



Your Regenerative Agriculture Journey:

Soil Health on Forestland



What is Regenerative Agriculture?

Regenerative agriculture is a conservation management approach that emphasizes natural resources through improved soil health, water management, and natural vitality. Emphasizing regenerative agriculture builds upon NRCS's 90 years of conservation work by restoring land health, improving long-term productivity, and ensuring American grown production for the future.



It Starts with a Whole Farm Assessment!

The NRCS Regenerative Pilot Program (RPP) begins with NRCS staff, partners, or technical service providers conducting a whole-farm assessment. An assessment examines the condition of resources across the operation to identify voluntary conservation opportunities. Conservation planning and producer objectives drive the process, ensuring site-specific solutions that work for the producer.

Soil health testing is an important part of the RPP and is required in both year 1 and year 5. The tests are a valuable tool for quantifying some of the soil's physical, biological, and chemical characteristics.



Putting Conservation Practices to Work

Using the whole farm assessment and conservation planning process, producers identify voluntary conservation practices they would like to implement. The RPP identifies 15 primary conservation practices that producers can select based on their goals and objectives.

Additional NRCS practices can be used to support the regenerative objectives in the right context. Most conservation practices address multiple resource concerns.



NRCS conservation practices are not limited to a single purpose but can have multiple benefits, and the combination of benefits varies with the site conditions and planning.

To make progress on your regenerative journey on forestland, follow the soil health principles for forestland (see graphic above).



More Information and How to Apply

Farmers and ranchers interested in regenerative agriculture are encouraged to apply through their local NRCS Service Center by their state's ranking dates for consideration in FY2026 funding.

Applications for both EQIP and CSP can now be submitted under the new single regenerative application process.

Scan or click the QR Code for more info.



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In any agricultural system, we'd love to have a quick fix to improve soil health, water management, and natural vitality, but these improvements are often a long-term journey. Some improvements may take 5-10 years to become visible or measurable, while others may appear within a single year.



The First Steps...

Improvements to your regenerative system start by feeding and protecting biology. Soil organisms are the driving force behind dynamic and vital soil processes, and everything in the soil food web begins with plants—lots of plants of many species, covering and inhabiting the soil and providing food for an amazing variety of organisms with many functions. They start a positive feedback loop that accelerates the transformations occurring deep within the soil and that leads to more improvements in soil functions. A more continuous (undisturbed) cover of a wide variety of plant types provides a steady stream of food for soil organisms that work together to create healthy soils.

Practices that increase ground cover and provide improved water availability can result in water quality improvements in the first year of implementation. Reduced evaporation, increased plant water uptake, and reduced runoff can also result in less nutrient loss by transport to surface water.

On forestland, using the following conservation practices can help kick start these improvements in Year 1: Mulching (484), and Forest Stand Improvement (666).



Years 2-10...

In the next few years, most improvements are related to increased biological activity as more varied food sources become regularly available to soil organisms throughout the year (including fall and winter!). Enhancing soil biology—from insects to earthworms to microbes—allows for many real-life benefits to how the soil functions and leads to equipping the soil to support itself more without as many inputs.

