BARNYARD RUNOFF CONTROL AND LOAFING LOT MANAGEMENT

PRESENTED BY:

VANESSA VAN NOTE, COORDINATOR ON 1/28/2021

CONTENT OF THIS PRESENTATION

- Introducing NRCS Representatives
- Differences between NRCS Practice Lifespans, Practice Design Life and CBP Credit Durations
- Understanding the NRCS
  - NRCS Conservation Practices and the NRCS Conservation Program/Annual Management Practices
  - How NRCS Conservation Practice Contracts Work
  - Financial Assistance Payments
  - Spot Checks and Program Appraisals Conducted by the NRCS
- CBP Barnyard Runoff Control (BRC) Definition
- CBP Loafing Lot Management (LLM) Definition
- Understanding an Animal Waste Management System
- CBP BRC and LLM Credit Durations
- Evidence (For and Against) Extending Credit Durations of CBP BRC and LLM Practices

NRCS REPRESENTATIVES

Timothy Peters

Agricultural Engineer on the Conservation Engineering Team within the Pennsylvania State Office

Chad Wentz

State Resource Conservationist **on the Ecological Sciences Team within the VA State Office**

- Tim and Chad will be available to answer questions on related NRCS practices, NRCS system design or general NRCS processes during this discussion.

WHAT ARE NRCS PRACTICE LIFESPANS, PRACTICE DESIGN LIFE AND CBP BMPS?

- **What are NRCS practice lifespans?**
  - Minimum time (in years) the implemented practice is expected to be fully functional for its intended purpose.
    - Amount of time based on O&M plan being followed as expected.
  - Related to the contract a landowner has with NRCS; this amount of time is the time NRCS expects a landowner to manage the certified practice to address the identified resource concern, such as # of animals.
    - If NRCS certifies a HUAP, but the operation grows to include more animals, the landowner may need to build a second HUAP to accommodate the additional animals/the resource concern.
  - Under proper maintenance, repairs to and retention of a practice, the practice is designed to last longer than the practice lifespan.

WHAT ARE NRCS PRACTICE LIFESPANS, PRACTICE DESIGN LIFE AND CBP BMPS?

- **What is a practice's design life?**
  - The amount of time a practice or system **could theoretically last under proper maintenance/management** – NRCS does not design to a specific timeframe.
  - NRCS follows loading requirements and storm events, but they do not design for permitting (Ex. NPDES).
- **What are CBP credit durations?**
  - Credit durations were established as an accountability framework for the Bay Restoration through practice lifespans/contract duration, design lifespans, permit duration, and best professional judgement.

WHAT ARE NRCS PRACTICE LIFESPANS, PRACTICE DESIGN LIFE AND CBP BMPS?

Practice Lifespan	Design Life	Credit Duration
Minimum time (in years) the implemented practice is expected to be fully functional for its intended purpose if O&M plan is followed as expected.	The amount of time a practice or system **could theoretically last under proper maintenance/management.** • NRCS does not design to a specific time past the minimum time defined by the practice lifespan.	The amount of time a CBP practice remains in the watershed model following its initial verification or re-verification. • If the credit duration expires and the practice is not re-verified, then the practice is removed from the model. • If the practice has been re-verified, the credit duration renews.

THE DIFFERENCE BETWEEN NRCS CONSERVATION PRACTICES AND THE NRCS CONSERVATION PROGRAM.

- **NRCS Conservation Practices = Individual Practices installed together to build a system**
  - NRCS provides technical and financial assistance to landowners to implement specific conservation practices through programs like the **Environmental Quality Incentives Program (EQIP),** which address the landowner's operation goals, objectives and resource concerns.
  - After a practice is implemented, agency personnel check compliance with NRCS standards and design specifications to certify the practice(s) as qualified for cost share.
  - Conservation Practice Contracts for built practices are multi-year contracts that provide financial assistance to landowners to implement conservation practices.
- **NRCS Conservation Program = Land Management**
  - Conservation program contracts may include a number of conservation practices.
  - These contracts are reviewed on an **annual basis** for adequacy of the plan, whether or not practices are completed or on track to be completed, status of operation and maintenance, status of payments, and agreement on practices to be implemented in the following year.

