

SUBCHAPTER 25. SOIL DISTURBANCE ON PRESERVED FARMLAND

§ 2:76-25.1 Applicability

This subchapter applies to premises subject to farmland preservation deed restrictions recorded pursuant to the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq, P.L. 1983, c.32.

§ 2:76-25.2 Purpose

The purpose of this subchapter is to define what activities on the premises constitute soil disturbance and to establish soil disturbance limitation. Exceeding the soil disturbance limitation established in this subchapter will constitute a violation of the deed of easement, which prohibits activities detrimental to soil conservation and detrimental to the continued agricultural use of the premises in accordance with N.J.A.C. 2:76-6.15(a)(7) and which requires the premises to be maintained as an agriculturally viable parcel capable of sustaining a variety of agricultural operations in accordance with N.J.A.C. 2:76-6. ~~2:15(a)(15)(i)~~.

§2:76-25.3 Definitions (“Core” which will eventually be merged with “Non-Core” Definitions)

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“Soil disturbance” means soil alteration, soil surfacing, or soil compaction.

“Soil alteration” means human-altered and or human-transported (“HAHT”) soils and includes soil movement, grading, leveling, importation, exportation, cut, and/or fill but does not include normal tillage or deep tillage.

“Human-altered and human-transported soils ‘HAHT,’” also known as anthropogenic soils, means soils that have profound and purposeful alteration or occur on landforms with purposeful construction or excavation and the alteration is of sufficient magnitude to result in the introduction of a new parent material (“human-transported material”) or a profound change in the previously existing parent material (“human-altered material”). HAHT soils do not include soils with incidental or unintentional surficial changes due to exempt agricultural practices and are more fully described in the in the United States Department of Agriculture (“USDA”), Natural Resources Conservation Service (“NRCS”), *Keys to Soil Taxonomy, Twelfth Edition, 2014*

(https://www.nrcs.usda.gov/wps/PA_NRCSCConsumption/download?cid=stelprdb1252094&ext=pdf) and the USDA NRCS *Soil Survey Manual, Issued March 2017 with Minor Amendments 2018*

(https://www.nrcs.usda.gov/wps/PA_NRCSCConsumption/download?cid=nrcseprd1333016&ext=pdf).

“Normal Tillage” means generally accepted agricultural practices for seedbed preparation and cultivation of soil including moldboard plowing, disking, chisel plowing, hill and furrow plowing, bed shaping, and the use of similar site preparation practices as determined by the Committee where the practice does not meet the definition of human-altered and human-transported soils. Normal tillage is limited to the depth of the topsoil layer as defined herein.

“Deep tillage” means performing tillage operations below the normal tillage depth in a manner consistent with a farm conservation plan to modify adverse physical or chemical properties of a soil that inhibit plant growth, such as compacted layers formed by field operations, restrictive layers such as cemented hardpans in the root zone, overwash or deposits from wind and water erosion or flooding, or contaminants in the root zone. Deep tillage does not include elevation or topography change.

“Soil surfacing” means a human-made and/or human-placed covering over the soil including both suspended surfaces and ground-level surfaces unless identified by the Committee as an exempt agricultural practice.

“Suspended surface” means a surface placed above the soil and includes, but is not limited to, roofs of buildings, trailers, greenhouses, run-in sheds, pavilions, open-floored arenas, and decks.

“Ground-level surface” means a surface placed in contact with the soil and includes, but is not limited to, flooring, paving, asphalt, asphalt millings, reinforced concrete, recycled concrete,

porous asphalt, porous concrete, stone, rock, gravel, pavers, bricks, block, rubber, sand, cinders, construction mats, pond liners, and non-topsoil stockpiles.

“Soil compaction” means any activity other than normal tillage that results in an increase in soil dry bulk density above the root limiting levels, or in the consolidation of or a reduction in a soil’s capacity to infiltrate and percolate water. The causes of soil compaction include, including, but are not limited to: static force, tamping, vibration, kneading, and/or rolling techniques. Examples of preparing or using land that may result in soil compaction include, but are not limited to: preparing or using land for the placement of engineered structures, footings, foundations, earth-retaining structures, parking areas, storage areas, livestock training or confinement areas, or travel lanes or the placement of engineered structures, through static force, tamping, vibration, kneading, and rolling techniques unless specifically identified approved by the Committee as an exempt agricultural practice.

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§2:76-25.3 Definitions (“Non-Core” which will eventually be merged with “Core” Definitions)

“Actively cropped” means land on portions of the premises that is available for agricultural use and production where the following apply: crops or forages are grown directly in the soil profile for a minimum of 150 consecutive days in one (1) calendar year or for two (2) periods of not less than 90 consecutive days each in one (1) calendar year; annual crops and hay are harvested or perennial crops (other than hay) are maintained annually, and forages are consumed by direct grazing; or cover crops grown as part of a production rotation that may or may not be harvested and included in a farm conservation plan.

