


# Forest Buffer Resource Improvement (RI) Practices: Credit Duration Discussion

**AgWG Meeting 07/20/2023**

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# Overview

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- I. Background
  - II. Request from EPA
  - III. Data from the FWG/States & 2022 progress
  - IV. Reference Materials

Does the AgWG support extending the credit durations of RI-9 and RI-10 practices from 10 years to 15 years?

The BMPVAHAT is asking the AgWG for approval, with input from technical experts (Forestry WG).

# To jog your memory...

## Resource Improvement (RI) Practices

**RI-9:** Forest Nutrient Exclusion Area (10 - 34 ft buffer)

**RI-10:** Buffer on Watercourse  
(>35 ft buffer)

- Voluntarily installed practices or used in instances where landowners can't accept government money (e.g., plain sect farmers, etc.)
- Verification Requirements: Visual Indicator Checklist
- Current credit duration of **10 years**.

## Cost-shared practice

**NRCS Practice 391:** Riparian Buffers

- Implemented with federal or state financial assistance.
- Verification Requirements: NRCS specified standards and specifications.
- Current credit duration of **10 years**. But **will change to 15 years** in next version of CAST.

# Rational for change: recap of technical expertise

- Technical experts state that the RI visual indicators checklist is sufficient to ensure functionality of these practices to 15 years. Federal standards are not needed to ensure this.
  - If the buffer is healthy and living at 3-5 years (establishment), then it's likely to be functioning at 15 years even if the original planting was done voluntarily by the farmer, and not according to an NRCS standard.
- Technical experts state that a 15-year credit duration for these practices seems reasonable based on the inherent biology and ecology of established young forest.
- Changing the credit duration of RI-9,10 to 15 years will not affect the definitions of RI practices, nor the ability to report these practices.

The EPA **voted HOLD** and requested that the Forestry WG provide **empirical data which compares the survivability of forest buffers** privately implemented as Resource Improvement (RI) BMPs 9 or 10, to forest buffer BMPs implemented under public agency standards with financial and/or technical assistance.