HOW NRCS CONSERVATION PRACTICE CONTRACTS WORK

- NRCS Conservation Practice Contracts are **Voluntary Cost-Share** Contracts.
  - The land-owner has a financial obligation to assist funding a cost-share project.
  - NRCS **provides financial assistance payments** in full that can be determined by factors such as: square footage of the roof or area and the linear footage of a gutter.
- **Financial Assistance Payments** = the amount of money NRCS contributes to a project.
  - Payment rates for NRCS practices are developed regionally across the country.
  - The exact rate can vary but averages around 50 to 70% of what the total Barnyard Runoff Control project cost could be once the project has been certified as meeting NRCS design specifications.
    - If the landowner chooses a third-party contractor, or does work themselves, the landowner's % out of pocket expense can vary.
  - Highly underserved communities or targeted areas for specific can have a higher payment rate.
  - If a project meets the NRCS design qualifications for a practice, then it will receive the assistance payment.

HOW NRCS CONSERVATION PRACTICE CONTRACTS WORK (CONT..).

- Land-owners interested in a cost-shared project can request technical assistance from NRCS, which is a free service.
  - Landowners not interested in a contract with NRCS can still request technical assistance.
- Any NRCS engineer with engineering job approval can plan, approve and certify engineering practices within their delegated levels (State -> Area -> Field for PA).
  - If the land-owner would prefer a contractor (third party technical service provider, like CBF) to develop the plan, the contractor will present the plan/design to NRCS staff for a functional review
- NRCS is present during the construction of a practice and inspects the practice post-construction prior to final certification that the practice meets its intended design.

- NRCS conducts two separate reviews:
- 1) Spot check 5% of each practice from previous year's certified work to identify engineering concerns/ improvements.
- 2) Program appraisals conducted within 5 years of a practice's certification appraise contracts, the overall process and if resource concerns were properly addressed.
  - Both reviews are internal to NRCS.
  - No citations are issued if the practices are not in compliance with the NRCS contract, but any management issues are addressed and resolved with the landowner.

BARNYARD RUNOFF CONTROL DEFINITION

- **Chesapeake Bay Program**
  - The installation of practices to **control runoff from barnyard areas**. This includes practices such as roof runoff control, diversion of clean water from entering the barnyard and control of runoff from barnyard areas.
- **NRCS Related/Associated Practices**
  - Roof Runoff Structure (558) - A structure that will collect, control and convey precipitation runoff from a roof.
  - Diversion (362) - A channel generally constructed across the slope with a supporting ridge on the lower side.
  - Stormwater Runoff Control (570) - Controlling the quantity and quality of stormwater runoff.
  - Trails and Walkways (575) - A trail is a constructed path with a vegetated or earthen surface. A walkway is a constructed path with an artificial surface. A trail/walkway is used to facilitate the movement of animals, people, or off-road vehicles

LOAFING LOT MANAGEMENT DEFINITION

- **Chesapeake Bay Program**
- The stabilization of areas frequently and intensively used by people, animals or vehicles by establishing vegetative cover, surfacing with suitable materials, and/or installing needed structures. **This does not include poultry pad installation.**
- **Can be Composed of the following NRCS Related Practices**
- **560 Access Road** – stabilize equipment traffic areas, typically geotextile, base stone, and a topping layer
- **561 Heavy Use Area Protection** – Stabilize animal concentration areas, contain stormwater that can be comingled with manure. Typically, concrete lot with curbing. Equine have separate criteria which can allow for gravel without curbing if specific site conditions can be met. Could also be used for stabilizing equipment traffic areas, such as geotextile, base stone, topping stone where equipment is entering a structure.
- **528 Prescribed Grazing** (standard has section for Temporary Concentrated Livestock Areas on Pastures) -- If certain site conditions and management can be met, can have temporary earthen confinement areas on pasture (usually for supplemental feeding) which must be rotated in a 4-year cycle. Limited to less than 50 AU, must have specific vegetated buffer lengths below, must have specific soils, and a few other requirements.
- **575 Trails and Walkways** – A walkway would include an artificial surface. This could include geotextile, base stone, topping stone. A trail is a vegetated or earthen path. I see trails planned as part of grazing systems in areas where there will be less animal traffic. Walkways are typically planned for higher animal traffic areas, such as locations from a HUAP to pasture where animals will regularly be traveling.

