A Partnership Program to Reduce Fertilizer & Pesticide Runoff through Public Education

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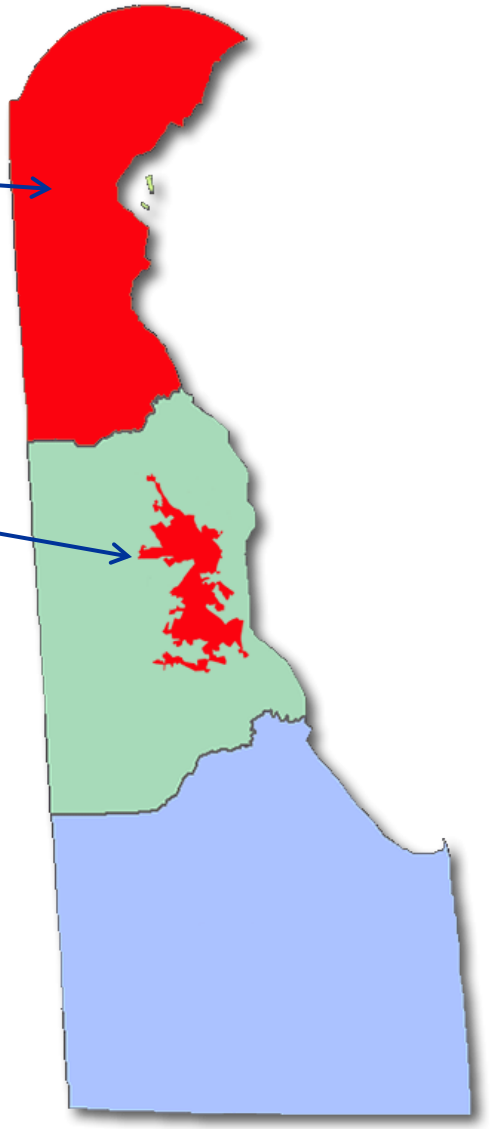
DelDOT's MS4 Permits

- Phase I Permit
  - New Castle Co. (co-permittees)
  - 2001, reissued May 2013
- Phase II Permit
  - Dover urbanized area, 2003
  - Reissued permit will include other areas
- TMDLs throughout the state for nutrients & bacteria



Public Education Permit Element

*…a program to promote, publicize, and facilitate the **proper use, application, and disposal of pesticides, herbicides, and fertilizers** by commercial and private applicators and distributors."*

- Existing program - changing public behavior???
- Not adequately addressing the requirement to educate commercial applicators.
- New approach needed that would include: (1) a more targeted campaign, and (2) participation of other partner organizations and stakeholders in the state.

Americans love their lawns,
green and weed-free!