# What information did we get from the states?

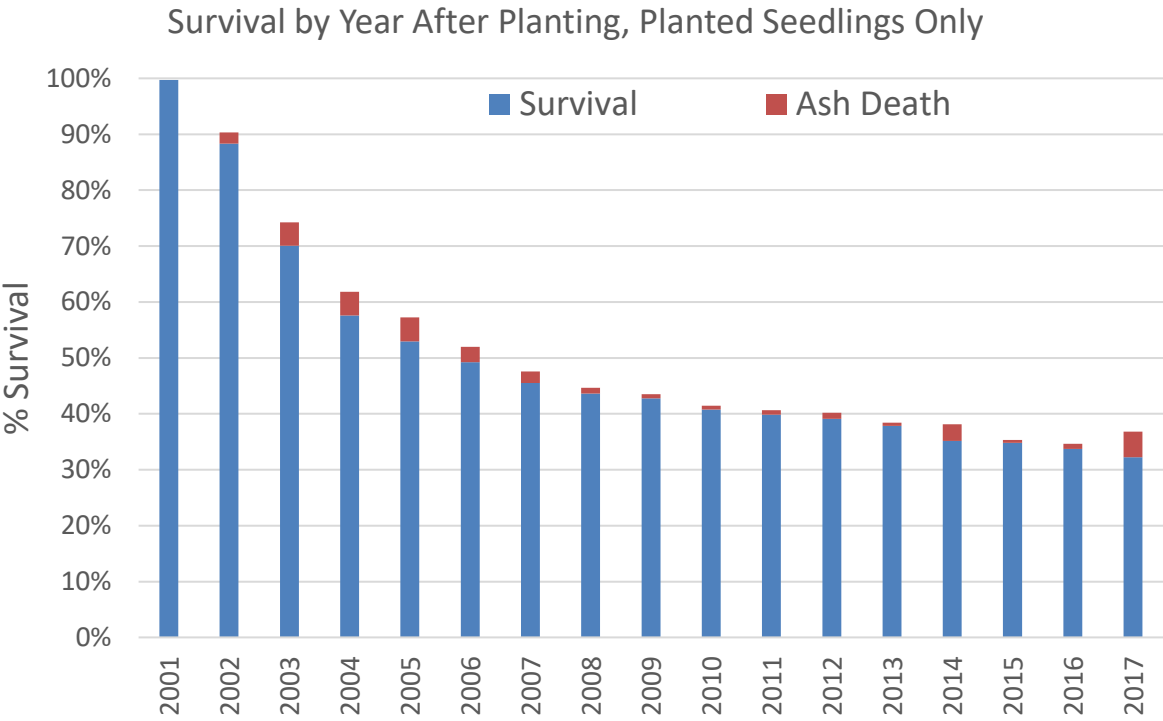
## **Federally funded practices**

- Study from MD Forest Service on seedling and mature forest (15+ years) survivability of federally-funded (CREP) tree plantings by tree species (long-term study)
- Forestry Workgroup proposal to extend credit duration of forestry cost-shared practices:
  - “For Forest Plantings: A forest established after 15 years is unlikely to be converted (compared to a grass buffer or single tree). One reason is because it is difficult to remove these trees. Also, multiple landowner surveys have shown that 80-88% of landowners intend to keep their new forest buffer indefinitely (English and Hyberg 2019, Cooper 2005, Fesco 1982).”

