

Is it Time to Revise the Expert Panel on Urban Nutrient Management?



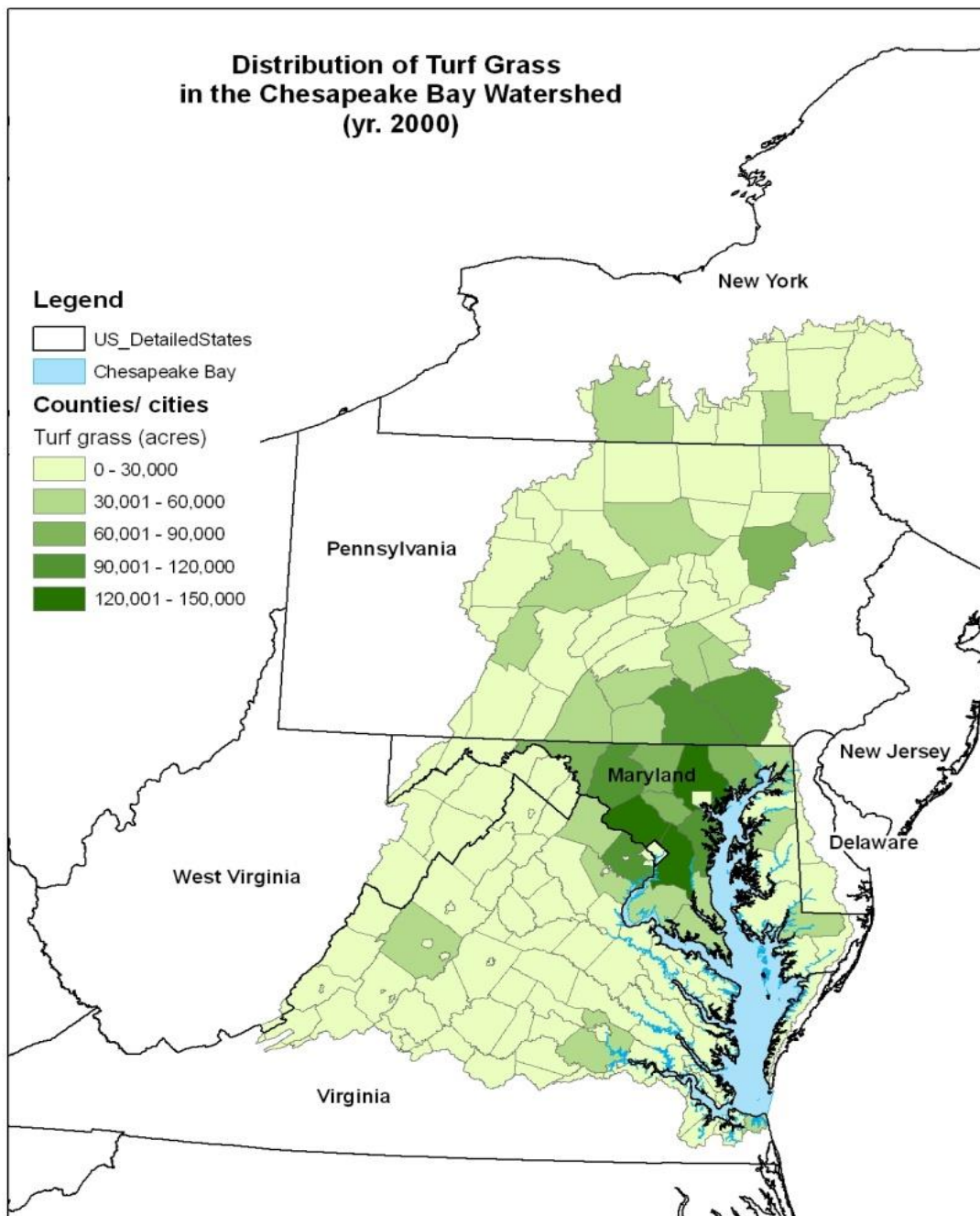
Urban Stormwater Work Group Discussion

Tuesday, January 18, 2022

Background/History of Expert Panel

- Most research reviewed was **2010** or earlier
- Panel launched in **2011** and approved in early **2013**
- State-wide fertilizer ban credit expired in **2015, to be replaced by valid state-wide data**
- Urban fertilizer inputs were estimated based on AAPFCO non-farm fertilizer statistics in **2016**
- UNM inputs and urban nutrient dynamics revised as Phase 6 model replaces Phase 5.3.2 in **2017**
- **2017-2022** -Not much use of UNM credits (beyond VA and MD)

