“Fundamentals of Nutrient Management”
A Pre-Certification Training Course
June 17-18, 2013 - Annapolis, MD

“MARYLAND NUTRIENT MANAGEMENT LAW & REGULATIONS”

Renato M. Cuizon
Regulatory & Compliance Coordinator
cuizonrm@mda.state.md.us
MARYLAND NUTRIENT MANAGEMENT PROGRAM TIMELINE

1989 – Initiation of Program

1992 – Certification & Licensing

1998 - Water Quality Improvement Act Passage

2000 – Regulations Finalized

2003 – Making Nutrient Management Work

2004 – Nutrient Management Law Amended

2005 – Nutrient Management Regulations Revised

Dec. 2009 – MDE General Permit for AFO Took Effect
MARYLAND NUTRIENT MANAGEMENT REGULATIONS
Revised – March 2005
Authority: Agriculture Article, §8-801--- §8-806

COMAR 15.20.04 - Certification & Licensing
COMAR 15.20.05 - Manure Transportation Project
COMAR 15.20.06 - Fertilizer Application Requirements
COMAR 15.20.07 - Ag. Operations NM Plan Req.
COMAR 15.20.08 - NM Plan Content & Criteria
COMAR 15.20.04 – CERTIFICATION & LICENSING

.01 SCOPE

- Management of Essential Primary Nutrients (N-P-K)
- Optimum Crop Production
- Water Quality Protection

CERTIFICATION

LICENSING
COMAR 15.20.04 – CERTIFICATION & LICENSING

.02 DEFINITIONS

Please refer to the regulations for definition of terms.

i.e. “Crop Nutrient Needs” means the primary nutrient requirements of a crop determined as pounds of ...

- (see pages 1, 12, 16, & 24 to 27)
Individual may not act as certified consultant unless certified by MDA

A person may not engage in the business of writing plans unless licensed by MDA

- Certified Operators can write their own plans
- No license Required
COMAR 15.20.04 – CERTIFICATION & LICENSING
.04 Certification Application & Examination Requirement

Submit Application Form to MDA,
• At least 15 days before the exam

Proof of Education and Experience
• Degree in agricultural related field, and
• One year practical experience in NM planning
• Or combination of both acceptable to MDA

Appropriate fee - $50
• Except for govt. agency
• One time payment for farmers
COMAR 15.20.04 – CERTIFICATION & LICENSING
.05 Examination

Offer Exam once a year, announce 30 days before

Provide Training or List of Study Materials

Allow for Retake
• Re-submit application 15 days before the exam
• Pays appropriate fee

Nutrient Management Consultants

Farm Operators

Maryland Department of Agriculture
COMAR 15.20.04 – CERTIFICATION & LICENSING

06 Certification

**Nutrient Management Consultant**
- Satisfy MDA Education and Experience
- Training Requirements
- Passes MDA Approved Examination

**Supplemental Certification for Special Op.**
- Meets Additional Educational and Related Experience
COMAR 15.20.04 – CERTIFICATION & LICENSING

.07 Employment Requirement

• Consultant must be licensed or employed by other licensed company/person if engage in the business of writing plans

• Certified consultants (operators/farmers) writing plans ONLY for their own operation
  – No need for a BUSINESS license
**COMAR 15.20.04 – CERTIFICATION & LICENSING**

.08 Certification Renewal

- Issued for 1 year and renewed for 3-yr. term
  - Submit Renewal Application
  - Renewal fee $150 (except for govt. agency cons. and farmers)
  - 12 hours of CEU every 3 years for consultants
  - 6 hours of CEU every 3 years for certified operators
  - Comply with Plan Preparation Requirements
  - Comply with reporting and record keeping

- Failure to Renew on time
  - May Retake Exam
• Submit MDA Application form
• Pay appropriate fee, except for govt. agency
  – $100 for corporation/company
  – $50 for individual
• Have at least ONE certified consultant
• Agree to comply with chapter requirements
COMAR 15.20.04 – CERTIFICATION & LICENSING
.10 License Renewal

• Issued for one year (initial)
• Renewal every three years
• Pay appropriate fee
  – $150 for 3 year period
• Maintain at least one active consultant
• Comply with requirements of the chapter
COMAR 15.20.04 – CERTIFICATION & LICENSING