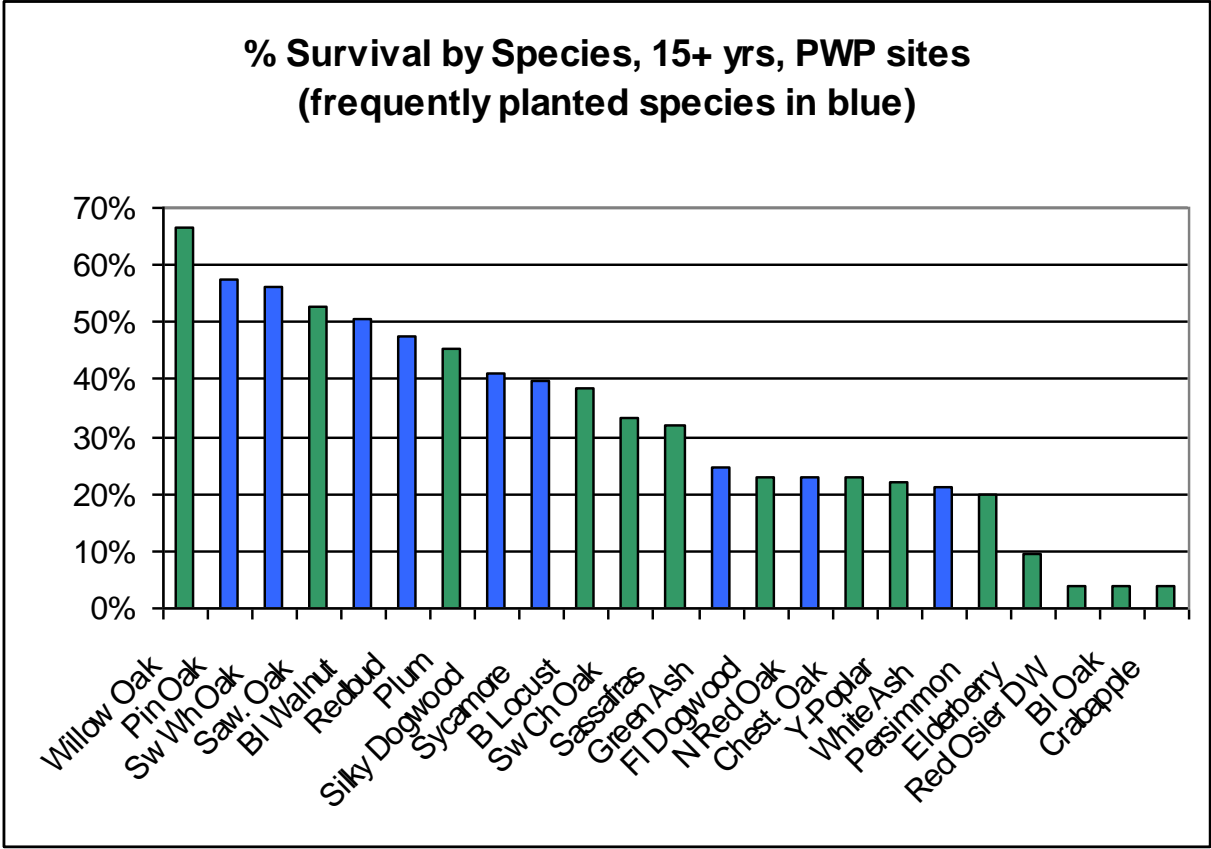
## **Non-federally funded practices**

- States are not required to collect survivability information as part of their verification requirements. The information collected during inspection of RI practices corresponds to the RI checklist for RI practices 9 and 10.
- States report implementation and inspection dates for practices annually.

# CREP Buffers: MD Long Term Survivability Study



After establishment, the survival rate levels off. Planting plans account for this.



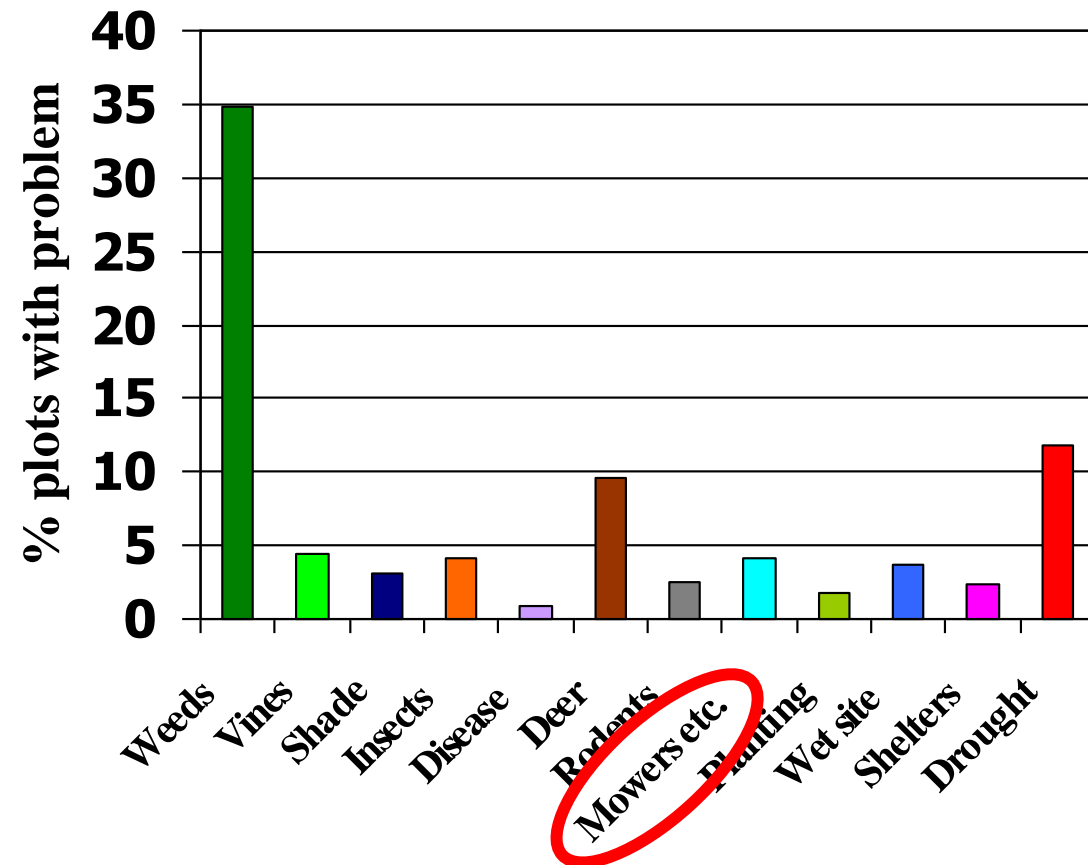
DNR tracks survival based on species.