~~“Agricultural production” has the same meaning as that term is defined in N.J.A.C. 2:76-6.2.~~

“Agricultural productivity” means the capacity of a soil to produce a specified plant or sequence of plants under a physically defined set of management practices as measured in terms of inputs of production factors in relation to outputs or yields (source: NRCS National Agricultural Land Evaluation and Site Assessment (LESA) Handbook).

“Agricultural productivity standards” means minimum criteria required to prove that rehabilitation was successful including, but not limited to, crop yield, soil bulk density, fertility, and pH range for the local soil series per USDA-NRCS soil mapping criteria.

~~“Agricultural purpose” has the same meaning as that term is defined in N.J.A.C. 2:76-6.2.~~

~~“Agricultural use” has the same meaning as that term is defined in N.J.A.C. 2:76-6.2.~~

“Agriculturally viable parcel” has the same meaning as that term is defined in N.J.A.C. 2:76-6.2.

“Bulk density” means an indicator of how well plant roots are able to extend into the soil, calculated as the dry weight of soil divided by its volume (source: NRCS Soil Quality Indicators Fact Sheet and NRCS-NJ Comments).

“Certified soil rehabilitation project” means a soil rehabilitation project approved by the Committee and completed pursuant to N.J.A.C. 2:76-25.9 and Appendix A.

“Committee” means the State Agriculture Development Committee.

“Contiguous premises” means adjacent properties, even if they are separated by human-made barriers or structures or legal boundaries. Contiguous premises shall include, but are not limited to, land areas which directly abut or are separated by a general access roadway or other right-of way, including waterways (source: NJ Freshwater Wetlands Protection Act rules).

“Cover crop” means an annual or perennial crop consisting of a specific plant or mix of plants that are planted and grown primarily to improve soil quality by reducing soil compaction, increasing soil organic matter content, trapping or producing nitrogen, and reducing soil erosion.

“Cranberry bog” also known as a cranberry bed, means a naturally acidic ~~peat~~ bog that has been drained, cleared, leveled, and covered with sand and includes appurtenant canals and earthen dikes for purposes of cultivating cranberry varieties developed from the native species *Vaccinium macrocarpon* Aiton.

“Deep tillage” means performing tillage operations below the normal tillage depth in a manner consistent with an approved farm conservation plan to modify adverse physical or chemical properties of a soil that inhibit plant growth, such as compacted layers formed by field operations, restrictive layers such as cemented hardpans in the root zone, overwash or deposits from wind and water erosion or flooding, or contaminants in the root zone. Deep tillage does not include elevation or topography change.

“Drylot” means an area with less than 70% vegetative cover used for livestock confinement. (Source: Equine AMP).

“Exempt agricultural practices” means those practices set forth in N.J.A.C. 2:76-25.4.

“Existing agricultural water impoundment” means an excavated, unlined farm pond or dammed impoundment fed by surface water or groundwater for irrigating agricultural crops or watering livestock that is constructed prior to adoption of these rules. Agricultural water impoundments shall not include other types of water-related structures including, but not limited to, decorative or recreational ponds, wildlife ponds, stormwater management facilities, aquaculture ponds, pools, manure lagoons, tailwater recovery ponds, ponds constructed primarily for hydropower uses, or naturally occurring ponds and wetlands but not including existing open ditches as that term is defined in this subchapter. Associated berms or dams are considered soil alteration or soil surfacing pursuant to N.J.A.C. 2:76-25.3.

“Existing open ditch” means a vegetated, unlined canal, ditch, open drain, conveyance swale, or similar structure used to convey water that was constructed prior to the adoption of these rules and may be associated with an existing agricultural water impoundment or utilized to convey runoff from crop fields or underground drainage systems.

“Farm conservation plan” has the same meaning as that term is defined in N.J.A.C. 2:76-6.2.

“Field moisture capacity” means the amount of water retained in a soil after it has been saturated and has drained freely, expressed as a percentage of the oven dry weight of the soil.

“Field Office Technical Guide (FOTG)” means United States Department of Agriculture Field Office Technical Guide, incorporated herein by reference, as amended and supplemented.

“Geotextile fabrics” means permeable, woven and non-woven plastic fabrics, typically used for separation of soil layers, erosion control and weed management but does not include biodegradable or paper fabrics.

“Geotextile field” means an area that has been covered with geotextile fabric for the purposes of nursery or floriculture production where the fabric is placed over native soil that has not undergone soil alteration, soil surfacing, or soil compaction but may be top-dressed with organic mulch.

“Grantee” means the holder of the development easement.

“Grantor” means the owner who conveyed the development easement, their heirs, executors, administrators, personal or legal representatives, successors and assigns.

“Hoophouse” means an individual temporary agricultural structure that is used exclusively for the production and storage of live plants by protecting same from sun, wind, excessive rainfall, or cold, or to extend the growing season. A hoop house is constructed of a metal, wood, or durable plastic frame covered with polyethylene, polycarbonate, plastic, or fabric material and does not have a permanent foundation, footings, ground-level surface, or anchoring system. The frame and exterior covering may or may not be removed during the growing season. Also known as “high tunnel,” “low tunnel,” “temporary greenhouse” or “polyhouse.”