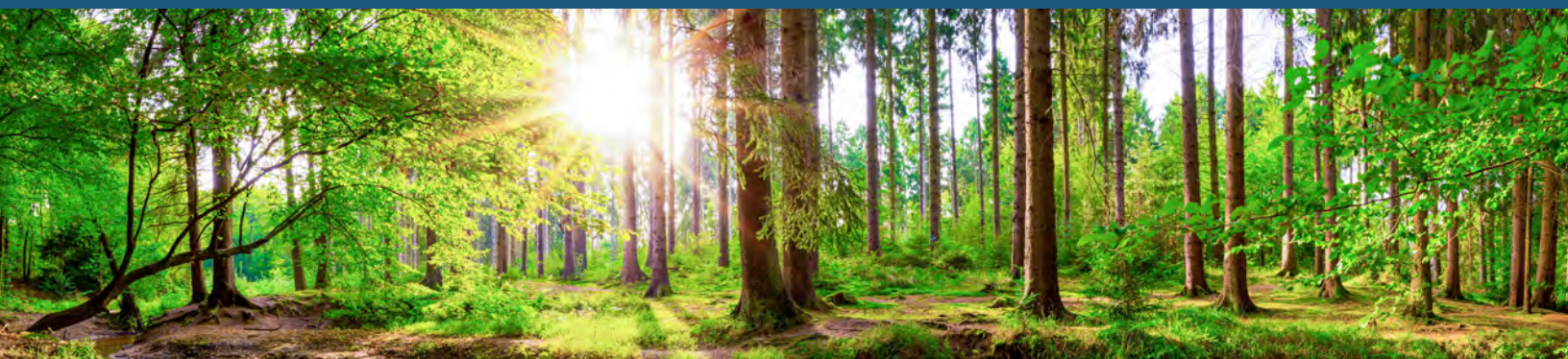
Changes in understory management via forest stand improvement or brush management to control invasive species can greatly reduce herbicide inputs during these years. Increased biological activity along with less soil disturbance from animal treading or mechanical traffic allows more stable soil aggregates to form. Soil aggregates are made up of individual mineral particles (sand, silt, clay, and organic particles) all held together with microbial glues, plant roots, and fungal hyphae. Think of soil aggregates as “piggy banks” that hold nutrients, moisture, and organic matter and keep them from being lost to leaching, evaporation, or erosion.

In Years 2-10, consider the following conservation practices to further enhance your regenerative system (if not already incorporated): Brush Management (314), Prescribed Burning (338), Woody Residue Treatment (384), and Pest Management Conservation System (595). You'll do another rounds of soil health testing to check on soil health trends typical for the soil and stand conditions at some point in year 5 or later.



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Lasting Change

Implementing regenerative agriculture principles for the long-term results in soil biology continuing its work of creating and sustaining soil aggregation, cycling water and nutrients, and stimulating plant growth. You will find that managing your forest becomes significantly more efficient, requiring fewer management efforts and production inputs.

You may have seen an increase in organic matter levels in topsoil and maybe even deeper down! This process may be limited if you only use some of the soil health principles but don't incorporate them all. Practicing all the principles of forestland soil health will help to get the most benefit from your management system.

If you've historically had problems with drought or poor soil drainage, you may also notice improvements in water use efficiency and how well the soil drains internally. Increased aggregation and soil organic matter allows soils to hold and provide more water for tree uptake. If you happen to receive more rain or snowmelt than the soil can infiltrate or store, any runoff from your forest will have much less nutrient and sediment load.

Increasing the variety of species in microbial community may also provide support to forest stands under attack by pathogens and diseases. Some soils have been shown to suppress pathogenic populations as newly-established, mixed microbial communities provide competition and serve to check pathogen populations.

INDICATORS	SHORTER JOURNEY 	LONGER JOURNEY 
Natural Soil Properties	Heavy soils, high clay content	Coarse, sandy soils
	High organic matter soils, prairie soils	Lower organic matter soils, forest soils
Previous Management	Already using some soil health principles	Eroded or degraded soils
Management with RPP	Higher level, bundled soil health principles— varied plantings on appropriate sites, proper stocking rates, improved nutrient cycling	Just meeting soil health principles —adequate ground cover, appropriate stocking levels, reduced wildfire risk.
Climate	Moderate temperatures, adequate rainfall	Cold and/ or dry conditions

Ready To Make Some Changes on Your Land?

It can be challenging to change your operation and do things differently, but the benefits of transitioning to regenerative agriculture can result in increased land value and profitability. Start small and as you figure things out, add more stands and higher levels of management to your operation.

NRCS Conservation Planners can help you develop a regenerative plan based on your goals and objectives. To start this “conservation conversation,” call your local NRCS team and schedule an appointment today!

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