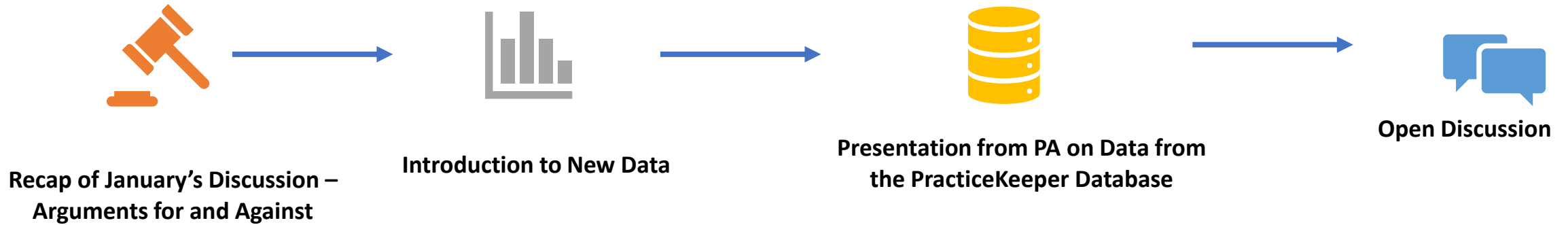


Continued Discussion on Barnyard Runoff Control and Loafing Lot Management



Presented By: Vanessa Van Note, Coordinator, on 2/12/2021

Overview of Today's Discussion



- **Please keep comments/arguments for Barnyard Runoff Control and Loafing Lot Management separate from each other. We will have discussion time for both practices.**
 - If an argument applies to both practices, please mention that the argument is for both practices.

➤ **Goal: Collect enough information to develop a recommendation for these practices.**

Two Options for each practice:

1. Extend the credit duration of the practice from 10 to 15 years. (We can discuss the amount of time in further detail if needed).
2. Keep the credit duration of the practice at 10 years.

Barnyard Runoff Control



Arguments presented at
January's Meeting

Items in **RED** were added
during the January Meeting



Barnyard Runoff Control

Argument to Extend the Credit Duration

- 558 Roof Runoff Structure, a closely related NRCS practice, has a NRCS Practice Lifespan of 15 years.
- States often report gutters (558 Roof Runoff Structure, NRCS lifespan 15 years).



Argument to Keep the Credit Duration at 10 years

- Credit durations were established to be conservative/considerate of the minimum lifespan of related NRCS practices.
- There is a desire to be conservative with the amount of time we allow practices to go without inspection. Other reported practices can be less than 15 years, such as Diversion (10 years).

Barnyard Runoff Control

Argument to Extend the Credit Duration

- CBP AWMS has a credit duration of 15 years. BRC is a supporting practice. -- It is simpler to verify all related/supporting practices at the same time since they can be installed together to support each other. **PA is in favor of 15 years to verify the entire system as a whole.**

Argument to Keep the Credit Duration at 10 years

- The CBP AWMS was established based on **NRCS 313 (Waste Storage Facility)** or **NRCS 359 (Waste Treatment Lagoon)** that have 15-year practice lifespans.



Barnyard Runoff Control

Argument to Extend the Credit Duration

- The practice lifespan of related NRCS practices define a minimum amount of time (years) a practice is expected to be fully functional if proper O&M is performed. The system is designed to outlast the minimum practice lifespan (if maintained properly).

Argument to Keep the Credit Duration at 10 years

- A maximum amount of time that a BRC practice will last (assuming proper maintenance) is *undefined*. Without proper maintenance, the practice is not designed to last the minimum amount of time defined by the practice lifespan.

Barnyard Runoff Control

Argument to Extend the Credit Duration

- Landowners contribute financially to NRCS funded projects = incentive to maintain and retain practice.

Argument to Keep the Credit Duration at 10 years

- Animal numbers can be far in excess what the practice is designed to manage.
- We are unaware of how fast these operations are going.

Barnyard Runoff Control

Argument to Extend the Credit Duration

- Infrastructure is in place and can exceed minimum lifespan.

Argument to Keep the Credit Duration at 10 years

- Infrastructure potentially undermined by new ownership.
- Ex. Amish Farmers in Lancaster Co. Often do not mechanized equipment. Can be simpler to allow runoff to run. (Potentially 8-10 of farms inspected in a county like Lancaster.) We do not know which time window new ownership occurs in on average [10-15 or 15-20 years?].

Barnyard Runoff Control

➤ New Data

Barnyard Runoff Control

Argument to Extend the Credit Duration

- Lined Waterways, which were identified to manage steep slopes, have a NRCS practice lifespan of 15-years.
- Underground outlets were identified as a supporting practice of the Roof Runoff Structure (NRCS Lifespan of 20 years).