ANIMAL WASTE MANAGEMENT SYSTEM (CBP VS. NRCS)

- **CBP Definition**
  - Any structure designed for collection, transfer and storage of manures and associated wastes generated from the confined portion of animal operations and complies with **NRCS 313 (Waste Storage Facility) or NRCS 359 (Waste Treatment Lagoon)** practice standards. Manure conserved through reduced storage and handling losses associated with AWMS implementation are available for land application or export from the farm.
- While Barnyard Runoff Control or Loafing Lot Management can contribute to the overall AWMS, they are separate CBP practices with closely related NRCS practices and individual credit durations.
  - **NRCS example of an entire system:** Control barnyard runoff by installing a 561 Heavy Use Area.
  - Stormwater comingled with manure must then be managed by directing to a 313 Waste Storage Facility using a 634 Waste Transfer, 635 Vegetated Treatment Area using a 634 Waste Transfer, or by excluding via installation of a 367 Roofs and Covers.
  - Upslope (clean) surface water can be directed around the 561 using diversion, waterways, lined waterways and outlets, roof runoff structures, underground outlets.
  - Access Roads and/or Trails and Walkways are often part of the system.

ANIMAL WASTE MANAGEMENT SYSTEM (CONT.)

- **For Loafing Lot Management – Most Closely associated with the following NRCS practices to build a system:**
  - 560 Access Road
  - 561 Heavy Use Area Protection
  - 528 Prescribed Grazing (standard has section for Temporary Concentrated Livestock Areas on Pastures)
  - 575 Trails and Walkways
- With supporting practices installed:
  - 362 Diversion
  - 382 Fence
  - 412 Grassed Waterway
  - 468 Lined Waterway or Outlet
  - 558 Roof Runoff Structure
  - 367 Roofs and Covers
  - 570 Stormwater Runoff Control
  - 620 Underground Outlet
  - 635 Vegetated Treatment Area
  - 313 Waste Storage Facility
  - 634 Waste Transfer
  - 533 Pumping Plant

BARNYARD RUNOFF CONTROL CREDIT DURATION VS NRCS PRACTICE LIFESPAN (CONTRACT DURATION)

- CBP Credit Duration – 10 years
- NRCS Related Practices
  - Roof Runoff Structure (558) – 15 years
  - Diversion (362) – 10 years
  - Trails and Walkways (575) – 10 years
  - Stormwater Runoff Control (570) – 1 year (In PA, temporary during construction)

LOAFING LOT MANAGEMENT CREDIT DURATION VS NRCS PRACTICE LIFESPAN (CONTRACT DURATION)

- CBP Credit Duration – 10 years
- NRCS Related Practices
  - 560 Access Road – 10 year
  - 561 Heavy Use Area Protection – 10 year
  - 528 Prescribed Grazing – 1 year
  - 575 Trails and Walkways – 10 year

EVIDENCE TO EXTEND BARNYARD RUNOFF CONTROL AND LOAFING LOT MANAGEMENT CREDIT DURATIONS

- **Important points to consider:**
  - A landowner has a financial responsibility to the practices that are installed.
    - There is a concrete/economic reason for a landowner to maintain a practice.
  - NRCS Cost-Shared practices are a voluntary program – landowners will contact NRCS.
  - Currently we **only** have practice retention (out of lifespan) data from MD.
    - At the moment, cannot locate specific data on LLM and BRC.
    - VA NRCS is working to develop a program to look at NRCS practices out of lifespan.

ARGUMENTS TO EXTEND BARNYARD RUNOFF CONTROL AND LOAFING LOT MANAGEMENT CREDIT DURATIONS

- Argument provided for Barnyard Runoff Control (BRC)
  - For:
    - 558 Roof Runoff Structure, a closely related NRCS practice, has a NRCS Practice Lifespan of 15 years.
    - 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.
    - The BRC system is designed to last longer than the NRCS practice lifespan.
  - Against:
    - The CBP AWMS was established based on **NRCS 313 (Waste Storage Facility) or NRCS 359 (Waste Treatment Lagoon)** that have 15-year practice lifespans.
    - Credit durations were established to be conservative/considerate of the minimum lifespan.
    - 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.

ARGUMENTS TO EXTEND BARNYARD RUNOFF CONTROL AND LOAFING LOT MANAGEMENT CREDIT DURATIONS

- Argument provided for Loafing Lot Management (LLM)
  - **For:**
    - 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.
  - **Against:**
    - 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.
    - 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.

