Synthetic organic** means a material that is manufactured chemically (by synthesis) from its elements and other chemicals, containing carbon and one or more elements (other than hydrogen and oxygen) essential for plant growth.
2. Using these definitions, a product which is comprised solely of bone meal, kelp and/or other natural organics could claim "100% natural organic" or "all natural organic." Products which contain a portion of their material as organic must list the actual percentage of that material, i.e., "95% natural organic." The same is true for synthetic organic claims.
3. Certified organic or certified-for-use for organic production statements must be approved by the WSDA Organic Food Program. The Organic Program web site address is http://www.agr.wa.gov/FoodAnimal/Organic/default.htm.
4. Mineral materials used as fertilizers such as limestone, rock phosphate, borax, gypsum or greensand are not "organic" according to the fertilizer rule definition. These products may be considered as Natural, however. Because these minerals do not contain carbon atoms, they do not meet the following definition: "Organic means a material containing carbon and one or more elements (other than hydrogen and oxygen) essential for plant growth". "Organic" does not mean pure or natural. "Organic" products still must be assessed the same as all other fertilizers.

Slow-Release Format

1. There are several approved formats for guaranteeing slow-release fertilizers. The most commonly used formats are listed below. For additional information, you may obtain an American Association of Plant Food Control Officials (AAPFCO) publication, which lists all other formats. See the contact information section for AAPFCO's address.

Examples of Slow Release Nutrient GA Formats

- With one coated material (Urea N):

Fertkote 10-15-20
Guaranteed Analysis
Total Nitrogen (N)…….….….5%
    2.5% Ammoniacal nitrogen
    2.5% Nitrate nitrogen
    5.0% Urea nitrogen*
Available Phosphate (P205)……..….….15%
Soluble Potash (K20) ……..……20%

Sulfur (S) ……..……..……..14%
_____% Slowly available Urea Nitrogen from _____
Derived from _____

- With all materials of one nutrient coated (all N):

Fertkote 10-15-20
Guaranteed Analysis
Total Nitrogen (N)*…….….10%
2.5% Ammoniacal nitrogen
2.5% Nitrate nitrogen
5.0% Urea nitrogen
Available Phosphate (P205)……...….15%
Soluble Potash (K20) ……..……20%
Sulfur (S) ……..……..14%
*_____% Slowly available Nitrogen from _____
Derived from _____

- With two or more nutrients from coated materials (N,P, and K):

Fertkote 10-15-20
Guaranteed Analysis
Total Nitrogen (N)*…….….10%
2.5% Ammoniacal nitrogen
2.5% Nitrate nitrogen
5.0% Urea nitrogen
Available Phosphate (P_2O_5)*……...….15%
Soluble Potash (K_2O)*…….……20%
Sulfur (S) ……..……..……..14%
Derived from _____
*The nitrogen, phosphate and potash materials in this product have been coated to provide 9% coated slow relase nitrogen, 13% coated slow release available phosphate, and 18% coated slow release potash.

- Slowly available Water Soluble Nitrogen (when a fertilizer mixture contains recognized and determinable forms of water soluble nitrogen with slowly available properties):

Fertkote 20-0-0
Guaranteed Analysis
Total Nitrogen (N)……..….….20%
8.0% Urea nitrogen
2.0% Other water soluble nitrogen
2.9% Slowly available water soluble nitrogen*
7.1% Water Insoluble nitrogen
Derived from _____
* Slowly available Nitrogen from _____

- Organic Nitrogen (the minimum % required when organic nitrogen is claimed):

Good Stuff 15-0-0
Guaranteed Analysis
Total Nitrogen (N)……..….….15%
10% Water insoluble organic nitrogen
5% Water soluble nitrogen

Derived from meat and bone meal.

If an amount of nitrogen is designated as organic then the water insoluble nitrogen or the slow release nitrogen guarantee must not be less than 60% of the nitrogen so designated. Coated urea shall not be included in meeting the 60% requirement.

When a slowly released nutrient is less than 15% of the guarantee for either total nitrogen, available phosphate, or soluble potash, as appropriate, the label shall bear no reference to such designations.

Bulk Fertilizer Labeling

If a commercial fertilizer is distributed in bulk, including truckloads and railcar loads, shuttles, or tote bags, a written or printed statement meeting the labeling requirements must accompany the delivery and be supplied to the purchaser at the time of delivery. This can be accomplished by attaching an approved label to the Bill of Lading (BOL), or incorporating the required labeling elements on the BOL.