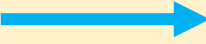

Argument to Keep the Credit Duration at 10 years

- We should consider climate change/increased storm events when determining a practice's longevity in the model.

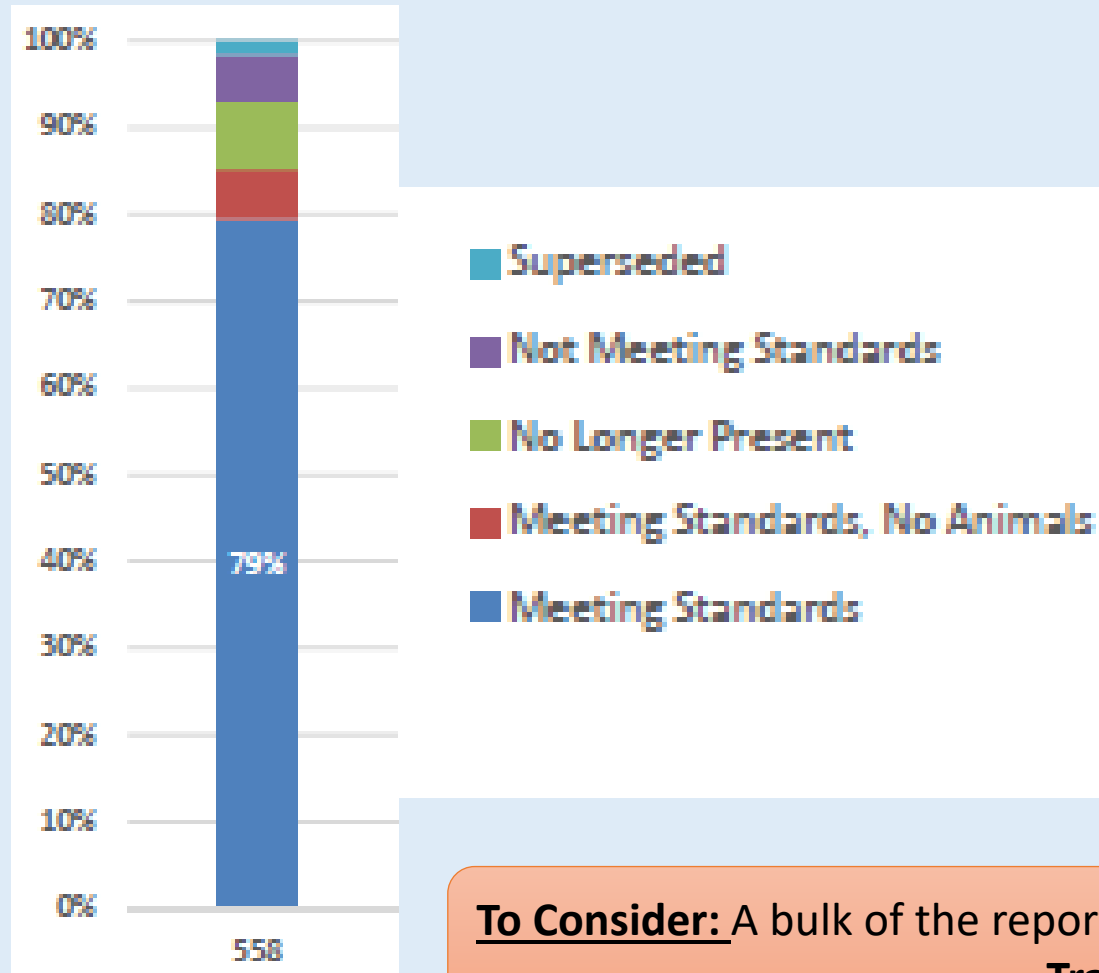
How do states report Barnyard Runoff Control?

- **Animal Trails and Walkways** = 10-year lifespan
 - Reported by PA, VA and WV.
- **Barnyard Runoff Controls** = Cannot locate an NRCS practice by this name.
 - Reported by PA, VA, NY and MD.
- **Roof Runoff Structure** = 15-year NRCS lifespan
 - Reported by PA, VA, WV and DE.
- **Roof Runoff Management** = Cannot locate an NRCS practice by this name
 - Reported by PA, WV and DE.
- **Wastewater Treatment Strip** = 10-year NRCS lifespan
 - Reported by PA.

How do States report Barnyard Runoff Control?

