Summary of Regenerative Practices

Cover Crop 340

- What: Grasses, legumes, and other forbs planted for seasonal vegetative cover.
- Where: All lands requiring seasonal vegetative cover for natural resource protection or improvement.
- Cover crops are established as part of a cropping system between production crops in rotation used to accomplish one or more of the following purposes:
    - Control erosion
    - Add fertility and organic material to the soil
    - Improve soil tilth
    - Increase infiltration and aeration of the soil
    - Improve overall soil health
    - Increase pollen and nectar resources for bees

Cover Crop resources:

Southern Cover Crops Council | Facilitating and enhancing communication and collaboration among producers, extension, researchers, and other agricultural professionals.

Conservation Cover 327

- What: Establish and maintain permanent vegetative cover (like perennial grasses, legumes, or forbs) on lands retired from agricultural production
- Where: This practice applies on most lands needing permanent vegetative cover. It is used to establish and maintain permanent vegetative cover (like perennial grasses, legumes, or forbs) on lands retired from agricultural production.
    - This practice does not apply to plantings for forage production or to critical area plantings that require special measures to ensure successful establishment.

Conservation Crop Rotation 328

- What: A planned sequence of crops grown on the same ground over a period of time (i.e. the rotation cycle).
- Where: This practice applies to all cropland where at least one annually-planted crop is included in the crop rotation. Crop rotations help break insect, disease, and weed cycles. Rotations add diversity to farm operations and often reduce economic and environmental risks. The crop rotation shall include a minimum of two different crops.

Residue and Tillage Management No Till Code 329

- What: Limiting soil disturbance to manage the amount, orientation and distribution of crop and plant residue on the soil surface year around.
- Where: This practice applies to all cropland.
    - This practice only involves an in-row soil disturbance operation during strip tillage, the planting operation, and a seed row/furrow closing device
    - There is no full-width soil disturbance performed from the time immediately following harvest or termination of one cash crop through harvest or termination of the next cash crop in the rotation regardless of the depth of the tillage operation
    - The crop interval Soil Tillage Intensity Rating (STIR) value shall be no greater than 20.
    - Distribute all residues uniformly over the entire field.
    - Removing residue from directly within the seeding or transplanting area prior to or as part of the planting operation is acceptable.
    - Residue should not be shredded after harvest

Residue and Tillage Management Reduced Till Code 345

- What: Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round while limiting soil-disturbing activities used to grow and harvest crops in systems where the field surface is tilled prior to planting.
- Where: This practice applies to all cropland. This practice includes tillage methods commonly referred to as mulch tillage or conservation tillage where a majority of the soil surface is disturbed by noninversion tillage operations such as vertical tillage, chiseling, and disking, and includes tillage/planting systems with relatively minimal soil disturbance.
- The crop interval Soil Tillage Intensity Rating (STIR) value rating shall be between 20 and 80 (any STIR value rating below 20 will follow Residue and Tillage Management No Till Code 329).
- Minimum documentation requirements
    - Planned crop(s).
    - Amount of residue produced by each crop.
    - All field operations or activities that affect—
        - Residue orientation including height (where applicable).
        - Surface disturbance.

- ♣ The amount of residue (pounds/acre or percent surface cover) required to accomplish the purpose, and the time of year it must be present.

Mulching Code 484

- What: Applying plant residues or other suitable materials to the land surface
- Where: This practice applies to all lands where mulches are needed.
- The mulch materials may consist of natural or artificial materials of sufficient dimension (depth or thickness) and durability to achieve the intended purpose for the required time period. Synthetic mulches must be removed from the field prior to the next crop and cannot be incorporated into the soil.
- Mulch applied to the soil surface helps:
    - o Reduce soil erosion.
    - o Conserve soil moisture, reduce soil evaporation, and improve the plant use of irrigation water.
    - o Regulate soil temperature.
    - o Suppress pests.

Grazing Management 528

- What: Managing vegetation with grazing and browsing animals to achieve specific ecological, economic, and management objectives.
- Where: This practice applies to all lands where grazing and browsing animals are managed.
- Manage livestock numbers and grazing periods to adjust the intensity, frequency, timing, duration, and distribution of grazing and browsing animals to meet the planned objectives for plant communities, the animals, and the associated resources. This includes adjusting animal numbers, grazing periods, and movements based on the rate of plant growth, available forage, livestock forage demand, or other desired objectives (e.g., degree of forage utilization, targeted plant height or standing biomass, residual forage mass, or animal performance).
- Use this practice to accomplish one or more of the following purposes:
    - o Improve or maintain desirable species composition, structure, productivity, health and/or vigor of plants and plant communities.
    - o Improve or maintain the quantity, quality, and/or balance of forages to meet the nutritional needs and ensure the health and performance of grazing and browsing animals.