# Survival Challenges: MD Long-term survivability study



- Noxious and invasive weeds
- Drought
- Deer
- Insects, **voles**, beavers, mice
- “Mechanical” damage, the toll from mowers and weed-eaters



# Professional Opinion of MD State Forester

***“Based on what we see in the field and from the long-term study, I personally would have no concerns granting similar credit to RI practices, even if it didn't get created through NRCS standards.***

***Tree planting plans developed by MD Forest Service generally use similar standards that we have found to be successful, whether the planting is federally funded or not.***

*There is tremendous variability site to site that we have to accommodate in design, but we also see good outcomes with a variety of forest restoration approaches, with attention paid to any maintenance or reinforcement planting needs along the way.*

*Stocking or density can vary some depending on landowner goals.*

*If the RI visits document a surviving forest buffer after several years or over 7 ft in height, I would expect it to continue to mature into a sheltering forest for the next 6-7 decades at least.”*

- Professional judgement from Anne Hairston-Strang, the State Forester with the Maryland Forest Service

# RI-9,10 Practice Lifespan

PA DNR and DEP pulled information from PracticeKeeper, one of Pennsylvania's primary databases. Based on this subsample, the RI-9s and RI-10s averaged **greater than 18 years** upon inspection.

We looked at all state reported implementation and inspection dates for 2022 Progress:

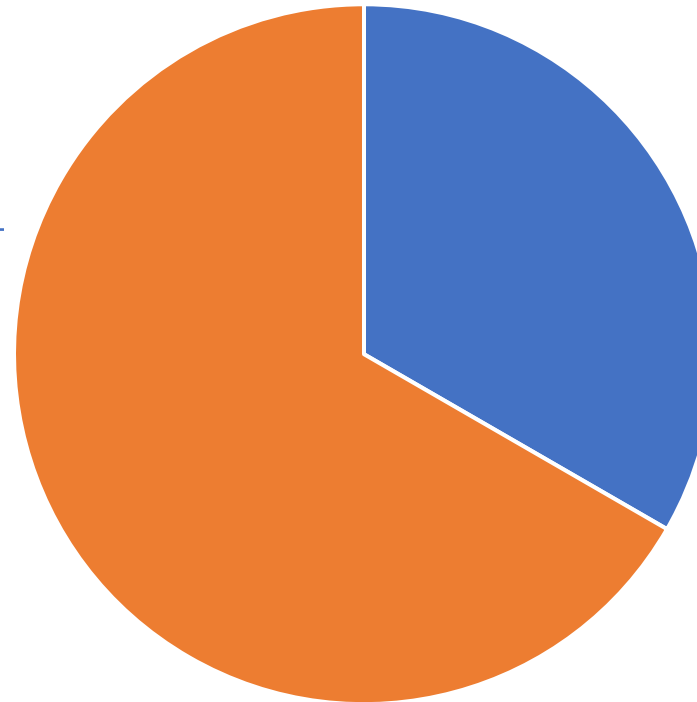
- Practices that were reverified:
  - Average age of all reverified practices = **28** years old.
  - Average age of practices over 10 years old (after “establishment”) = **40** years old.

# Percent of total reported practices reverified (# of practices)

RI 9,10 practice records from 2022 Progress: 81 total records

## NOT REVERIFIED

**54 of 81** have not yet been inspected.



■ Reverified ■ Not reverified

## REVERIFIED

**27 of 81** have been reinspected/reverified.

Average age of all reverified practices = **28** years old.

Average age of practices over 10 years old = **40** years old.

Average length = 2,031 ft (median 935 ft).