“Livestock training area” means an uncovered, outdoor area of the Premises used for riding, racing, training, showing, or rehabilitating livestock. Examples include but are not limited to arenas, tracks, and training rings.

“Livestock confinement area” means housed lots, feedlots, confinement houses, stall barns, milk rooms, milking centers, cow yards, barnyards, medication pens, dry lots, exercise yards and stables. *(source: NJ Animal Waste Rules)*

“Low-ground pressure equipment” means construction equipment designed to distribute heavy loads to reduce soil compaction with designed ground pressure less than 12psi *(source: Penn State Extension: <https://extension.psu.edu/avoiding-soil-compaction#:~:text=Topsoil%20compaction%20is%20caused%20by,percent%2010%20years%20after%20compaction>)*

“Maximum dry bulk density” means the maximum bulk density measured in grams per cubic centimeter as set forth in N.J.A.C. 2:76-25A.5.

“Minimum rooting depth” means at least 40 inches or a lesser depth equal to the depth to a subsurface layer in the natural soil profile that inhibits or prevents root penetration *(source: NRCS Specifications for Prime Farmland)*.

“Minimum vegetative cover” means vegetative cover of at least 70% for at least 9 months per calendar year measured pursuant to the procedures set forth in N.J.A.C. 2:76-25A.4 and Appendix A.

“NRCS” means the Natural Resources Conservation Service, an agency of the United States Department of Agriculture providing technical assistance for the conservation of agricultural and related natural resources.

“Nominal smoothing” means the movement of topsoil for an agricultural purpose that does not alter the elevation of the existing ground surface more than three (3) inches from the original pre-existing natural landform.

“Normal tillage” means generally accepted agricultural practices for seedbed preparation and cultivation of soil including moldboard plowing, disking, chisel plowing, hill and furrow plowing, bed shaping, and the use of similar site preparation practices as determined by the Committee where the practice does not meet the definition of human-altered, human-transported soils. Normal tillage is limited to the depth of the topsoil layer.

“On-farm utilities” means buried electric, sewer, water, gas, communication lines, or similar utilities that serve residential units, agricultural labor housing, farm buildings, or other permitted uses on the premises, solely service the premises, and installed in compliance with the on-farm utilities construction standards established in N.J.A.C. 2:76-25A.7. On-farm utilities shall not do not include utilities installed for the purpose of supplying resources for, or being interconnected with, for off-farm utility demand or generation. are not used to export resources from or convey resources the premises and which follow the on-farm utilities construction standards established in N.J.A.C. 2:76-25A.7.

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“Organic” means a material derived from living matter such as leaves, crop residues or compost.

“Organic mulch” means a material at a depth capable of being incorporated into the soil profile consisting exclusively of organic material used for weed control, moisture retention, landscaping, travel paths, livestock bedding, soil-compaction alleviation, or as a soil amendment that is composed of tree bark, wood chips, straw, pine straw, grass clippings, leaves, compost, manure, coconut fibers, or similar materials. Organic mulch does not include rubber mulch or materials with synthetic fibers, oils, or other substances added.

“Parking aisle” means a lane within a parking area used to connect peripheral lanes to parking stalls.

“Parking area” means an area on a farm used for vehicular parking that does not meet the definition of a travel lane or storage area. A parking area encompasses parking aisles but does not include peripheral lanes. Parking areas are delineated by roads, travel lanes, peripheral lanes, fences, or otherwise delineated by land use and vegetative cover.

“Parking structure” means any fence, barrier, bollard, parking aid, traffic control device, lighting fixture, or similar structure that is installed for long-term use related to managing vehicular traffic and limits or prohibits normal harvesting or tillage activities. Temporary traffic control devices such as wooden stakes, fiberglass reflective rods, rope, and traffic cones which are installed only during a farm event and removed at the events’ completion are not considered parking structures. Agricultural fencing whose primary purpose is to contain livestock or exclude wildlife and generally follows the field perimeter is not considered a parking structure.

“Peripheral lane” means established travel lanes used by vehicles to access parking areas, which typically follow the peripheral edges of a parking area. These lanes may be considered unimproved travel lanes as that term is defined in this subchapter.

"Permeable" means a material or surface treatment that allows the passage of water into the soil at a rate equal to or greater than the surrounding surface soils, or that allows the passage of water into the soil at a rate equal to or greater than the saturated hydraulic conductivity for the soil type identified in the soil survey.

"Premises" means the property under easement which is defined by the legal metes and bounds description contained in the deed of easement.

"Public parking" means parking of vehicles registered to patrons, members of the public, or suppliers of the farm not directly employed by the farm.

"Saturated hydraulic conductivity" means a quantitative measure of a saturated soil's ability to transmit water when subjected to a hydraulic gradient (source: NRCS Soil Survey Technical Note 6).