- Reduce or eliminate the transportation of sediment, nutrients, pathogens, or chemicals to surface and groundwater.
- Improve or maintain upland hydrology, riparian dynamics, or watershed function to reduce surface or groundwater depletion and improve naturally available moisture.
- Reduce runoff and compaction and enhance or maintain key soil health components, such as soil organic matter, aggregate stability, habitat for soil organisms, water infiltration, and water holding capacity.
- Prevent or reduce sheet, rill, classic gully, ephemeral gully, bank, or wind erosion.
- Improve or maintain terrestrial or aquatic habitat for wildlife, fish, invertebrates, or other organisms.
- Manage biomass accumulation for the desired fuel load to reduce wildfire risk or to facilitate prescribed burning.
- Reduce plant pest pressure from invasive and/or undesirable plants and other pests as part of an integrated plan

Pasture & Hay Planting 512

- What: Establishing adapted and compatible species, varieties, or cultivars of perennial herbaceous plants suitable for pasture or hay production.
- Where: This practice applies on all lands suitable for the one-time establishment of perennial species for forage production that will likely persist for 5 years. This practice does not apply to the establishment of annually planted and mechanically harvested food, fiber, or oilseed crops planted on designated cropland.
- This practice is used to accomplish one or more of the following purposes:
  - Improve or maintain livestock nutrition and health.
  - Provide or increase forage supply during periods of low forage production.
  - Reduce soil erosion.
  - Improve water quality.
  - Improve air quality.
  - Improve soil health.

Nutrient Management 590

- What: Manage rate, source, placement, and timing of plant nutrients and soil amendments while reducing environmental impacts.
- Where: This practice applies to any area of land where plant nutrients and soil amendments are applied.

- Nutrient management may be used to improve crop productivity and improve soil organic matter while reducing environmental impacts. Sources of nutrients include, but are not limited to, commercial fertilizers (including starter and in-furrow starter/pop-up fertilizer), animal manures, legume fixation credits, green manures, plant or crop residues, compost, organic by-products, municipal and industrial biosolids, wastewater, organic materials, estimated plant available soil nutrients, and irrigation water.

WHERE TO LEARN MORE:
The following organizations have a wide array of resources available to learn more about these practices and how to implement them. Use the search box within each site to narrow down resources specific to your interest.
NCAT/ATTRA resources
Rodale resources
SARE resources

Your local Cooperative Extension is a great local resource and can provide you with resources specific to your locality.

Summary of Well Installation and Irrigation System Practices

Irrigation Pipeline (430)

- What: A pipeline and appurtenance installed to convey water for storage or application as part of an irrigation system.
- Where: This standard applies to irrigation water conveyance and distribution pipelines installed above or below ground. This standard does not apply to multiple-outlet irrigation system components (e.g., surface gated pipes, sprinkler lines, or microirrigation tubing). This practice does not apply to pipelines in systems for animal watering or waste transfer
- This practice is used to accomplish one or more of the following purposes:
    - Convey water from a supply source to an irrigation system, storage pond, or reservoir.
    - Reduce irrigation conveyance water losses by converting from open channel to pipeline.

- Reduce energy use.

Irrigation System Surface & Subsurface 443

- What: A system that delivers irrigation water by surface means, such as furrows, borders, and contour levees, or by subsurface means through water table control.
- Where: This practice applies to areas suitable for irrigation with an adequate water supply of sufficient quantity and quality to make irrigation practical for the planned crops to be grown and application methods to be used. For surface irrigation, site conditions must be suitable to enable target application efficiency and distribution uniformity to be achieved. For subsurface irrigation, site conditions and water supply must be suitable to raise and maintain the water table in the crop root zone during the growing season using water control structures and buried perforated pipe or shallow ditch structures.
- This practice is used to accomplish one or more of the following purposes:
    - Efficiently convey and distribute irrigation water to the soil surface point of application without causing excessive water loss, erosion, or water quality impairment
    - Efficiently convey and distribute irrigation water to the subsurface point of application without causing excessive water loss or water quality impairment
    - Apply chemicals and/or nutrients as part of a surface irrigation system in a manner that protects water quality including downstream drinking water sources.
    - Reduce energy use