Liming Material Labels

Liming material labels must include the applicable general labeling information. In addition, all liming material labels must include in the guaranteed analysis section:

- The percentage of calcium or magnesium expressed as carbonate ($CaCO3$ or $MgCO3$);
- The calcium carbonate equivalent ($CaCO3$ eq) as determined by methods prescribed by the Association of Official Analytical Chemists (AOAC);
- The minimum percentage of material that will pass respectively a one hundred mesh (100), sixty mesh (60), and ten mesh (10) sieve. The mesh size declaration may also include the percentage of material that will pass additional mesh sizes.
- Total calcium (Ca) and /or total magnesium (Mg) may also be guaranteed.

Types of Claims Prohibited on Fertilizer Labeling

Do not use the following words and phrases on fertilizer labeling: "Safe for Children and Pets", "Safe for the Environment", "Fish Friendly", "Environmentally Friendly", "Complete Fertilizer", "Balanced Fertilizer", or "Contains all Nutrients for Plant Growth" (when the product only has NPK).

The reason for prohibiting such label claims is that “the dose makes the poison”. Used incorrectly, in the wrong place, at the wrong time, or at the wrong rate, any fertilizer could be unsafe to people, pets, the environment or fish. “Complete” or “balanced” fertilizer has no common definition that the public understands. Refrain from making these types of claims.

Products such as phosphorous acid (P2O3 or phosphite), humic acid, lignosulfonate, or fulvic acid are not considered fertilizer sources or materials. They must be listed under the heading "Non-Plant Food Ingredients" under the derivation statement in the guaranteed analysis.

Department of Ecology Questionnaire and Review

1. If the fertilizer product(s) you are registering meet the definition of a waste-derived or micronutrient fertilizer (see below and in the definitions section), you must identify it accordingly. These products are required by law to undergo a review by Ecology in addition to the review conducted by WSDA.
2. Ecology may require additional analytical testing (see below in Additional Tests, #3) before your product can be registered for distribution in Washington State. The Department of Ecology sends the review packet to the Washington State Department of Labor & Industries and Department of Health for review regarding worker safety and health concerns.
3. The Ecology Questionnaire may be downloaded from the fertilizer registration web site.

What Is a "Waste-Derived" Fertilizer?

1. Fertilizers derived in whole or in part from solid wastes or hazardous wastes as defined by laws and rules are considered waste-derived. The applicable laws and rule are the following: Chapter 15.54 RCW requires that all waste-derived and micronutrient fertilizers submit the analytical test results for 9 heavy metals; Chapters 70.95 and 70.105 RCW define solid waste; and Chapter 15.54.270 RCW defines waste-derived fertilizers and micronutrients. The Department of Ecology adopted the review criteria for fertilizer into the Dangerous Waste Regulations under 173-303-505 Washington Administrative Code (WAC).
2. Solid and hazardous wastes include not only industrial-type wastes such as used acids, chemical production wastes and air pollution emission dusts, but also includes biological wastes such as animal parts, manures, feathers and other non-hazardous wastes.

What Are the Additional Tests Required by Ecology?

1. Two analytical tests are required for the review and registration of waste-derived and micronutrient fertilizers. Tests on the fertilizer using the Toxicity Characteristic Leaching Procedure (TCLP) for metals and/or the Halogenated Organic Compounds (HOC) are the Initial Criteria used by Ecology for the review of these types of fertilizer products. The Ecology Questionnaire provides details about the methodologies for conducting these analyses.
2. **BE AWARE** the TCLP metals test required for Ecology's review is a distinct and separate analysis from the metals analyses required by the Department of Agriculture. The metals results required by Ecology are for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

3. **If I conducted the TCLP & HOC tests on my products last year, do I need to conduct them again?** YES – if your product has been registered for less than two registration cycles (4 years.) However, in the future, Ecology may choose to forgo a repeat of these analyses for products that have not been reformulated or changed sources of raw materials since they were last tested.
4. **Are These Analyses Required for ALL Waste-Derived and Micronutrient Fertilizers?** NO! The Department of Ecology also provides for Secondary Criteria, which allows Ecology to focus its review on the ingredients and processes used for manufacturing a fertilizer. Registrants of waste-derived fertilizers utilizing certain wastes such as biological wastes may submit a complete list of ingredients and the sources of those ingredients in place of the analytical test results (Initial Criteria) discussed above. Biological wastes include, but are not limited to, bone meal, blood meal, feather meal, fishmeal, manures, and poultry litter. Instead of TCLP Analysis – Totals will be accepted for products made of only organic ingredients (must add tests for chromium, barium, and silver.) In lieu of HOC testing, a written and signed statement from the applicant stating that each product (by name and WSDA number) contains no more than 1% HOCs (any organic compounds which included one or more atoms of chlorine, fluorine, bromine or iodine bonded directly to a carbon atom.) Questions? Call Tom Cusack, WA State Department of Ecology, (360) 407-6755, or e-mail tcus461@ecy.wa.gov