"Soil" means the natural and native mineral and/or organic enriched material that occurs at the earth's surface due to the combined long-term interactions of soil forming factors such as geologic parent material, climate, vegetation, and topography. Natural soils are characterized by distinct layers (or horizons) that have resulted from these factors over time.

"Soil horizon" means a layer within a soil profile differing from layers of soil above and below it in one or more of the soil morphological characteristics including color, texture, coarse fragment content, structure, consistency and presence of redoximorphic features (source: DEP's Standards for Individual Subsurface Sewage Disposal Systems).

"Soil loss tolerance rate (T)" means the maximum rate of annual soil loss that will permit crop productivity to be sustained economically and indefinitely on a given soil (source: American Society of Agronomy, Soil Science Society of America, Special Publication Number 45).

"Soil profile" means a vertical cross-section of soil showing the characteristic horizontal layers or horizons of the soil, which have formed as a result of the combined effects of parent material, topography, climate, biological activity and time. (source: DEP's Standards for Individual Subsurface Sewage Disposal Systems).

"Soil structure" means the arrangement of soil particles into aggregates which form cohesive and distinct structural units.

"Soil Survey Report" means a report generated from the NRCS Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>) that includes maps showing the distribution of soil mapping units throughout a particular geographic area, together with narrative descriptions of the soil series shown and other information relating to the uses and properties of the various soil series (source: DEP's Standards for Individual Subsurface Sewage Disposal Systems and NRCS-NJ Comments).

"Solar energy" has the same meaning as that term is defined in N.J.A.C. 2:76-24.3.

"Solar energy facilities" has the same meaning as that term is defined in N.J.A.C. 2:76-24.3.

"Solar panels" means ground-mounted photovoltaic panels associated with a solar energy facility meeting the standards set forth in N.J.A.C. 2:76-25A.6.

"Stockpile" means a pile of any material that is in place for more than 120 cumulative days in a 12-month period. Stockpiles include but are not limited to subsoil, sand, manure, leaves, wood chips, compost, building materials, gravel, road surfacing materials, timber, and metal.

"Storage area" means an area of land not in crop production used for the storage of equipment or other farm-related items but not otherwise meeting the definition of a parking area or travel lane.

"Subsoil" means the layer of soil beneath the topsoil where there is visibly less organic matter and root development than the topsoil layer, typically noticed by a change in soil color. Subsoil is considered the B soil horizon.

"Substitute soil material" means soil that has been created from a blend of basic components to have equivalent physical, chemical, and biological properties to the native soil.

"Technical Service Provider (TSP)" means a private individual or entity that has been certified by the USDA-Natural Resources Conservation Service as capable of providing technical service activities according to NRCS standards and specifications for specific conservation activities.

"Temporary geomembrane" means an impermeable plastic film used for a variety of agricultural uses, including but not limited to plastic mulch, silage wraps, or tarps, which is removed annually.

"Temporary ground protection mats" means specifically designed construction mats consisting of wood (not including plywood), plastic, or metal that distribute heavy loads over a larger area to reduce soil compaction and that are in place for less than 120 cumulative days per calendar year.

"Temporary movable structure" means a structure that is removed from the Premises without demolition and which does not have a permanent foundation, floor, or anchoring system and is in place for no more than 120 cumulative days in a 12-month period. Temporary movable structures include but are not limited to office trailers, portable trailer-mounted-bathrooms, portable toilets, horse trailers, food carts, campers, or similar structures.

"Temporary parking area" means an actively cropped area used seasonally or periodically for public parking of vehicles related to the operation of the farm and which maintains minimum vegetative cover. Temporary parking areas do not contain parking structures.

"Temporary storage area" means an area utilized for the storage of infrequently used farm equipment or privately owned equipment associated with permissible farm activities and which maintains minimum vegetative cover.

"Temporary tents" means temporary structures with an impermeable covering to provide shelter for agriculture-related activities. They are also known as tensioned membrane structures or canopies.

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Temporary tents do not have ~~a permanent foundations, footings, floors, or anchoring systems and are in place for not more than 120 cumulative days in a 12-month period.~~ Temporary tents do not include hoop houses.

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"Topsoil" means the uppermost layer in a natural or cultivated soil profile where cultivation, root growth, biological activity, and organic matter are concentrated. Topsoil is composed of mineral particles (sand, silt, and clay) and organic material, and allows for air exchange and water holding. Topsoil is also known as the "plow layer", "surface soil", "Ap layer", "Ap horizon", or the "surface layer". Topsoil depth is site specific, but typically varies between 6 and 12 inches.

"Topsoil stockpile" means a stockpile of topsoil constructed in accordance with N.J.A.C. 2:76-25A.5.

"Travel lane" means a generally linear feature on a farm primarily used for the conveyance of vehicles, pedestrians, livestock, and/or equipment.