# Percent of total reported practices reverified (# of practices)

RI 9,10 practice records from 2022 Progress: 81 total records

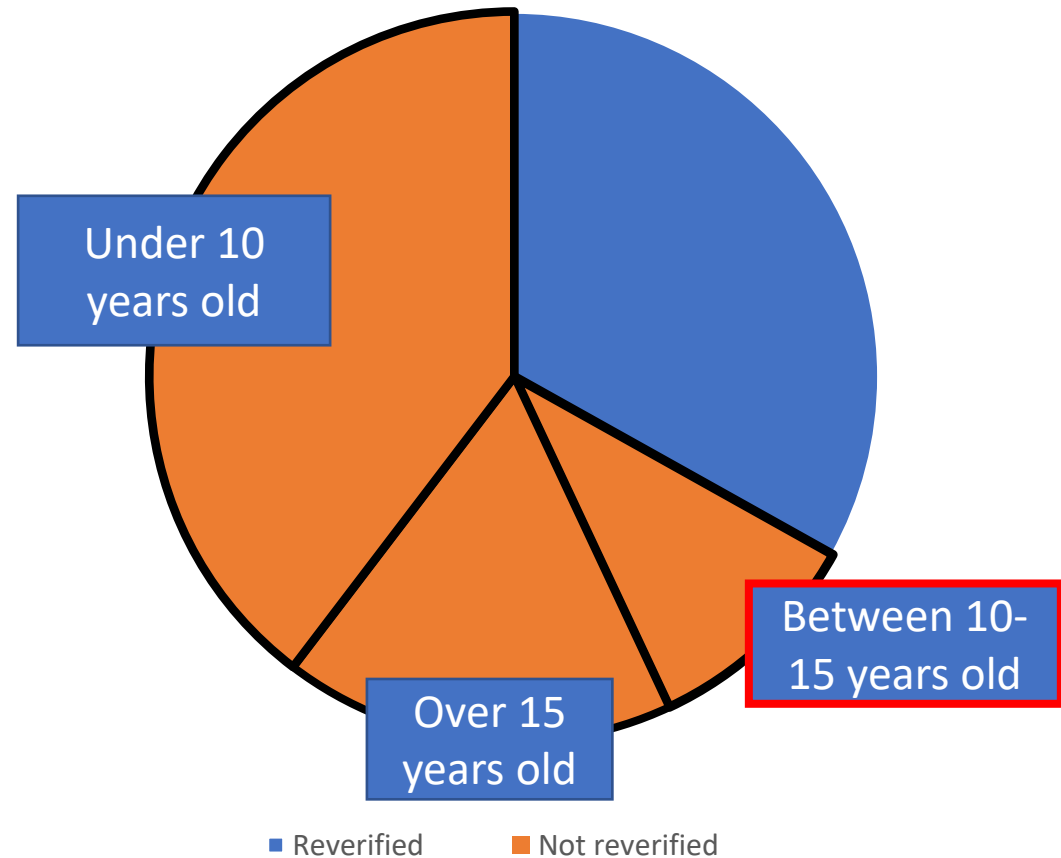
## NOT REVERIFIED

**54 of 81** have not yet been inspected.

Between 10 and 15 years → 8 reported practices (77,615 ft).

Over 15 years → 14 reported practices (11,833 ft total).

Under 10 years → 32 reported practices (245,359 ft).