State Practice	Total NEIEN "Successes"	Unit
 Roof Runoff Structure	9,711	System
Roof Runoff Management	8,268	System
Wastewater Treatment Strip	313	Acre
Animal Trails and Walkways	704,838	Feet
 Barnyard Runoff Controls	38,445	System

Updated Maryland Data: 558 Roof Runoff Structure



In Total: 481 Roof Runoff Structures

79% or 380 practices Met the Standards following the Expiration of the Practices' Credit Durations.

To Consider: A bulk of the reported practices in CAST were submitted as **Animal Trails and Walkways**.

Updates from VA and WV on Expired Practice Data

- **VA is currently working to aggregate raw data and perform an analysis.**
 - DCR has accumulated 4800 data points associated with verification of non-agronomic BMPs that have a status, such as “no longer functional” and “BMP verified”, along with field notes.
- **WV was able to aggregate data for AWMS and is checking to see if there is any more data available for BRC and LLM.**
 - Out of 244 *poultry* AWMS, 174 or 71.3% were able to remain in the database.
 - Out of 32 *beef* AWMS structures, 17 or 53.1% were able to remain in the database.

Data from PA's PracticeKeeper Database

- An analysis of the Agriculture Erosion and Sediment Control (Ag E&S) Plan data in PA's PracticeKeeper Database found that many BMPs that translate to CB Barnyard Runoff Control are functioning as intended well past their current credit duration of 10 years, and even past the proposed credit duration of 15 years.
- This information, documented in the PracticeKeeper Database, is entered by conservation district and DEP staff.

Barnyard Runoff Control

- A review of **Animal Trails and Walkways, Diversion, Roof Runoff Structure, Stormwater Runoff Control, Structure for Water Control, and Underground Outlet** indicated **43%** of these BMPs were inspected after the credit duration of the BMP expired.
 - All were functioning as intended at an **average of 9 years past the credit duration expiration date**, or an average age of 19 years old.
- The other 57% were less than 10 years old.
- Finally, as a result of the planning process, this would also include BMPs to address new resource problems as well as replacement BMPs for BMPs that were failing at the time of the inspection.

Open Discussion on Barnyard Runoff Control

Is there enough data to justify extending this
practice from 10 years to 15 years?

Loafing Lot Management



Arguments presented at
January's Meeting

Items in **RED** were added
during the January Meeting



Loafing Lot Management

Argument to Extend the Credit Duration

- CBP AWMS has a credit duration of 15 years. LLM is a supporting practice. It is simpler to verify all related/supporting practices at the same time since they can be installed together to support each other. **PA is in support of verifying an AWMS in its entirety.**

Argument to Keep the Credit Duration at 10 years

- The CBP AWMS was established based on **NRCS 313 (Waste Storage Facility) or NRCS 359 (Waste Treatment Lagoon)** that have 15-year practice lifespans.
- The practices most closely related to **LLM: HUAP, Access Roads, and Trails and Walkways**; have NRCS practice lifespans of 10 years.

Loafing Lot Management

Argument to Extend the Credit Duration

- The practice lifespan of related NRCS practices define a minimum amount of time (years) a practice is expected to be fully functional if proper O&M is performed.

Argument to Keep the Credit Duration at 10 years

- A maximum amount of time that a LLM practice will last (assuming proper maintenance) is *undefined*. . **Without proper maintenance**, the practice is not designed to last the minimum amount of time defined by the practice lifespan.

Loafing Lot Management

Argument to Extend the Credit Duration

- Landowners contribute financially to NRCS funded projects = incentive to maintain and retain practice.

Argument to Keep the Credit Duration at 10 years

- **Funds provided address a specific resource concern.**
- **Animal numbers (an example of a resource concern) can be far in excess what the practice is designed to manage. We are unaware of how fast these operations are going.**

Loafing Lot Management

Argument to Extend the Credit Duration

- Infrastructure is in place and can exceed minimum lifespan.



Argument to Keep the Credit Duration at 10 years

- Infrastructure potentially undermined by new ownership.
- Ex. Amish Farmers in Lancaster Co. Often do not mechanized equipment. Can be simpler to allow runoff to run. (Potentially 8-10 of farms inspected in a county like Lancaster.) We do not know which time window new ownership occurs in on average [10-15 or 15-20 years?].