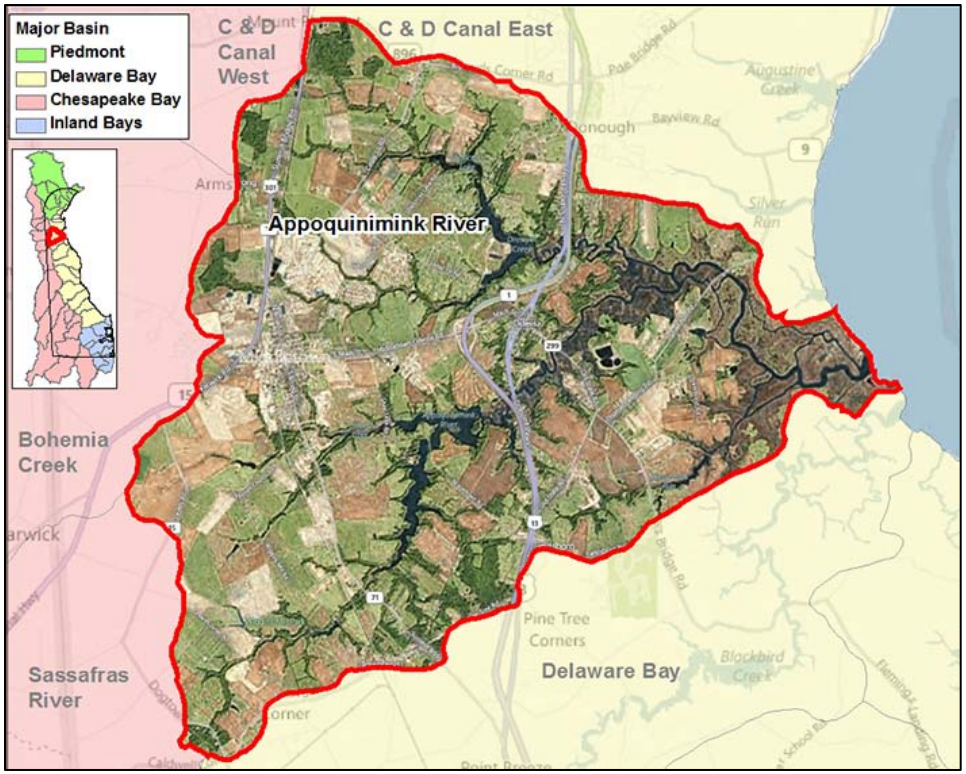
- US lawn care is a multi-billion $ industry
- Majority of homeowners fertilize their lawns

AND YET…

- Fertilization significant nutrient source in urban watersheds
- Many watersheds have mandates to reduce N & P

Appoquinimink Watershed Survey, 2006

- Majority apply fertilizers
- Most apply 2 times per year
- Many apply 3-6 times per year



www.ChesapeakeClub.org

Organizing Partners

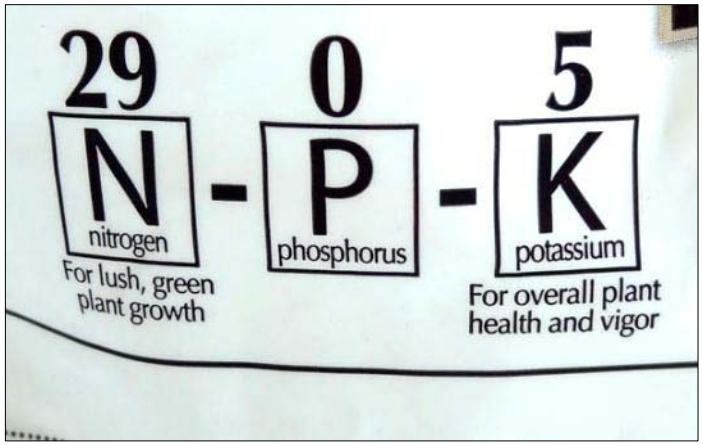
- Delaware Dept. of Transportation
- Delaware Dept. of Natural Resources & Environmental Control (DNREC)
- Appoquinimink River Association
- DDA Nutrient Management Commission
- New Castle Conservation District
- USDA NRCS
- Univ. of Delaware, Water Resources Agency
- Univ. of Delaware Cooperative Extension
- Delaware Nursery & Landscape Association
- Commercial Lawn Care reps

Delaware Livable Lawns

Two-phased approach:

1) Certification/incentive program for commercial applicators

2) Education/outreach to Delaware residents



Initial funding provided by DelDOT

Commercial Applicators Focus Group

- Held at 2010 DE Ornamentals & Turf Expo
- Written survey, facilitated small groups
- Asked about current practices
- Reviewed proposed requirements
- Discussed incentives

Certification of Applicators

- Keep fertilizer/clippings off impervious surfaces
- Leave behind educational lawn care material
- Conduct soil tests
- Apply nutrients according to guidelines
- Calibrate spreaders & record lbs applied
- Certified Nutrient Management Handler
- Submit annual reports
- Free listings, advertising, logos, educational materials