.11 Record Keeping and Reporting Requirements

License Holder

Submit Annual Report by September 30th of each year from July 1 – June 30 of Previous year

Keep Copies of NMP for 5 years

Made available to MDA upon request
COMAR 15.20.04 – CERTIFICATION & LICENSING

.12 Denial, Suspension or Revocation

- Misleading Information on Certificate & License Application
- Misleading, false or fraudulent report
- Offering or preparing plans w/o certificate and license
- Preparing plans not meeting state’s criteria
- No certified consultant working
- Failure to report or allow MDA access for inspection
- Failure to meet CEU’s

Opportunity for a Hearing
COMAR 15.20.04 – CERTIFICATION & LICENSING
.13 Reinstatement of Certificate or License after Disciplinary Action

Denied, Suspended or Revoked Certificate May Retake the Exam

NM EXAM
NOT COVERED IN THE EXAM

But Be Familiar....
COMAR 15.20.06 – NUTRIENT & COMMERCIAL FERTILIZER APPLICATION REQUIREMENTS

.01 SCOPE

- Have an applicator voucher, (valid for 3 yrs)
- Be a certified consultant or certified farm operator
- Hire a certified consultant
- Apply Nutrients according plan

>10 acres of AG-LAND owned or managed

- Follow UM’s Nutrient Recommendations
- Will need applicator voucher (NEW)

10 or more acres of NON-AG land or state-owned land
Ag-land Commercial Applicator

- Records of being certified or working under the supervision
- Keep 3 yrs. Application Records
  - Type & amount of nutrients applied
  - Crop acreage receiving nutrients
  - Location & timing of application
  - Analysis of nutrients applied
.05 Record Keeping & Reporting Requirements (cont.)

**Non Ag-land** Commercial Applicator

- Keep 3 yrs. Records
  - Amount of nutrients applied
  - Location & timing of application
  - Nutrient content of fertilizer applied

Application records shall be available to MDA upon request
.06 Denial, Suspension or Revocation of Certificate or Voucher

Subject for denial, suspension & revocations

Misleading, false, or fraudulent information

Failure to meet continuing education

Failure to apply, or to supervise nutrient applications

Suspension/Revocation Process

Hearing opportunity with MDA Secretary
.07 Assessment of Civil Penalty for non-ag applicators

- Up to $1,000 for first violation
- Up to $2,000 for each subsequent violation, Not to exceed $10,000

Willfulness & extent of violations
COMAR 15.20.07 – AG. OPERATION NMP REQUIREMENTS

.01 SCOPE

Farm or agricultural operator to develop and implement N-based and/or P-based plans by certain deadlines

Ag Operation

- Gross annual income of $2,500 or more
- Or have 8 or more animal units (1000 lbs live wt. = 1 AU)
• Chemical Fertilizers
  ○ N & P based by December 31, 2001
  ○ Implement by December 31, 2002

• Biosolids or Animal Manure
  ○ N based by December 31, 2001
  ○ Implement by December 31, 2002
  ○ N & P based by July 1, 2004
  ○ Implement by July 1, 2005

• Combination of Chemical & Biosolids/Manure
  ○ Min. 10 acres or 50% of operation
  ○ Use deadlines for biosolids/manure

**DEADLINES PASSED**
COMAR 15.20.07 – AG. OPERATIONS NMP REQUIREMENTS
For more information - Refer to Regulations

– NMP Plan Implementation Requirements
– Record Keeping and Reporting
– Assessment of Penalty
COMAR 15.20.08 – NM PLAN CONTENT AND CRITERIA
.04 Required Plan Content

- Plan ID (Reporting Form)
- Map or Aerial Photograph
- Soil Test Results
- Animal Information & Manure Analysis (if appl.)
- Field or Management Unit Information
- Summary of Nutrient Recommendations
- Plan Maintenance Information
COMAR 15.20.08 – NM PLAN CONTENT AND CRITERIA
.05 Required Plan Recommendations

**Based on UM Crop Nutrient Recommendations or Alternative Standards**

- **Expected Crop Yield or Production Goal**
  - Avg. of 3 highest yields from latest 5 consecutive yrs.
  - >5 years, use avg 60% of highest yielding years
  - No yield records, use soil productivity info. or yields from similar nearby fields or mgt. units

- **Limiting Nutrients**
  - P, <150 FIV, N Based
  - >150 FIV use P Site Index, N or P Based
COMAR 15.20.08 – NM PLAN CONTENT AND CRITERIA
Required Plan Recommendations Cont...