Irrigation System Micro-irrigation 441

- What: An irrigation system for frequent application of small quantities of water on or below the soil surface as drops, tiny streams, or miniature spray through emitters or applicators placed along a water delivery line.
- Where: This practice applies on sites where soils and topography are suitable for irrigation of crops or other desirable vegetation and an adequate supply of suitable quality water is available for the intended purpose(s). This standard applies to systems that wet only a specific area (e.g., an individual plant or tree) and typically have design discharge rates less than 60 gallons per hour at individual application discharge points.
- This practice is used to accomplish one or more of the following purposes:

- Efficiently and uniformly apply irrigation water and maintain soil moisture for plant growth
- Prevent contamination of ground and surface water by efficiently and uniformly applying chemicals or nutrients
- Establishment of vegetation such as windbreaks and buffers
- Improve poor plant productivity and health
- Maintain or increase soil organic matter.
- Improve habitat for soil organisms.

Livestock Pipeline 516

- What: A livestock pipeline is a pipeline installed to convey water for livestock or wildlife.
- Where: The practice is applicable where water must be piped to another location for management purposes, to conserve the supply, or for reasons of sanitation. Pipelines installed under this practice are generally for livestock management purposes. A single water source can provide livestock water to several locations and be very effective in improving management of a grazing unit.

Pumping Plant 533

- What: A facility that delivers water or wastewater at a designed pressure and flow rate.
- Where: This practice applies where conservation objectives require the addition of energy to do the following:
  - Pressurize and transfer water from a surface or underground source to irrigated land, wetlands, livestock watering facilities, or reservoirs.
  - Transfer water for fire protection, or transfer of manure, wastewater or liquid byproducts.
  - Remove surface runoff or excess subsurface water.

  The pumping plant includes one or more pumps and associated power units, plumbing, and appurtenances, and may include pressure tanks, onsite fuel or energy source, variable speed and frequency drives, and protective structures.
- This practice is used to accomplish one or more of the following purposes:
  - Deliver water for improved plant condition, fire suppression, livestock, or wetlands.
  - Remove excessive subsurface or surface water.
  - Provide efficient use of water on irrigated land.

- Transfer of livestock waste or liquid byproducts as part of a wastewater transfer system.
- Reduce energy use.

Watering Facility 614

- What: A watering facility stores or provides drinking water to livestock.
- Where: This practice applies to all land uses where there is a need for a watering facility for livestock, where there is a source of water that is adequate in quantity and quality for the purpose, and where soils and topography are suitable for a facility. This practice is not intended for constructed earthen embankment or excavated ponds.
- This practice is used to accomplish one or more of the following purposes:
  - Supply daily water requirements.
  - Improve animal distribution.
  - Provide a water source that is an alternative to a sensitive resource.

Water Well 642

- What: A hole drilled, dug, driven, bored, jetted, or otherwise constructed into an aquifer for agricultural water supply.
- Where: This practice applies to all types of agricultural land where the quality and quantity of underground water is appropriate for the intended purpose. This practice does not apply to wells constructed for domestic or public water supply. Texas applicants are unable to apply for irrigation wells, but can apply for livestock wells.
- This practice is used to accomplish one or more of the following purposes:
  - Address the need for adequate livestock water quality and quantity
  - Provide irrigation water

WHERE TO LEARN MORE:

The following organizations have a wide array of resources available to learn more about these practices and how to implement them. Use the search box within each site to narrow down resources specific to your interest.

NCAT/ATTRA resources

Rodale resources
SARE resources

Your local Cooperative Extension is a great local resource and can provide you with resources specific to your locality.

Specific resources:
The Irrigator's Pocket Guide – NCAT

State specific:
The Texas Irrigator's Pocket Guide – NCAT

WHERE TO FIND CONTRACTORS:
If you need help sourcing local contractors who can provide estimates and help with project planning and installation the following offices in your locality may be able to help connect you with contractors in your area:
Soil & Water Conservation District office
NRCS office
County Cooperative Extension office

Other helpful resource specific for well installation:
Find Water Well Service Near Me - Water Well Contractor Directory - Wellowner.org