Nutrient Application Requirements

Turfgrass Species	Maximum nitrogen allowed over entire year	Recommended application rates and timings when using fertilizer containing <35% SAN[1]	Recommended application rates and timings when using fertilizer containing ≥35% SAN[1]
Cool Season Grasses (e.g., Tall Fescue, Perennial Rye, Fine Fescue, Kentucky Bluegrass)	3 lbs/1000 ft^2	March or April: 0.5 lbs/1000 ft^2 Sept: 1 lb/1000 ft^2 Oct: 1 lb/1000 ft^2 Nov: 0.5 lb/1000 ft^2	August: 1.5 lbs/1000 ft^2 October: 1.5 lbs/1000 ft^2
Warm Season Grasses (e.g., Bermudagrass, Zoysiagrass)	3 lbs/1000 ft^2	May: 1 lb/1000 ft^2 June: 1 lb/1000 sq ft July or August: 1 lb/1000 ft^2	May: 1.5 lbs/1000 ft^2 July: 1.5 lbs/1000 ft^2

[1]SAN = Slowly Available Nitrogen

Limitation On Use of Phosphorus: If soil test results show phosphorus levels above optimum, do not apply phosphorus. If phosphorus is recommended by a soil test, apply no more than 1 lb/1000 ft^2 per application.

Cold Weather Application Restrictions: Fertilizer application is prohibited between December 7 and February 15.

Tired of fertilizing your own lawn?
Check out one of these Livable Lawns certified applicators who can get you the lawn you want while still protecting our waterways!
Matt's Landscaping
Mowing ~ Leaf Removal
Mulching ~ Pruning
Matt Stead
393 Saint Regis Drive
Newark, DE 19711
mstead48@gmail.com
302.229-8766
~ Licensed and Insured ~
CERTIFIED and helping to save Delaware's rivers and bays one lawn at a time!
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and Ornamental Shrub Care
Jack Layton
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Jack@laytonslawns.com
302.992.0115
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melvinslawnco@verizon.net
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Gabriel Clouser, Operations Mgr.
41 N. Cliffe Drive
Wilmington, DE 19809
(302)792-2201
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Website: www.finolandco.com
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Richard E. Williams
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rlservices4747@comcast.net
www.randlirrigation.com
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Tom Buck
Aspen eco Green
18766 John J. Williams Hwy, Unit 4
Rehoboth Beach, DE 19971
Tom@AspenEcoGreen.com
302-745-5155

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2
3
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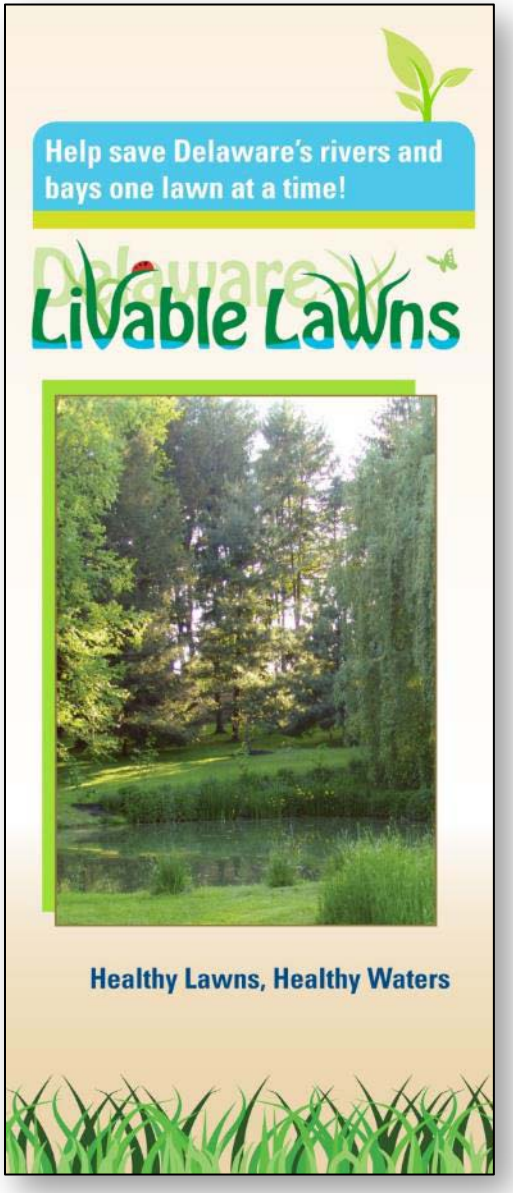
Delaware Livable Lawns
Mowing to the proper height
keeps your grass healthy!
Best Mowing
Height
2.5" to 3.5"
Saving Delaware's Rivers and Bays:
ONE LAWN AT A TIME!
www.DelawareLivableLawns.org