Fertilizer Product Distribution & Reporting

Bulk Commercial Fertilizer Distribution License

This annual license is required for each location (whether in or out of state) that distributes bulk fertilizer in Washington State. The application is completed through the Business Licensing Service. http://bls.dor.wa.gov/ Click on "Apply for specialty licenses if required for your business", then under "Type of license", click on "Bulk fertilizer distributor." There is a fee of $25/location. Whenever fertilizer is distributed within the state, the name and address shown on the license shall appear on all company registered labels, pertinent invoices and storage facilities.

All bulk fertilizers used in blending fertilizer for distribution must first be registered with WSDA. A bulk fertilizer license-holder may also register fertilizer materials and fertilizer blends if they are not already registered.

> Note: A facility that makes Customer Formula Fertilizer Mixes (CFMs) must register each brand under which it distributes CFMs: For an example: If company Z makes Greenhill Customer Formula Fertilizer Mix and Redhill Customer Formula Fertilizer Mix, then company Z must register two CFMs. Since each CFM will be unique to a customer, submission of a sample bill of lading with the required labeling elements on it is sufficient for registration.

Tonnage Reporting

Every registrant or licensee who distributes commercial fertilizer in Washington state shall file with the department a semi-annual report on forms provided by the department setting forth the number of net tons of each commercial fertilizer so distributed in this state. Any registrant or licensee that distributes a fertilizer to non-registrants or non-licensees in Washington state must report tonnage and pay inspection fees to WSDA. Tonnage fees are assessed semi-annually: July 1st through December 31st and January 1st through June 30. The fee for fertilizer materials is $0.30 per ton; the fee for lime materials is $0.15 per ton. When more than one registrant or licensee is involved in the distribution of a commercial fertilizer, the last registrant or licensee distributing to non-registrants or non-licensees is responsible for completing the tonnage report and paying the appropriate fees.

The Washington State Commercial Fertilizer Tonnage Report forms should arrive at your business in June and December. If you do not receive these forms by the above dates, call the Tonnage line at (360) 902-2080.

Fertilizer Product Database

The department's fertilizer product database provides information on the metals concentrations of each of the nine heavy metals (arsenic, cadmium, cobalt, mercury, molybdenum, lead, nickel, selenium and zinc) for which Washington State has developed soil-loading standards. Registrants may list a higher concentration than actually found by the laboratory in order to build in a safety factor. All calculations are based on these numbers multiplied by the state default application rates or the labeled maximum application rate. Metal concentrations for each registered product are accessible to the public at the department's web site. Fertilizer products may be searched by product name or by registering company. The name, address, and telephone number of the registrant and the guaranteed analysis of the product are also listed when a product or company is selected in the database. Instructions are under 'How To Navigate WSDA Database.'

Secondary Containment

Washington State has requirements regarding the secondary containment of liquid and dry bulk fertilizers as found in The Fertilizer Bulk Storage and Operational Area Containment Rules, WAC - 16-201. These standards are designed to protect groundwater and other natural resources from fertilizer storage accidents resulting in contamination. WSDA periodically inspects fertilizer facilities for compliance with these standards.

WSDA Organic Food Program Registration

The Organic Food Program is separate and distinct from Pesticide Management Commercial Fertilizer Registration. The way these two programs are linked is that fertilizer products first must be approved by Pesticide Management before they can be approved by the Organic Program. To ensure that produce labeled as Organic in this state is grown with approved fertilizer and pesticide products, the Organic Food Program has developed a brand name materials list. The lists can be found at the department's web page at http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.aspx.

The Brand Name Materials List (BNML) includes products that are registered for use in organic food production. Every material which is manufactured within this state for use in organic food production (WAC 16-160-030) may apply for registration with the Organic Food Program (OFP). Every fertilizer material must be first registered with WSDA Pesticide Management Division. The telephone number for the Organic Food Program is (360) 902-1805.