"Underground drainage system" means a subsurface drainage system made of conduit such as corrugated plastic tubing, tile, or pipe, installed beneath the ground surface to collect and/or convey drainage water to improve farming conditions. Also known as "drain tile". (source: NRCS definition for subsurface drain, practice code 606)

"Unimproved travel lane" means a travel lane that is not more than 10 feet wide for one-way traffic or 16 feet wide for two-way traffic, measured from the outside of the tire tracks, plus an additional 2-foot allowance per side for a shoulder, that has not been surfaced, and is not constructed closer than 300 feet in parallel to another unimproved travel lane or travel lane. An "unimproved travel lane" is also known as a farm lane. (source: NRCS-NJ Field Office Technical Guide standards for Access Road (Code 560)).

"USDA" means the United States Department of Agriculture.

"Vegetative cover" means living plant cover or intact residues but does not include weeds.

"Vegetated livestock area" means a livestock training or confinement area that maintains minimum vegetative cover.

"Weed" means a plant that is not grown deliberately or is otherwise prohibited, invasive, or noxious. Examples of weeds include but are not limited to plantain, thistle, burdock, garlic mustard, and ground ivy.

§ 2:76-25.4 Exemptions

(a) The following agricultural practices shall not constitute soil disturbance for purposes of determining compliance with the soil disturbance limitation set forth in N.J.A.C. 2:76-25.5, and shall be considered exempt agricultural practices:

1. Cranberry bogs/beds;
2. Deep tillage;
3. Existing open ditches;
4. Existing agricultural water impoundments;
5. Geotextile fields;
6. Hoophouses;
7. Normal tillage;
8. Nominal smoothing;
9. On-farm utilities;
10. Organic mulch;
11. Rehabilitated soils;
12. Solar panels;
13. Temporary geomembranes;
14. Temporary ground protection mats;
15. Temporary movable structures;
16. Temporary parking areas;
17. Temporary storage areas;
18. Temporary tents, when;

- a. In aggregate, all temporary tents on the Premises occupy less than 2,000 square feet -or;
- b. Temporary tents of any size that are in place for less than 120 cumulative days in a calendar year.

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19. Topsoil stockpiles;
20. Underground drainage systems;
21. Unimproved travel lanes;
22. Vegetated livestock areas

(b) Hoophouses, as defined in N.J.A.C. 2:76-25.3 placed on geotextile fields without soil alteration, soil surfacing, or soil compaction are considered exempt agricultural practices.

(c) Conservation practices meeting the criteria below shall not constitute soil disturbance for the purpose of determining compliance with the soil disturbance limitation set forth in N.J.A.C. 2:76-22.5, and shall be considered exempt conservation practices when:

1. The conservation practice is planned and installed in accordance with the planning criteria and conservation practice standards developed by the USDA-Natural Resources Conservation Service and;
2. Has a positive conservation value effect under in section 5 of the FOTG (ADD FOTG REFERENCE) for one or more of the following resource concerns:
 - i. Sheet and Rill Erosion
 - ii. Wind Erosion
 - iii. Ephemeral Gully Erosion
 - iv. Classic Gully Erosion
 - v. Bank Erosion from Streams, Shorelines, or Water Conveyance Channels
 - vi. Compaction and;
3. Is designed to minimize excavation, cuts, and fills and:
 - i. In no case shall excavation exceed 18 inches and;
 - ii. All topsoil shall be stripped and reapplied in accordance with the topsoil stockpiling standard (N.J.A.C. 2:76-25A.5) and;
4. Does not utilize suspended surfaces or ground level surfaces and;
5. The conservation practice is included in a farm conservation plan approved by the local soil conservation district and NRCS prior to installation and;
6. The practices are installed under the supervision of a licensed professional engineer, SADC, Technical Service Provider (TSP), or USDA-NRCS and;
7. An as-built design is prepared certifying the conservation practice, as implemented, meets or exceeds NRCS standards, and is provided to SADC and the Grantee and;
8. Stormwater basins are excluded from conservation practices.

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(d) An agricultural practice not specifically listed in subsection (a) shall be considered an exempt agricultural practice on the premises if approved by the Committee in advance based on its determination that the agricultural practice in question meets all of the following criteria:

1. Is able to maintain minimum vegetative cover; and
2. Does not cause an increase beyond the maximum dry bulk density; and
3. Does not cause soil and water resource concerns; and
4. Does not have soil surfacing that cannot be easily removed; and
5. Does not cause soil contamination; and
6. Does not cause soil erosion; and
7. Are necessary to support agricultural production.

(e) The Committee may designate additional exempt agricultural practices by amendment to subsection (a) of this subchapter.

1. In considering the adoption of additional exempt agricultural practices, the Committee may consult with the following agencies, organizations, or persons:

- i. The New Jersey Department of Agriculture;
- ii. The New Jersey Agricultural Experiment Station, including appropriate county agents;
- iii. County Agriculture Development Boards;
- iv.. The State Soil Conservation Committee;
- v. Any other states' Departments of Agriculture, land grant institutions or Agricultural Experiment Stations;
- vi. The United States Department of Agriculture, or any other Federal governmental entity; or
- vii. Any other organization or person which may provide expertise concerning the particular practice.