# Percent of total length reported

RI 9,10 practices from 2022 Progress: 389,641 feet total

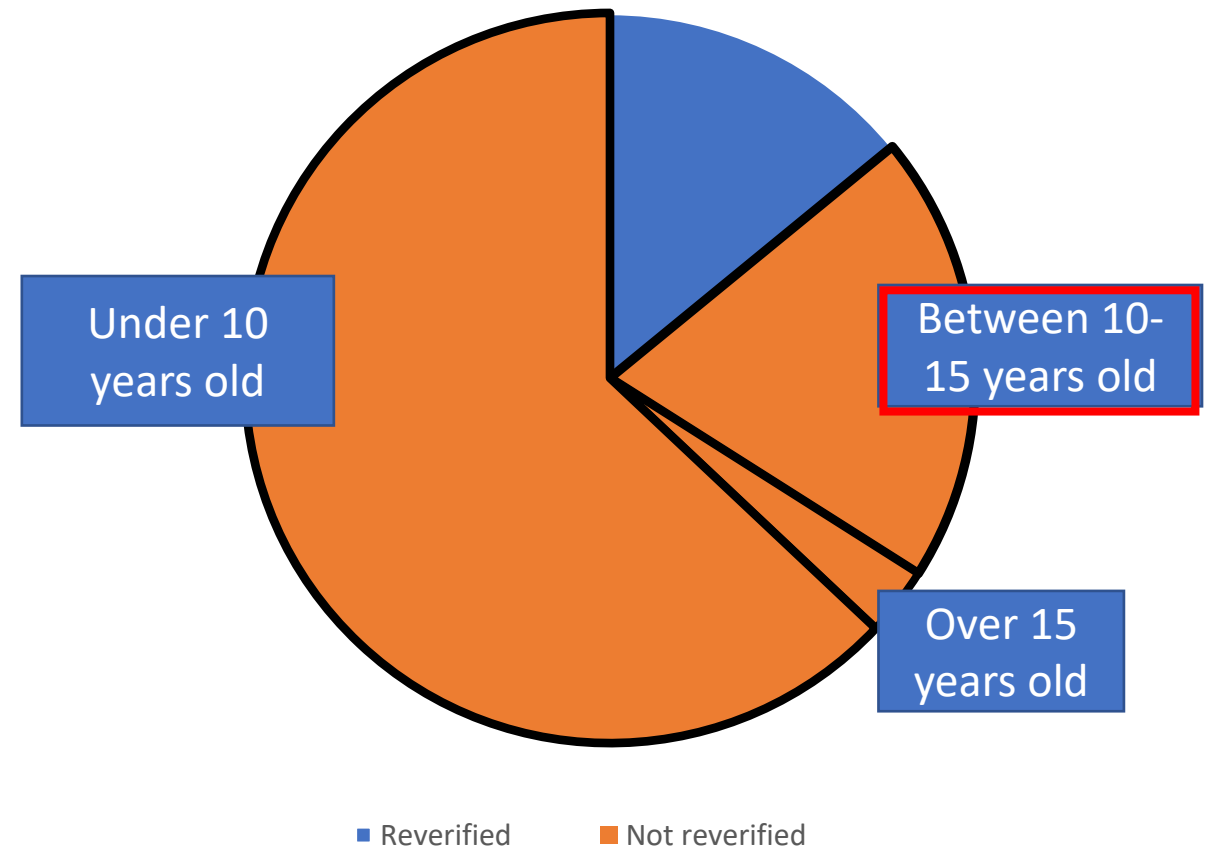
## NOT REVERIFIED

**389,641 ft total** have not yet been inspected.

Between 10 and 15 years = 8 reported practices (77,615 ft).

Over 15 years = 14 reported practices (11,833 ft total).

Under 10 years = 32 reported practices (245,359 ft).



# Some final thoughts...

- Credit durations were originally established based on best professional judgement. The BMPVAHAT was asked to **revisit these based on updated best professional judgement** (in this case, the Forestry Workgroup and source sector experts).
- Original intention of Verification Program was never to verify every single practice on the ground – it was to prioritize verification of practices with the most impact on our goals/outcomes.
- Calls attention to the issue identified by the BMPVAHAT – there is no system in place for assessing BMP performance
  - **no system for assessing available data, lack of consistent data collected, and inability to incorporate guidance from source sector experts** (see BMPVAHAT Final Report and Suggestions Document).

Does the AgWG support extending the credit durations of RI-9 and RI-10 practices from 10 years to 15 years?

The BMPVAHAT is asking the AgWG for approval, with input from technical experts (Forestry WG).



# Reference Slides

June AgWG presentation slides

# Concerns from EPA about the Proposal

The EPA expressed concerns about extending the credit duration of RI-9 and RI-10 practices to 15 years.

**REQUEST 1: Demonstrate that the standards and specifications (including function, tree density, canopy cover, survival rate, no concentrated flow, frequency for inspection and maintenance) are equivalent between federally funded and RI practices.**

**RESPONSE 1:**

Due to the inherent definition of RI practices, the standards and specifications of RI practices are not required to meet federal standards.

Expertise from the FWG\* states that:

- Federal requirements are not needed to reliably have buffers survive and grow.
- If the buffer is healthy and living at 3-5 years (establishment), then it's likely to be functioning at 15 years even if the original planting was done voluntarily by the farmer, and not according to an NRCS standard.
- A 15-year credit duration seems reasonable based on the inherent biology and ecology of established young forest, as well as incentive to the agencies to support retention of the buffers in their communication and policies.

\*Anne Hairston-Strang, MD Forest Service; Rebecca Hanmer, FWG Chair. See direct quotes in document on calendar page.

**Concern (related to Request 1):** RI practices are half the credit duration of cost-shared practices because they are not held to the same standards and specifications as NRCS (cost-shared) practices. Therefore, the RI 9 and 10 practices should remain at 10 years.