Organic Food Program registration is not required, but is necessary for an appearance on the Brand Name Materials List. Approved materials have been reviewed to verify that all of the ingredients comply with Organic Crop Production Standards, chapter 16-157 WAC and registration guidelines per Registration of Materials for Organic Food Production, chapter 16-160 WAC. Chapter 16-157 WAC contains Organic Food Standards & Certification information.

Certified organic or certified for use for organic production statements must be approved by the WSDA Organic Food Program. The Organic Program web site address is http://agr.wa.gov/FoodAnimal/Organic/.

Product-Specific Information

Biosolids

(Treated municipal sewage sludge)
Biosolids are processed municipal sewage sludge that can be beneficially recycled and have undergone adequate treatment to permit their application to land. Most are used as soil amendments and are regulated by the Department of Ecology. Unpackaged biosolids are distributed in a loose form and are generally exempt from the fertilizer law and registration. Packaged biosolids are distributed in a container and are regulated as a fertilizer when they make fertilizer claims (such as a guaranteed analysis) on the labeling. Unpackaged and packaged biosolids that do not meet the definition for commercial fertilizer must include a legible and conspicuous disclaimer on the labeling. The disclaimer must state that the product is not a commercial fertilizer and that any nutrient claims are estimates or averages and are not guaranteed.

Compost

Commercial composting is regulated by the Washington State Department of Ecology. The regulatory information can be found in Chapter 173-350 WAC Solid Waste Handling Standards and at this web site: http://www.ecy.wa.gov/programs//swfa/facilities/350.html.

Composts can be plant and/or animal material. Under the fertilizer law, if the compost fits the definition of organic waste-derived material (see Definition Section), it is exempt from the law, regardless of the nutrient or plant growth claims. If it is a composted animal manure being sold with a nutrient guarantee and claims to promote plant growth, it is not considered an organic-

waste derived material, and manipulated manure and does require registration. Composts are reviewed by the Organic Food Program for organic crop production.

- Composting is the controlled aerobic degradation of organic waste materials.
- Organic Waste Materials are grass clippings, leaves, weeds, bark, plantings, prunnings, and other vegetative waste, uncontaminated wood waste from logging and milling operations, food wastes, food processing wastes and materials derived from those wastes through composting.
- Manipulation means processed or treated in any manner, including drying to a moisture content less than 30%.
- Also exempt from the definition of a fertilizer are unmanipulated animal and vegetable manures and organic-waste derived materials.

Potting Soils

Potting soils that do not contain nutrient claims on the product label are not required to be registered as fertilizers. Those potting soils that are sold with nutrient claims are considered fertilizers and are regulated as such. Contact Fertilizer Registration for more information regarding the registration of potting soils. Washington State does not have laws or rules that specifically address horticultural mediums, potting soils, or soil amendments. These products may be registered as fertilizers on a case by case basis, depending upon the label claims and guarantees.

Pesticide/Fertilizer Combination Products

Products that contain both fertilizers and pesticides, such as **weed & feeds, moss killers** or any other fertilizer that contain a pesticide (insecticide, herbicide, fungicide or spray adjuvant) are considered combination products and must be registered with both the Fertilizer and Pesticide Registration Programs. The registration periods for these programs differ; the pesticide registration period is from January 1 through December 31, while the fertilizer registration period is from July 1 to June 30. WSDA recommends that whenever a combination product is submitted for registration, applications and fees should be submitted separately, for both fertilizer and pesticide registration. For information regarding pesticide registration see: http://agr.wa.gov/PestFert/Pesticides/ProductRegistration.aspx.

Limes and Gypsum

Lime and gypsum are regulated as commercial fertilizers in Washington State. The yearly tonnage fee for lime is $0.15 per ton, while gypsum is regarded as a fertilizer and the yearly tonnage fee is $0.30 per ton.
The difference between gypsum and lime is that gypsum is calcium sulfate and does not change the pH of the soil. Lime does change the pH of the soil. Most lime is calcium carbonate; dolomite lime is calcium and magnesium carbonate. Types of liming materials are compounds

such as carbonates, hydroxides and oxides. Limes have specific labeling requirements; see Liming Materials Label section of this guidance document and the definition of Guaranteed Analysis (d).