2. A Grantee or Grantor may request the Committee designate additional exempt agricultural practices.

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(f) Exempt agricultural practices shall not violate any other provision of the deed of easement.

(g) Soil disturbance created solely as a result of other property interests in the premises superior in title to the farmland preservation easement, such as utility easements and road rights-of-way, shall not constitute soil disturbance for the purposes of determining compliance with the soil disturbance limitations set forth in N.J.A.C. 2:76-25.5.

§ 2:76-25.5 Limitation

(a) Soil disturbance totaling up to 12% of the premises or 4 acres, whichever is greater, will be permitted.

1. In calculating the permissible soil disturbance limit, acreage shall be rounded to three decimal places (.000).

(b) Once an area of the premises has been disturbed, it will continue to be considered soil disturbance until and unless the Committee determines that the area has been successfully rehabilitated in accordance with N.J.A.C. 2:76-25.9 and Appendix A.

(c) Activities occurring within the footprint of areas already considered disturbed will not be counted as additional soil disturbance.

(d) Soil disturbance located outside the boundaries of the premises, including but not limited to severable and non-severable exception areas, residential exclusion areas, and any other area(s) of a farm not subject to the term and conditions of the deed of easement, shall not count towards the limitation set forth in (a) above.

2:76-25.6 Waiver

(a) This ~~sub~~section applies solely to premises preserved prior to the date of adoption ~~date of these~~ chapter rules.

(b) For eligible premises, the Committee may grant a waiver of the soil disturbance limitation established by N.J.A.C. 2:76-25.5 and the baseline mapping conducted pursuant to N.J.A.C. 2:76-25.10 up to a maximum soil disturbance limit of 15% or 6 acres, whichever is greater, provided that:

1. In calculating the permissible waiver limit, acreage shall be rounded to three decimal places (.000); and
2. The owner applies for a waiver on a form prepared by the Committee; and
3. The Committee determines that one or more of the requirements at (g) below are satisfied; and

43. The Committee determines that ~~one~~ all of the requirements at (h) below are satisfied; and

54. If a county or a qualified tax-exempt nonprofit organization is the Grantee of the development easement, the waiver shall be approved by both the ~~Grantee~~ Grantee and the Committee pursuant to this section.

(c) The application shall be filed with the Committee and the Committee shall provide the Grantee, if applicable, with a copy of the application.

1. The Committee shall, within 30 days of receipt of the application, provide written notice to Grantor and Grantee, if applicable, whether the application is complete or incomplete. The notice shall specify the missing information.

2. If the application is incomplete, Grantor shall have 120 days from receipt of the notice of incompleteness to provide the Committee with any missing information.

3. The Grantee, if applicable, shall take no action on the request for a waiver until the Grantee receives copies of the complete application and all supporting materials from the Committee.

(d) Within thirty (30) days of receipt of written notice from the Committee that the application is complete, the Grantor shall provide written notice of the application, at Grantor's sole expense, via certified mail, return receipt requested, and/or by personal service, to:

i. The clerk and land use board secretary of the municipality in which the premises is located. If the premises is located within 200 feet of an adjoining municipality, then written notice of the application shall also be given as set forth in (d)~~6~~ above to the clerk and land use board secretary of the adjoining municipality;

ii. The owners of all real property, on the current tax duplicates, within 200 feet in all

directions of the premises. The Grantor shall be solely responsible to pay for and obtain a certified list of property owners in accordance with N.J.S.A. 40:55D-12c.;

iii. The Grantee;

iv. The county planning board, if the premises is located adjacent to a county road or county-owned property;

(e) The notice ~~provided by the Grantor set forth~~ in (d), above, shall describe the relief sought in the application, a description of the project or other reason(s) necessitating the application, that comments on the application may be provided to, and ~~that~~ copies of the application materials can be obtained from, the Committee at: State Agriculture Development Committee, P.O. Box 330, Trenton, NJ 08625-0330, and sadc@ag.nj.gov.

(f) The application shall include, but not be limited to, the following information, as applicable:

1. A detailed narrative that:

- i. Explains how the project for which the Grantor is seeking a waiver meets at least one of the requirements at (g) ~~below above as well as~~ and all of the requirements of (h) ~~below~~; and
- ii. Demonstrates alternate designs and/or locations for the project necessitating the waiver application are infeasible; and

2. A description of any potential impacts of the proposed project upon the premises and any contiguous properties; and

3. If the waiver request relates to the construction of agricultural buildings, all necessary information relevant to support the request, including but not limited to building plans and site plans; and

4. If the waiver request is based on economic grounds, detailed financial documentation to support the request; and

5. A description of the existing land uses in the area and any potential impacts of the proposed project or regulated activities on those land uses; and

6. Any additional information that the Committee determines is reasonable and necessary to evaluate whether the waiver request meets the requirements of this section.