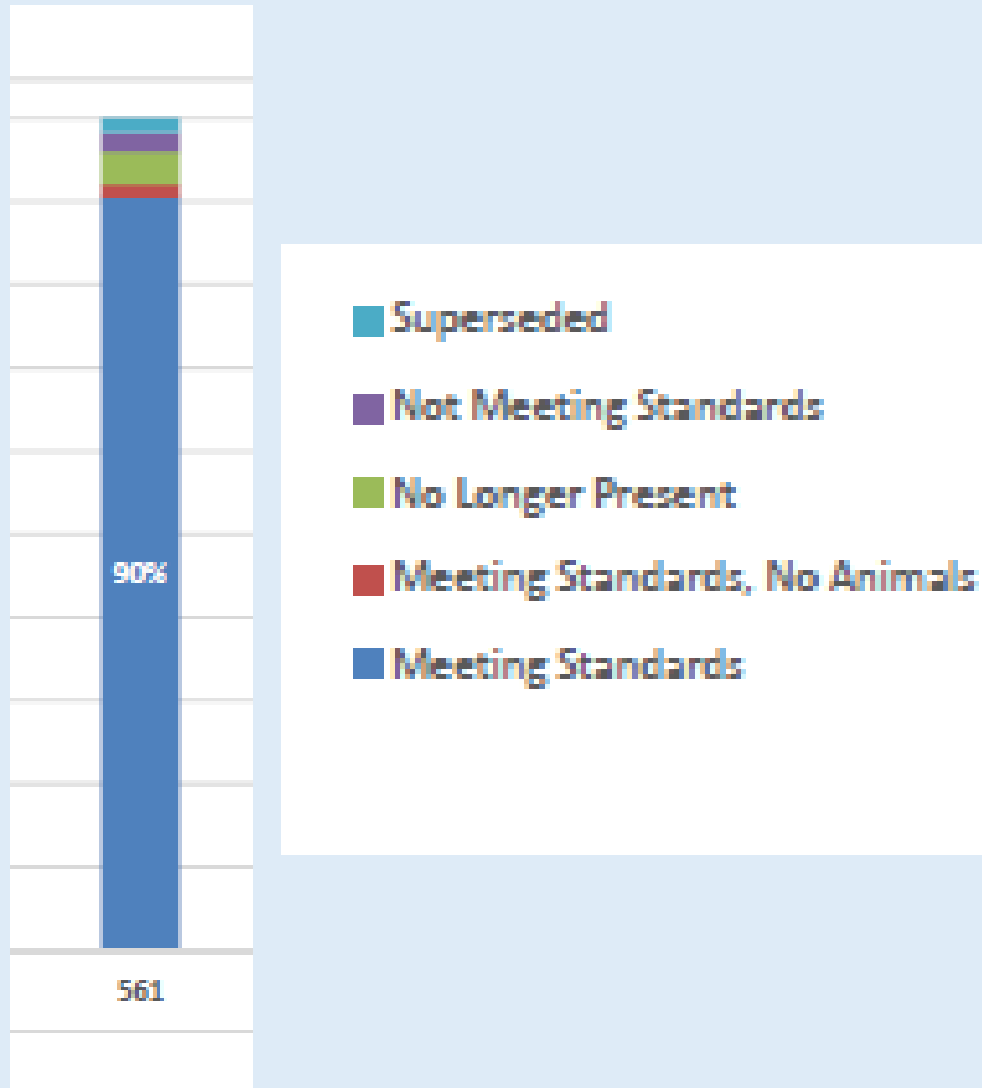
Loafing Lot Management

➤ New Data

How do States report Loafing Lot Management?

- PA, MD and WV reported 8,910 acres of **Loafing Lot Management Systems**.
- The NEIEN Appendix and Validation Reports do not currently show Loafing Lot Management Systems submitted as Heavy Use Area Protection Structures.

Updated Maryland Data: 561 Heavy Use Area Protection



In Total: 490 HUAP Structures (dataset excludes poultry pads.)

90% or 441 practices Met the Standards following the Expiration of the Practices' Credit Durations.

Loafing Lot Management: New Data



- Over 700,000 feet of **Animal Trails and Walkways** (10-year) was mapped to Barnyard Runoff Control in CAST.
- 528 Prescribed Grazing (1 year) and 575 Trails and Walkways(10 years) have been identified by NRCS as related practices to 561 Heavy Use Area Protection.
- While 575 Trails and Walkways was identified as a supporting practice of Barnyard Runoff Control, its **primary purpose is to manage areas of high animal traffic and can provide access to pasture from the HUAP.**

Data from PA's PracticeKeeper Database

Loafing Lot Management

- A review of **Access Road and Heavy Use Area Protection** indicated that **39%** of these BMPs were inspected after the credit duration of the BMP expired.
 - All were functioning as intended at an **average of 8 years past the credit duration** expiration date, or an average age of 18 years old.
- The other 61% were less than 10 years old.
- Finally, as a result of the planning process, this would also include BMPs to address new resource problems as well as replacement BMPs for BMPs that were failing at the time of the inspection.

Open Discussion on Loafing Lot Management

Is there enough data to justify extending this practice
from 10 years to 15 years?