USE FERTILIZER RESPONSIBLY
Fertilizer is for Fall.
Test your soil first to see if you need to fertilize.
Recycle grass clippings.
LiVable LaWns
www.DelawareLivableLawns.org

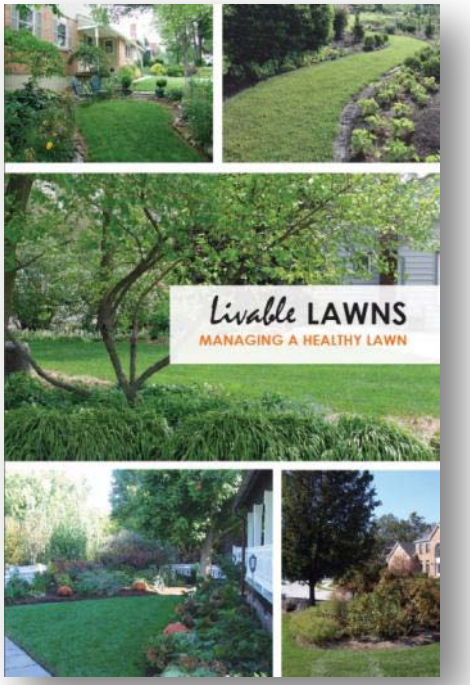

Help save Delaware's rivers and bays one lawn at a time!
Delaware
LiVable LaWns
Healthy Lawns, Healthy Waters

Phase II – Outreach to Residents

- Expand awareness of issues
- Promote certified companies
- Provide education and incentives to those who care for their own lawns
- Focus message on:
  - *Fertilize in fall*
  - *Use low-P or P-free products*
  - *Use recommended N amounts*

Phase II – Outreach to Residents

- Website
- Videos
- Booklets, brochures, tip cards
- Newspaper ads & articles
- Email newsletter
- Social media
- Workshops & events