Hydroponic Fertilizers

Special rules apply to the labeling of hydroponic or continuous feed fertilizers. Products labeled solely for hydroponic use may guarantee levels of plant nutrients below the minimum guarantees required for commercial fertilizers if hydroponic and/or continuous feed is the ONLY method for use mentioned on the label. See minimums required in Table 4. It is important for you to determine the maximum application rate for these products and enter it on form 4300B. When foliar and/or soil spray directions are on the label, the maximum application rate should be taken from those directions.

Other Analysis Methods

As allowed in the rules (WAC 16-200-7062 (2)) other sample preparation and analysis methods for total concentration of each metal in each commercial fertilizer may be used only under the following conditions:

- You must submit a request to WSDA, in writing, detailing the sample preparation methods, minimum detection limits and quality assurance, quality control documentation and a side-by-side comparison of the analysis results from the alternative method to one of the approved methods' analysis results of the same material; and
- WSDA, after reviewing the request, may approve the sample preparation or accuracy of the applicable method listed.

The Department of Agriculture is interested in your feedback on the analysis methods. If your laboratory or technical personnel think that there are better methods of analysis, please submit your views in writing to the Department (fertreg@agr.wa.gov).

Customer Formula Fertilizer Mixes (CFMs)

A CFM must be formulated and mixed according to each customer's requests. This mix is blended in bulk for only one customer to use; it cannot be resold without first being registered. All of the commercial fertilizer products going into the blend must be registered with WSDA. The end product (CFM) can be bagged for the one customer, if requested. The CFM must have labeling attached with all the elements of the label included. The CFM mix-formulas and records must be kept for one year. The customer name and address must accompany this information.

"CFM" is registered as a product with other fertilizers on the 4300B Form. All customer formula mixes that are sold under one brand name such as Blue Bird are considered one product. No specific guaranteed analysis or metals are required on the form because the "CFM" can only be made from registered fertilizers and change with each blend. CFMs are also discussed under Bulk Fertilizer License section of the guidance document.

Products Considered Non-Plant Food Materials

Phosphorous acid and phosphite (different from phosphorus) or phosphate, does not provide P_2O_5 and is not considered a valid source of available phosphate for plant nutrition. The product can be converted with time to elemental phosphorus. The percentage of elemental (P) can be listed under the Available P_2O_5 in the guaranteed analysis as Elemental Phosphorus (P) but that elemental amount cannot be used in the grade. This listing is placed under Soluble Potash (K2O) and before calcium, magnesium and sulfur on the label. The source of the phosphite may be listed under Non Plant Food Ingredients with the % of Phosphorous Acid added. Materials such as humic acids and lignosulfonates are generally not recognized as plant food sources. Micronutrients can be chelated with lignosulfonate but lignosulfonate is not considered an allowable source of sulfate. Definitions of plant food sources are found in the WSDA law and rule and in the AAPFCO guidance document (see Contact section). Other non-plant food ingredients can include silicon or water-holding gel.

IMPORTANT

Fertilizer Registrants need to be aware that statements on fertilizer product labeling suggesting pesticide, adjuvant, fungicide, or disinfectant activity are considered claims that necessitate the product also be registered with EPA and WSDA as a pesticide, fungicide or disinfectant. Although not regulated by EPA, WSDA requires all Adjuvants and 25(b) products to be registered in Washington State. For more information about pesticide registration, go to the department's Internet address at http://agr.wa.gov/PestFert/default.htm.

Labeling Example

Commercial Agricultural Fertilizer – Bulk Label

BLUEBIRD WESTERN CORN BOOSTER
15-20-30+2Mg+7S+.1B

Guaranteed Analysis

Total Nitrogen (N)……..15.0%
5% Nitrate Nitrogen
8% Urea Nitrogen
2% Water soluble Nitrogen
Available Phosphate (P2O5)……20.0%
Soluble Potash (K2O)……..30.0%
Magnesium (Mg)……2.0%
Sulfur (S)……....7.0%
Boron (B)……....0.1%*

Derived from ammonium nitrate, diammonium phosphate, super phosphate, sulfate of potassium, magnesium sulfate and sodium borate.

Manufactured by Williams Fertilizer for Bluebird Fertilizer Company, PO Box 123, Olympia, WA. 98504

"Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm"

Net Weight 2000 pounds

*Note: A warning of caution statement may be required on the label for any commercial fertilizer containing more than 0.1% Boron.

Commercial Fertilizer Bagged Product

Bluebird General Purpose Fertilizer
16-16-16 +5S

Guaranteed Analysis
Total Nitrogen (N)……. 16%
6% Urea nitrogen
10% Ammonium nitrogen
Available Phosphate (P2O5)…….. 16%
Soluble Potash (K2O)……. 16%
Sulfur (S)……. 5%

Nutrient sources derived from Ammonium Sulfate, Muriate of Potash and monoammonium phosphate.