**Distribution of Turf Grass
in the Chesapeake Bay Watershed
(yr. 2000)**



2000 Data
from EPR
Report

Continued
Growth in Turf
Acres Since
Then

UNM: A Promising Practice that Has Largely Been Abandoned

Comparison of Acres of Urban Pervious Areas and Anticipated Acres Under UNM by 2025, For Each Bay State

State	Urban Pervious Area ¹	2025 Urban Nutrient Management ²
	Acres	
Delaware	36,481	34,584
District of Columbia	17,206	42,240
Maryland	990,291	555,575
New York	170,716	170,654
Pennsylvania	1,052,558	311,154
Virginia	1,195,567	517,058
West Virginia	88,218	347
TOTAL	3,551,037	1,631,612

THIS TABLE WAS IN THE ORIGINAL EXPERT PANEL REPORT

Actual UNM Bay State Implementation as of 2020 (For Nitrogen)

DE	143.95
Nutrient Management Plan	143.95
MD	751,200.00
Nutrient Management Maryland Commercial Applicators	285,000.00
Nutrient Management Maryland Do It Yourself	466,200.00
PA	75.57
Nutrient Management Plan	75.57
VA	40,974.61
Nutrient Management Plan	39,717.54
Nutrient Management Plan High Risk Lawn	21.20
Nutrient Management Plan Low Risk Lawn	1,235.87

From 2019 CAST

Landmark Panel for its Time



- First time in nation that UNM earned a nutrient reduction credit
- Defined ten core practices that constitute UNM
- Identified 12 risk factors that influence higher nutrient export
- Laid out details for reporting, tracking and verification
- Struggled with solving real-world UNM plan delivery issues

Summary of Urban Nutrient Management Credits on Urban Pervious Land

	<i>Urban Nutrient Management Credit</i>
TP	Low risk: 3% High risk: 10% Blended: 4.5%
TN	Low risk: 6% High risk: 20% Blended: 9%

Higher credit proposed for UNM generated by alternative outreach dropped by WQGIT



Summary of P and N Credits for State-wide Fertilizer Legislation on Urban Pervious Land

Nutrient	Statewide with fertilizer legislation	Statewide without fertilizer legislation	Post 2016 State Inputs
TP	25%	20%	Shift to “Actual” Non-Farm Fertilizer Statistics
TN	3% for every 10% decrease in N urban fertilizer input	No State N “Freeloader” Credit	Year to Year state trends hard to explain and don’t match Industry data

MD, VA, DC, NY all Passed Legislation in 8 to 12 years ago

Is it Time to Revisit the UNM Expert Panel?



Possible Charges for New Panel

- Assess current state and future trends in UNM plan crediting in watershed (by state)
- Assess post-2010 new research on P and N dynamics from urban land uses (e.g., impervious cover, pervious cover and urban forest canopy).
- Assess significance of fertilizer N and P inputs relative to other urban nutrient sources
- Determine whether a nutrient credit is appropriate for non-fertilized urban lands
- Re-evaluate all state-wide fertilizer law credits (especially MD)
- Review of new methods to scale up UNM delivery (e.g., certified planners, MS4 outreach, citizen stewardship)

Possible Charges for New Panel (cont.)

- Citizen monitoring: P and N content of lawn fertilizer 10 years after
- Streamline methods for reporting, tracking and verification (CBP, State, SCD and Local)
- Recommend improvements in both urban nutrient application and physical process simulation in Phase 7 Watershed Model
- Use improved land cover data to target hi-risk factors so UNM can be better applied in the watershed
- Determine if credits can be linked to effective outreach, stewardship and behavior change campaigns
- Other ideas?

Non-Farm Fertilizer Statistics

AAPFCO non-farm
fertilizer statistics



No one is satisfied with them, but no other alternatives available yet

No one can clearly explain about how they are actually derived

5 year data lag w/ a lot of unpleasant year to year surprises

Are other regions using better methods to track fertilizer use?

Discussion/Next Steps



- Decide in Feb whether to re-visit UNM
- If so, establish a small ad-hoc group to develop charge for possible UNM panel and recruit new members
- Conduct an initial post-2000 UNM research sweep this Spring