Natural Organic Fertilizer
- Analysis at least once a year using acceptable sampling method
- Must be done as close to nutrient application as possible
- Baseline or book value can be used

Method of Nutrients Application
- Minimize N & P losses
- Techniques for accurate and uniform application
- Split N application for soils with high leaching potential

Timing of Nutrients Application
- Close to plant nutrient uptake
- Consistent with MDA’s Manual

Manure Management if applicable
- Stockpiling and handling
- Storage
### Summary of Plant Production
- Listing of plants, # of plants grown by categories and sizes
- Total growing area

### Summary of Nutrient Recommendations
- Listing of all nutrient sources and quantities to be applied
- Description of application methods

### Environmental Risk Assessment
- Risk assessment of nutrient losses to surface water provided in NM Manual Section II-D

### General Management Recommendations
- Equipment calibration, timing and other management to reduce nutrient losses
<table>
<thead>
<tr>
<th>Specific Management Recommendations</th>
<th>Grouping plants, monitoring water &amp; nutrient needs, reduce runoff/leachate, and water containment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program for Monitoring Runoff (if risk &gt;0)</td>
<td>Methods, frequency, &amp; locations</td>
</tr>
</tbody>
</table>
| Plan Maintenance | Length of time the plan is effective  
Change in area > 20% or 5 acres  
Substantial change in production plan or method |
Basis of Nutrient Recommendations

- Label recommendations on fertilizer use
- UM recommendations
- Recommendations from other state’s univ.
- Research data from other accredited univ.
- General nutrition guidelines for similar plants
- Any other general growing practices on similar growing conditions
COMAR 15.20.08 – NM PLAN CONTENT AND CRITERIA
NM Plan Recommendations for Container or Out-of-Ground Ag. Production Cont...

**Management Recommendations**
- Goal is 0 or low risk
- BMP’s to reduce risk
- Timing & Application methods
- Operators training on minimizing nutrient losses

**Recommendations for Monitoring Runoff, if risk >0**
- Sampling frequency
  - Low risk, 2X growing season
  - Medium or High risk, monthly
- Sampling location
  - Next to growing areas
- Sampling Methods
  - Nutrient Meters or EC
New Regulations took effect on October 15, 2012
Phased In Implementation

• Effective Immediately
  – For plan (one year or multi year) written before Oct. 15, 2012, needs to be updated to address new regulatory requirements when it expires or need plan adjustments

• Beginning Spring 2013
  – Manure, biosolids and other organic sources must be injected or incorporated within 48 hrs. of application except for spray irrigation, permanent pastures, hay fields and HEL
New Regulations took effect on October 15, 2012
Phased In Implementation

• Beginning Fall 2013
  – Fall application of N if prohibited on small grains if fall nitrate test is >10 ppm for wheat or 15 ppm for barley
  – Cover crops must be planted when organic sources are applied in the fall
  – Fields with 150 FIV or greater needs to use new PMT after July 1, 2013
New Regulations took effect on October 15, 2012
Phased In Implementation

• Beginning January 1, 2014
  – Needs 35 ft. setback for fertilizer applications adjacent to surface waters and streams. Reduced to 10 ft. for direct application
  – Livestock access to streams or surface waters is restricted by a min. of 10 ft.
New Regulations took effect on October 15, 2012
Phased In Implementation

• Beginning July 1, 2016
  – Nutrient applications are prohibited from Nov 1 to March 1 for Eastern Shore farmers and Nov 15 to March 1 for Western Shore Farmers. Applies to farmers with 50 or more AU.

• Beginning March 1, 2020
  – Farmers with less than 50 AU are prohibited from applying nutrients from Nov. 1 to Mar. 1 for Eastern shore and from Nov. 15 to March 1 on Western shore.
THE TEAM PARTNERS

GOVERNMENT AGENCIES

ENVIRONMENTAL ORGANIZATIONS, PUBLIC/CONSUMERS

FARMERS/PRODUCERS, FARM ORGANIZATIONS

UNIVERSITIES

PRIVATE SECTOR
MARYLAND NM EXAM
August 2, 2013, 9 to 11 am

Good Luck!