Apply 3 times a year at the maximum rate of 200#/A/year.

"Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm"

Bluebird Fertilizer Company
PO Box 123
Olympia, WA 98504

Net Weight 50 pounds

Commercial Fertilizer Bulk with Bill of Lading (BOL)

Sent to:
Green Pastures Farm
Accounts Payable
145 Old Farm Road
Olympia, WA 98504

Sent From:
Bluebird Fertilizer Company
PO Box 123
Olympia, WA 98504

Customer Number: 223334445
Order Number: May1015
Carrier Information—customer truck
Bill of Lading Number: 98798
Date ordered: May 3, 2006
Date shipped: May 9, 2006

Quantity: 1 truckload
Description: 46-0-0, Urea

Net Weight: 5000#
Product code: N46

"Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm"

Note: if the above example was a bulk mix, then the ingredients are stated. Since the example is a fertilizer material (urea) the source is not indicated.

Specialty Fertilizer-Liquid

Bluebird Houseplant Fertilizer
5-6-7

Guaranteed Analysis

Total Nitrogen (N)……. .. 5.0%
3% Ammonium nitrogen
2% Water insoluble nitrogen
Available Phosphate (P2O5)……. 6.0%
Soluble Potassium (K2O)…… .7.0%

Derived from Diammonium Phosphate, bone meal, muriate of potash.

Use 8 oz. per 3 gallons of water, 7 times during the growing season (once a month from March-September). 3 gallons of diluted fertilizer will treat six 12" pots, or 6 sq ft of soil.

Net volume=1 qt.
Product weight=8.8#/Gallon
Net weight=2.2#/qt.

"Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm"

Bluebird Fertilizer Company, Olympia, WA. 98504

Lawn and Garden Specialty Fertilizer - Bagged

Bluebird All Purpose Lawn and Garden Fertilizer
20-10-20 +5S+2Zn

Guaranteed Analysis

Total Nitrogen (N)……. 20%
Available Phosphate (P2O5)…….. 10%
Soluble Potash (K2O)…… 20%
Sulfur (S)……... 5%
Zinc (Zn)……. 2%

Sources derived from: Urea, monoammonium phosphate, sulfate of potash, zinc sulfate.

For turf and lawns apply 20#/5000 sq ft of product 3 times a year.
For flower and vegetable gardens apply 1#/1000 sq ft. every 6 weeks.

Net Weight
50#

Manufactured by Bluebird Fertilizer Company, PO Box 123, Olympia, WA 98504

"Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm"

Customer Formula Fertilizer Mix

Typically are shown on Bills of Lading.

Sold To: Farmer Dell
Boundary Farm
Prosser, WA 9____

Sold By: Superior Plant Food Co.
1212 Hwy. 24
Moses Lake, WA 9

Total Nitrogen (N)……*xxxx*
Available Phosphate (P2O5)……*xxxx*
Soluble Potash (K2O)……...*xxxx*

(If secondary or micronutrients are guaranteed in the customer's formula mix they are listed after the primary nutrients)

(There may be a weight ticket or blend sheet that accompanies this document. The actual ingredients must be listed here and kept in the registrant's CFM file for one year.)

Net Weight 14,000# Railcar/Truck/

"Information regarding the contents and levels of metals in this product is available on the Internet at http://www.aapfco.org/metals.htm"

Contact Information

WSDA

Washington State Department of Agriculture
Pesticide Management Division
1111 Washington Street, NRB - 2nd Floor
P.O. Box 42589
Olympia, WA 98504-2589
Fertilizer Information: (360) 902-2025
Tonnage & Fertilizer Licensing Information: (360) 902-2080
Fax: (360) 902-2093
E-mail: fertreg@agr.wa.gov

ECOLOGY

Washington State Department of Ecology
Hazardous Waste & Toxics Reduction Program
Tom Cusack
300 Desmond Drive
P.O. Box 47600
Lacey, WA 98504-7600
Phone: (360) 407-6755
Fax: (360) 407-6715
E-mail: tcus461@ecy.wa.gov

AAPFCO

The Official Publication of the Association of American Plant
Food Control Officials may be purchased from:
Jamey Johnson, AAPFCO-Treasurer
Div of Feed & Fertilizer
No. 1 Natural Resources Dr.
AR State Plant Board
Little Rock, AR. 72205
Telephone: (501) 225-1598.