(g) Grantor shall be eligible for a waiver under this section if one of the following apply:

1. There is no feasible and prudent alternative to a proposed project resulting in soil disturbance on the preserved farm beyond the limitation contained in N.J.A.C. 2:76-25.5, including not pursuing the project, which would avoid or substantially reduce the anticipated soil disturbance; or

2. Due to ~~an situation~~ the particular circumstances of the Grantor and/or particular site conditions, compliance with this chapter would result in an exceptional and/or undue hardship for the Grantor and/or would adversely impact agricultural operations on the premises.

(h) In addition to meeting at least one of the requirements in (g) above, a premises is eligible for a waiver under this section only if the Grantor demonstrates that:

1. Existing soil disturbance on the premises is, upon the date of adoption of this chapter, within fifty percent (50%) of the limitation set forth in N.J.A.C. 2:76-25.5; and

i. In calculating the waiver threshold, acreage shall be rounded to three decimal places (.000).

2. The proposed project will not cause a direct negative impact on the use of property contiguous to the premises; and

3. The proposed project will be in compliance with relevant federal and state laws and regulations; and

4. The Grantor is in compliance with the farmland preservation deed of easement recorded on the premises; and

5. Grantor has obtained and implemented a farm conservation plan on the premises which is the subject of the waiver request, and management of the premises is consistent with that plan; ~~and~~

(i) In determining whether to grant an application for a waiver satisfying the requirements of (g) and (h) above, consideration shall be given to the extent to which the Grantor's actions or inaction current or previous activities may have directly or indirectly caused or contributed to the need to submit a request for a waiver.

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(j) The request for a waiver shall be approved, approved with conditions, or denied by the Committee, if the Committee is the grantee of the development easement, within 90 days after written notice of a complete application has been issued to the Grantor; if a board or a qualifying tax-exempt nonprofit organization is the grantee of the development easement, then the request for a waiver shall be approved, approved with conditions, or denied by ~~that~~ grantee within 90 days of receiving the complete application from the Committee. Such time periods may be extended by the Committee, the board or the qualifying tax-exempt nonprofit organization for good cause or with the consent of the Grantor.

1. The decision set forth in (i) above shall be memorialized by resolution of the Grantee, if applicable, and by the Committee, setting forth detailed findings of fact and conclusions of law.

2. The Committee ~~or and~~ the Grantee, if applicable, shall provide the Grantor with a copy of its decision to approve, approve with conditions, or deny the application, and shall also provide copies of the decision to the individuals and entities listed in (d) above, as applicable.

i. The Grantee shall provide the Committee with a copy of the Grantee's decision within 10 days of the issuance of the decision;

ii. The Committee shall approve, approve with conditions, or deny the request for a waiver within 60 days of receipt of the Grantee's approval. Such time period may be extended by the Committee for good cause or with the consent of the Grantor. The Committee shall provide the Grantor with a copy of the Committee's decision.

34. Decisions by the Committee and by the Grantee, as applicable, shall be memorialized by resolution adopted at a meeting held in accordance with the Byron M. Baer Open Public Meetings Act, N.J.S.A. 10:4-6, et seq.; decisions by the Committee shall be considered final administrative agency action subject to the right of appeal to the Appellate Division of the Superior Court.

(k) The Committee, or the Grantee, if applicable, may issue a waiver conditioned on, and which will become effective only upon, the Grantor's receipt of all necessary local, State, and Federal approvals, provided that if such approvals contain any requirements for implementation of a project associated with the waiver that are inconsistent with N.J.S.A. 4:1C-11, et seq., this subchapter, or the waiver itself, the waiver will be deemed null, void, and of no further force or effect.

(l) The Committee and the Grantee, if applicable, may include other reasonable conditions in granting the application for a waiver.

(m) The approval of an application for a waiver, with or without conditions, shall not run with the land, and the Committee's and Grantee's, if applicable, resolution shall explicitly so state, in addition to the following:

1. The right to apply for a waiver shall automatically terminate if there is a change in the record ownership of the premises, except upon sale, conveyance or transfer to the Grantor's immediate family member.

a. If the Grantor is an individual, "immediate family member" shall mean the Grantor's spouse, child, parent, sibling, aunt, uncle, niece, nephew, first cousin, grandparent, grandchild, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepparent, stepchild, stepbrother, stepsister, half-brother, or half-sister, whether the individual is related by blood, marriage, or adoption.

b. If the sale, conveyance or transfer of the record ownership of the premises is made to a business entity, such as a corporation, limited liability company, partnership or trust, the new Grantor of the subject property shall be entitled to the waiver provided that the transferring Grantor, or an immediate family member or members of the transferring Grantor, as defined in 1(a) above, hold(s) a majority interest in the business entity or trust;

2. A project completed in accordance with this section shall not be deemed a violation of the soil disturbance limitation set forth in N.J.S.A. 2:76-25.5 for successors in title to the premises.