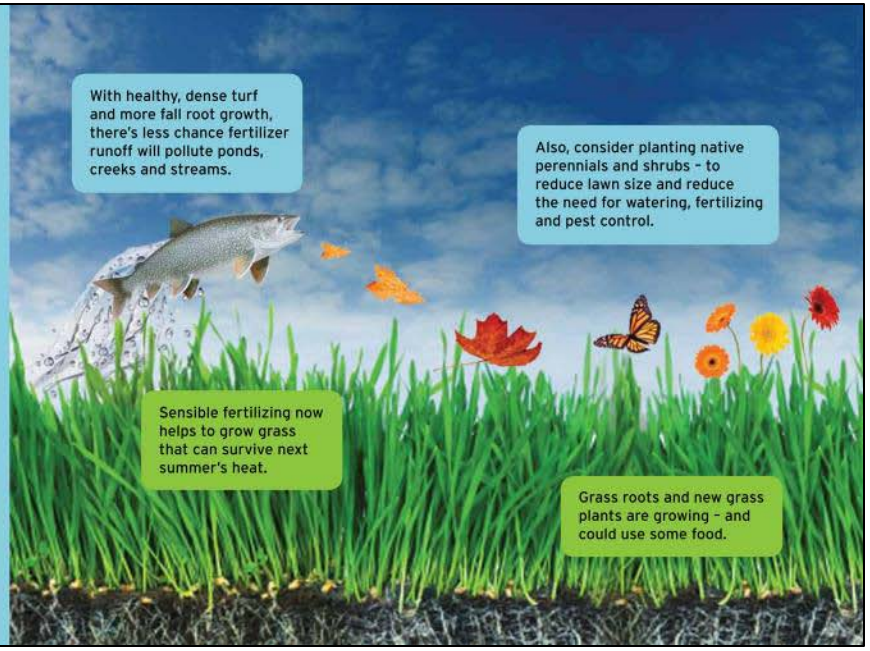


Fertilize in fall...feed the roots for spring!

Better roots, more shoots!

For more information, on creating a sustainable lawn and garden, visit
www.delawarelivablelawns.com

Delaware Livable Lawns



- Lots of fertilizer in spring means more frequent mowing – and grass that's less likely to survive a hot, dry summer.
- Spring fertilizer promotes weeds and diseases leaving bare patches and making fertilizer more likely to run off into ponds, streams and rivers.

Spring fertilizer encourages more tender shoots, not deep, sturdy roots.

- Consider reducing your lawn's size by planting more native shrubs and flowers. (You'll reduce the need for fertilizing, watering and pest control, too!)

For more information, on creating a sustainable lawn and garden, visit
www.delawarelivablelawns.com

Delaware Livable Lawns

Delaware Livable Lawns Practices

Leave grass clippings on your lawn.

Include more than just grass in your landscape.

Verify that your lawn needs fertilizer by testing your soil before application.

Apply fertilizer according to directions.

Be sure to sweep excess fertilizer and lawn clippings off your sidewalks and driveways.

Leave fertilization until the fall.

Establish a no-mow buffer around waterways.

Fertilizer Recommendations:

Turfgrass catagories	Cool season grasses	Warm season grasses
Examples	tall fescue, perennial ryegrass, fine fescue, Kentucky bluegrass	bermudagrass, zoysiagrass
Total N/year	1.5-3 lbs N/1000 square feet	
Rates and dates with less than 35% slowly available N (in lbs N/1000 sq. ft.)	March/April: 0.5 lb * Sept: 1 lb Oct: 1 lb Nov: 0.5 lb	May: 1 lb June: 1 lb July/Aug:1 lb
Rates and dates with 35% or more slowly available N (in lbs N/1000 sq. ft.)	September: 2 lb or August: 1.5 lb October: 1.5 lb	May: 1.5 lb July: 1.5 lb

* Spring fertilization is optional and only used to get quick spring green up.

Monthly Garden Calendar

January—Plan plantings for the upcoming year.

February—Prune trees to reshape and remove crossing or rubbing branches.

March—Cut back perennials. Transplant or plant new trees and shrubs. Spread yard waste compost on beds to conserve water and reduce weeds.

April—Apply preemergent herbicide to lawn if you had a crabgrass problem last year. Apply a small amount of fertilizer for green up. Sharpen your mower blade. Plant perennials.

May—Plant annuals in mid-May. Move houseplants outdoors to shady location. Cut your lawn frequently enough to return clippings to the lawn.

June—Remove flower heads from flowering plants to prolong bloom. Sharpen your mower blade.

July—Keep newly planted trees and shrubs watered by soaking thoroughly once a week. Keep the garden weeded. Increase the mowing height of your lawn.

August—Do not let weeds go to seed. Reseed or renovate lawns in mid-late August.

September—Plant perennials, trees and shrubs. Fertilize your lawn. Core aerate your lawn.

October—Fertilize your lawn if necessary. Move and divide crowded perennials. Plant spring-blooming bulbs.

November—Clean up the garden and put yard waste in the compost pile. Rake leaves from lawn areas, shred and spread on beds.