WSU Laboratory Booklet

EB1578
Analytical Laboratories and Consultants Serving Agriculture in the Pacific Northwest, June 2003.
http://wsprs.wsu.edu/AnalyticalLabsEB1578E.pdf.

Definitions

(Found in RCW 15.54.270 and WAC 16-200-695)

Brand - a term, design or trademark used in connection with the distribution and sale of one or more grades of commercial fertilizers.

Bulk fertilizer - commercial fertilizer distributed in a non-packaged form such as, but not limited to, tote bags, tote tanks, bins, tanks, trailers, spreader trucks and railcars.

Calcium carbonate equivalent - the acid-neutralizing capacity of an agricultural liming material expressed as a weight percentage of calcium carbonate.

Commercial fertilizers - a substance containing one or more recognized plant nutrient(s) that is used for its plant nutrient content or that is designated for use or claimed to have value in promoting plant growth. Commercial fertilizers also include lime, gypsum, and manipulated animal and vegetable manures. It does not include unmanipulated animal and vegetable manures and organic waste-derived material. Recognized plant nutrients include: primary nutrients (nitrogen, phosphorous, potassium), secondary nutrients (calcium, magnesium, sulfur) and micronutrients (boron, manganese, chlorine, molybdenum, cobalt, sodium, copper, zinc or iron).

Composting - the controlled aerobic degradation of organic waste materials. Natural decay of organic waste under uncontrolled conditions is not composting.

Customer-formula fertilizer - a mixture of commercial fertilizer or materials of which each batch is mixed according to the specifications of the final purchaser.

Distribute - to import, consign, manufacture, produce, compound, mix, or blend commercial fertilizer, or to offer for sale, sell, barter, exchange, or otherwise supply commercial fertilizer in this state.

Distributor - a person who distributes commercial fertilizer.

Fertigation - a method of applying commercial fertilizers with irrigation water to fertilize land or plants.

Fertilizer component - a commercial fertilizer ingredient containing one or more recognized plant nutrients which is incorporated in the commercial fertilizer for its plant nutrient value.

Fertilizer material - a commercial fertilizer that either:
a) contains important quantities of no more than one of the primary plant nutrients: nitrogen, phosphate, or potash;
b) has eighty-five percent or more of its plant nutrient content present in the form of a single chemical compound; or
c) is derived from a plant or animal residue or byproduct or natural material deposit that has been processed in such a way that its content of plant nutrients has not been materially changed except by purification and concentration.

Grade - the percentage of total nitrogen, available phosphoric acid, and soluble potash stated in

whole numbers in the same terms, order, and percentages as in the "guaranteed analysis," unless otherwise allowed by a rule adopted by the department. Specialty fertilizers may be guaranteed in fractional units of less than 1% of total nitrogen, available phosphorus or phosphoric acid, and soluble potassium or potash. Fertilizer materials, bone meal, manures, and similar materials may be guaranteed in fractional units.

Guaranteed analysis - (a) Until the director prescribes an alternative form of "guaranteed analysis" by rule, the term "guaranteed analysis" shall mean the minimum percentage of plant nutrients claimed in the following order and form:

Total nitrogen (N)	percent
Available phosphoric acid (P_20_5)	percent
Soluble potash (K_20)	percent

The percentage shall be stated in whole numbers unless otherwise allowed by the department by rule.
The "guaranteed analysis" may also include elemental guarantees for phosphorus (P) and potassium (K).
(b) For unacidulated mineral phosphatic material and basic slag, bone, tankage, and other organic phosphatic materials, the total phosphoric acid or degree of fineness may also be guaranteed.
(c) Guarantees for plant nutrients other than nitrogen, phosphorus, and potassium shall be as allowed or required by rule of the department. The guarantees for such other nutrients shall be expressed in the form of the element. (d) The guaranteed analysis for limes shall include the percentage of calcium or magnesium expressed as their carbonate; the calcium carbonate equivalent as determined by methods prescribed by the association of official analytical chemists; and the minimum percentage of material that will pass respectively a one hundred mesh, sixty mesh, and ten mesh sieve. The mesh size declaration may also include the percentage of material that will pass additional mesh sizes. (e) In commercial fertilizer, the principal constituent of which is calcium sulfate (gypsum), the percentage of calcium sulfate ($CaS0_4.2H_20$) shall be given along with the percentage of total sulfur.