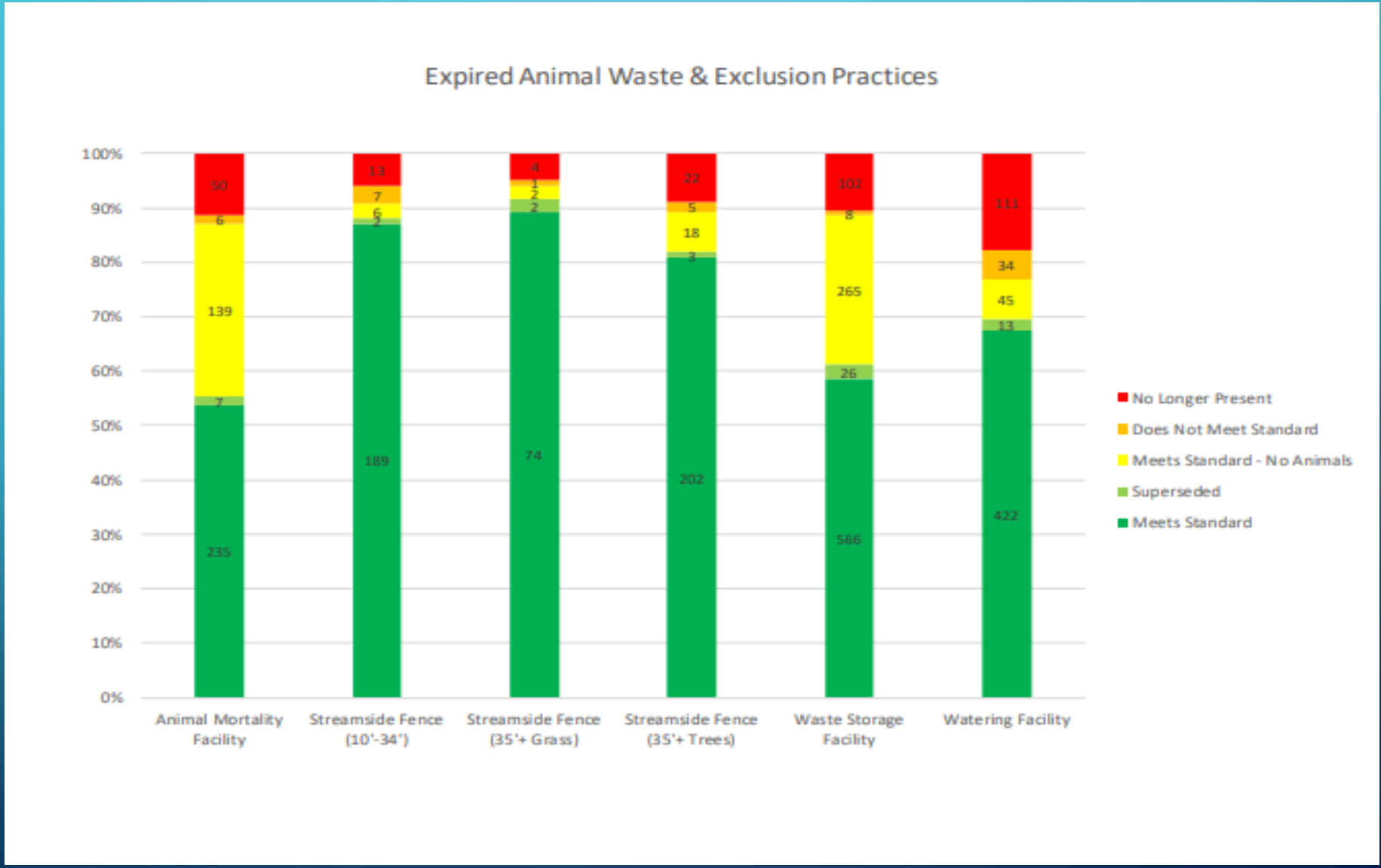
ARGUMENTS TO EXTEND BARNYARD RUNOFF CONTROL AND LOAFING LOT MANAGEMENT CREDIT DURATIONS

- Argument provided for Barnyard Runoff Control (BRC)
  - For:
    - 558 Roof Runoff Structure, a closely related NRCS practice, has a NRCS Practice Lifespan of 15 years.
    - 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.
    - The BRC system is designed to last longer than the NRCS practice lifespan.
  - Against:
    - The CBP AWMS was established based on **NRCS 313 (Waste Storage Facility) or NRCS 359 (Waste Treatment Lagoon)** that have 15-year practice lifespans.
    - Credit durations were established to be conservative/considerate of the minimum lifespan.
    - 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.

DISCUSSION TO BE DOCUMENTED ON WORD DOCUMENT

LOOKING AT THE DATA MD PROVIDED:

- (Will discuss in meeting if relevant)



LOOKING AT THE DATA MD PROVIDED:

- (Will discuss in meeting if relevant)