**Response:**

Yes, this is *usually* the case. But practices RI9,10 are the exception. They had the same credit duration as NRCS practices from the start.

Members from the original technical panel\* stated that these practices were not given half the credit durations as their NRCS practice counterparts because they ***are just as likely to remain in place and be effective as ones installed through a public cost-share program using NRCS CPSs, i.e., they each have similar chances of thriving or declining (e.g., flood, disease, farmer removal), so the same credit duration was applied.***

Extending the credit durations of these practices does **NOT** mean that other RI practices are/should be eligible for the same credit durations as their NRCS/cost-shared practice counterpart

\*Greg Albrecht, NYSDEC; Jeff Hill, YCCD. See direct quotes in document on calendar page.

## Response 1 Recap:

Technical experts state that the RI visual indicators are sufficient to ensure functionality of these practices to 15 years.

Federal standards are not needed to ensure this.

## REQUEST 2: Define how RI practices will differ from federally funded practices.

### RESPONSE 2:

**The definitions of RI practices and federally funded practices will not be affected by the extension of RI-9,10 practice credit durations.**

RI practices differ from cost-shared practices because RI practices **DO NOT**:

- Involve contract requirements
- Require oversight from government agencies
- Require the same standards/specifications as cost-shared practices during implementation

RI practices **DO**:

- Require the verifier to confirm all visual indicators are present and that the practice contains all critical design elements that are needed for WQ resource improvement

**REQUEST 3:** Clearly define how the move to make RI and NRCS practices equivalent will impact the current ability to report RI practices.

**RESPONSE 3:**

These practices were given the same credit durations in 2014, up until the 2021 WQGIT decision to extend cost-shared practices to 15 years. There were no previous issues with having the credit duration of these practices be the same as cost-shared riparian forest buffers.

In other words, this will NOT impact the ability to report RI practices.



## Response 2 + 3 Recap:

Changing the credit duration of RI-9,10 to 15 years will not affect the definitions of RI practices, nor the ability to report these practices.



Questions?



# Materials for Reference

- April Presentation to AgWG: [presentation](#)
- April 2023 AgWG minutes: [minutes](#)
- FWG Proposal to extend credit durations of select forestry practices (approved by the WQGIT in Aug 2021): [proposal](#)
- RI practice definitions and visual indicators report (approved by AgWG in 2014): [RI report](#)
- [FWG Response to EPA Vote](#)

**RI-9,10: Forest Exclusion Area or Buffer on Watercourse Example Checklist Verification Date:**

Cooperator Name, Address, and Phone #		FSA Farm / Tract		SCD		Inspection Type	
		Field Number:				<input type="checkbox"/> Initial Inspection <input type="checkbox"/> QA Spot Check <input type="checkbox"/> Re-verify <input type="checkbox"/> Other _____	
RI-9,10 Practice: Forest Nutrient Exclusion Area or Buffer on Watercourse						Supporting Data & Documentation:	
Re-Verification Interval: 10 years		Y		N		N/A	
RI-9,10 Visual Indicators							
1	Dominant vegetation (>50% canopy cover) consists of existing, naturally regenerated, or planted trees and/or shrubs					Visual Observation	
2	Perpendicular distance from top-of-bank of stream, ditch or tidal area $\geq 10'$ minimum average for width of buffer					Estimate by paces	
3	Overland/sheet flow through buffer is maximized (no concentrated flow)					Visual Observation	
4	Structural measures are present where vegetation practice is insufficient to control erosion					Visual Observation	
Meets RI-9,10 Visual Indicators							
RI Installation Date:							
RI-9,10 Reportable Units: Feet							
Check RI Reporting and Record Length in Feet:							
RI-9: 10'-34' Width Nutrient Exclusion Area							
Length Feet:                      Width Feet:							
RI-10: 35'+ Width Buffer							
Length Feet:                      Width Feet:							
CERTIFICATION DATE/INITIALS:							
RE-VERIFICATION DATE/INITIALS:							

All Visual Indicators must either have a Y or NA marked. If an N is marked on the checklist, the RI may not be reported until the deficiency is addressed.

**Additional Notes/Documentation about RI:**