Imported fertilizer - any fertilizer distributed into Washington from any other state, province, or country.

Label - the display of all written, printed, or graphic matter, upon the immediate container, or a statement accompanying a fertilizer.

Labeling - includes all written, printed, or graphic matter, upon or accompanying a commercial fertilizer, or advertisement, brochures, posters, television, and radio announcements used in promoting the sale of such fertilizer.

Licensee - the person who receives a license to distribute a commercial fertilizer under the provisions of this chapter.

Lime - a substance or a mixture of substances, the principal constituent of which is calcium or magnesium carbonate, hydroxide, or oxide, singly or combined.

Manipulation - processed or treated in any manner, including drying to a moisture content less than thirty percent.

Manufacture - to compound, produce, granulate, mix, blend, repackage, or otherwise alter the composition of fertilizer materials.

Maximum acceptable cumulative metals additions to soil - the amount of total metals that can be added to soil over a forty-five-year period of time without exceeding the Canadian standards which have been adopted in RCW 15.54.800(3) as Washington standards for metals.

Maximum application rate - the maximum amount of commercial fertilizer expressed by weight (such as: pounds, ounces, kilograms, or milligrams) or volume (such as: gallons, quarts, fluid ounces, liters, or milliliters) to be applied to an area of a specified size (such as: acres, square feet, hectares, or square meters) in a period of time stated in years.

Micronutrients - are: Boron; chlorine; cobalt; copper; iron; manganese; molybdenum; sodium; and zinc.

Micronutrient fertilizer - a produced or imported commercial fertilizer that contains commercially valuable concentrations of micronutrients but does not contain commercially valuable concentrations of nitrogen, phosphoric acid, available phosphorus, potash, calcium, magnesium, or sulfur.

Natural base - a mixed fertilizer where more than half of the fertilizer materials is natural and where more than half of the sum of the guaranteed primary nutrient percentages is derived from natural materials.

Official sample - a sample of commercial fertilizer taken by the department and designated as "official" by the department.

Organic - a material containing carbon and one or more elements (other than hydrogen and oxygen) essential for plant growth. When the term "organic" is utilized in the label or labeling of any commercial fertilizer, it shall be qualified as either "**synthetic organic**" or "**natural organic**," with the percentage of each specified.

> **Natural organic -** a material derived from either plant or animal products containing carbon and one or more elements (other than hydrogen and oxygen) essential for plant growth.
>
> **Synthetic organic -** a material that is manufactured chemically (by synthesis) from its elements and other chemicals, containing carbon and one or more elements (other than hydrogen and oxygen) essential for plant growth.

Organic base fertilizer - a mixed fertilizer where more than half of the fertilizer materials is organic and where more than half of the sum of the guaranteed primary nutrient percentages is derived from organic materials.

Organic waste-derived material - grass clippings, leaves, weeds, bark, plantings, prunings, and other vegetative wastes, uncontaminated wood waste from logging and milling operations, food wastes, food processing wastes, and materials derived from these wastes through composting. "Organic waste-derived material" does not include products that include biosolids.

Packaged fertilizer - commercial fertilizers, either agricultural or specialty, distributed in non-bulk form.

Person- an individual, firm, brokerage, partnership, corporation, company, society, or association.

Percent or percentage - the percentage by weight.

Produce - to compound or fabricate a commercial fertilizer through a physical or chemical process, or through mining. "Produce" does not include mixing, blending, or repackaging commercial fertilizer products.

Registrant - the person who registers commercial fertilizer under the provisions of this chapter.

Specialty fertilizer - a commercial fertilizer distributed primarily for non-farm use, such as, but not limited to, use on home gardens, lawns, shrubbery, flowers, golf courses, municipal parks, cemeteries, greenhouses, and nurseries.

Ton- the net weight of two thousand pounds avoirdupois.

Total nutrients - the sum of the percentages of total nitrogen, available phosphoric acid, and soluble potash as guaranteed and as determined by analysis.

Washington State Application Rate - is calculated by using an averaging period of up to four consecutive years that incorporates agronomic rates that are representative of soil, crop rotation, and climatic conditions in Washington State.

Waste-derived fertilizer - a commercial fertilizer that is derived in whole or in part from solid waste as defined in chapter 70.95 or 70.105 RCW, or rules adopted there under, but does not include fertilizers derived from biosolids or biosolids products regulated under chapter 70.95J RCW or wastewaters regulated under chapter 90.48 RCW.