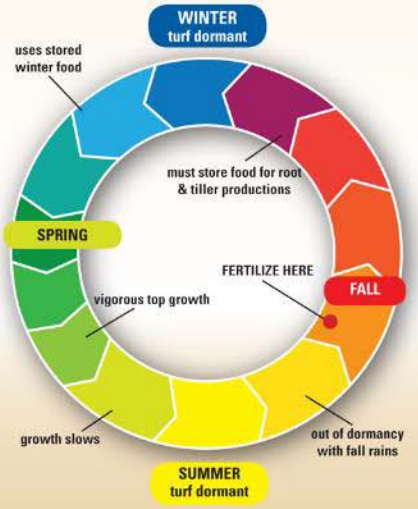
December—Winterize lawn mowers and other equipment.

Why fertilize in the fall?

In the fall, grass grows primarily roots and new grass plants, so fall fertilization results in denser, healthier, more deeply rooted lawns.

In the spring, grass puts its energy into growing leaves. When you fertilize in the spring, you get quick green up, but you also have to cut your lawn more frequently.

Look at the diagram below to see why fall is best.



What about organic vs. synthetic?

Lots of people think organic products are good for your lawn and synthetic products are bad. It is just not that simple. Organic matter tilled into your soil to improve soil structure—like composted yard waste or mushroom soil—is great for improving soil quality and plant growth. But organic fertilizers are not necessarily better for your lawn.

The real issue is how readily available are the nutrients. So, for lawn fertilization, it is best to think in terms of quick release nitrogen and slow release nitrogen. Some organic products are quick release (fresh poultry manure) and some are slow (composted cow manure). Some synthetic products are quick release (urea) and some are slow (sulfur coated urea). Slow release fertilizer may be more expensive, but it allows you to fertilize less frequently and is safer to use when rain is predicted. So select the right fertilizer for your lawn based on the timing and the amount you want to apply.

Quick release nitrogen

- ❑ Water soluble
- ❑ Available immediately
- ❑ May leach
- ❑ Usually inexpensive

Slow release nitrogen

- ❑ Water insoluble (variety of release mechanisms)
- ❑ Released over time
- ❑ Rarely leach
- ❑ Usually more expensive

www.DelawareLivableLawns.org

Delaware State Fair

- Live plantings to demonstrate sustainable lawn and garden design
- Examples of native plants for Delaware

"Phase III" – Expanding the Brand

- Targeted social marketing campaigns; more certified applicators
- Engage other stakeholders watershed/estuary programs and leverage additional funding
- Homeowner incentives – e.g. free soil tests and native plants for certifying your lawn
- Evaluate effectiveness

Livable Lawns Homeowner Incentive Program

Step 1:

Requirement: Sign on to our Healthy Lawn Statement

Incentive: Free Soil Test Kit

Step 2:

Requirement: Submit Fertilizer Use Information Within Livable Lawns Guidelines

Incentive: $50 Voucher for Free Native Plants

Livable Lawns Homeowner Incentive Program

Congratulations!

By agreeing to make your lawn a LIVABLE LAWN, you are now receiving this free certificate! This certificate is worth up to $50 to spend on native perennials, shrubs or trees as determined by the Delaware Livable Lawns Program at participating retailers. **Voucher must be redeemed by June 1, 2015 at one of the following participating retailers.**

Recipient's Name and Date

Official Signature of Delaware Livable Lawns

Participating Locations:

Gateway Garden Center – 7277 Lancaster Pike, Hockessin
Countryside Nursery & Garden Center – 1604 Pulaski Highway, Newark
Old Farmhouse Nursery – 525 Black Diamond Road, Smyrna
Ronny's Garden World – 5580 Dupont Highway, Smyrna
East Coast Garden Center – 30366 Cordrey Road, Millsboro
Garden Shack Farm – 19884 Beaver Dam Road, Lewes

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Coupon Verification Number -

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