(n) Nothing in this subchapter shall be interpreted as providing a project constructed pursuant to a

waiver with protection under section 9 of the “Right to Farm Act”, P.L.1983, c.31 (N.J.S.A. 4:1C-1, et seq.) if the project is not otherwise eligible for such protection.

§ 2:76-25.7 Aggregation and consolidation

(a) The soil disturbance allocation pursuant to N.J.A.C. 2:76-25.5 may, upon joint approval if applicable, of the Grantee and the Committee, be aggregated on a contiguous ~~premises~~ Premises owned by the same Grantor provided the total disturbance acreage does not exceed the combined individual allocations for each ~~parcel~~ Premises comprising the contiguous ~~P~~premises.

1. The decision set forth in (a), above shall be memorialized by resolution of the Grantee, if applicable, and Committee setting forth detailed findings of fact and conclusions of law.

2. The Grantee shall provide the Grantor and Committee with a copy of its decision to approve, approve with conditions, or deny the application.

- i. The Grantee shall provide the Committee with a copy of the Grantee's decision within 10 days of the issuance of the decision.

3. The Committee shall approve, approve with conditions, or deny the request for aggregation within 60 days of receipt of the Grantee's approval. Such time period may be extended by the Committee for good cause or with the consent of the Grantor.

- i. The Committee shall provide the Grantor and Grantee with a copy of its decision to approve, approve with conditions, or deny the application.

4. Decisions by the Committee and by the Grantee, as applicable, shall be memorialized by resolution adopted at a meeting held in accordance with the Byron M. Baer Open Public Meetings Act, N.J.S.A. 10:4-6, et seq.; decisions by the Committee shall be considered final administrative agency action subject to the right of appeal to the Appellate Division of the Superior Court.

(b) No aggregation between contiguous premises owned by the same Grantor shall be permitted unless those premises are restricted such that each premises is permanently associated with, and shall not be conveyed separate and apart from, each other, except as provided in (d), below. at any time in the future.

1. The ~~f~~urther division of aggregated parcels is prohibited.

(c) In the event the Committee approves an aggregation and consolidation in compliance with this section, the Committee shall prepare a ~~Corrective Deed of Easement~~ document reflecting the reallocation of the permitted disturbance and prohibiting further division on the respective premises in the future. The ~~Corrective Deed~~ document shall be recorded with the

County Clerk, and a copy of the recorded ~~Corrective Deed~~document shall be provided to the Grantor and, if applicable, to the Grantee.

(d) The Committee may, upon a showing of reasonable cause, approve the disaggregation of parcels as permitted in this section.

1. The approval shall require that the soil disturbance limitation for each disaggregated parcel not exceed that set forth in N.J.A.C. 2:76-25.5.
2. The Committee may require such other reasonable terms and conditions in granting approval.

§ 2:76-25.8 Division of the premises

(a) Each parcel resulting from a division of the premises approved by the Committee pursuant to N.J.A.C. 2:76-6.15(a)(15) must comply with the soil disturbance limitation prescribed in N.J.A.C. 2:76-25.5 at the time of division.

1. A parcel ineligible for a waiver pursuant to N.J.A.C. 2:76-25.6 shall not be deemed eligible as a result of a division of the premises.

(b) The soil disturbance limitation prescribed in N.J.A.C. 2:76-25.5 shall be allocated ~~at the same proportion for~~ proportionally to each of the parcels resulting from a division of premises pursuant to N.J.A.C. 2:76-6.15(a)(15) unless subject to aggregation in accordance with N.J.A.C. 2:76-25.7.

(c) In the event the Committee approves a division of the premises, the Committee shall prepare a ~~Corrective Deed of Easement~~ document reflecting the division and the allocation of the allowable soil disturbance on the respective premises. The ~~Corrective Deed~~ document shall be recorded with the County Clerk, and a copy of the recorded ~~Corrective Deed~~ document shall be provided to the Grantor and, if applicable, to the Grantee.

(d) In no event shall an increase in the total soil disturbance limitation prescribed in N.J.A.C. 2:76-25.5 result from a division of the premises.

§ 2:76-25.9 Soil rehabilitation application and certification procedures

- (a) A Grantor may complete a certified soil rehabilitation project for purposes of rehabilitating disturbed soils so that they no longer count towards the soil disturbance limit established pursuant to N.J.A.C. 2:76-25.5.
- (b) The Committee shall have the discretion to reduce, and/or determine the non-applicability of rehabilitation plan components set forth in Appendix A.
 - 1. Reduction of the components in Appendix A shall be based on relevant, site-specific conditions of the premises; or
 - 2. The Committee may develop templates for rehabilitation of common soil disturbances which may be followed in lieu of the requirements of Appendix A.
- (c) Not less than 180 days prior to commencing any proposed rehabilitation activities, the Grantor shall submit to the Committee a rehabilitation application and plan ("application package") on a form prepared by the Committee consistent with this subchapter and with the Soil Rehabilitation Standards set forth in Appendix A.
- (d) The Committee shall, within 60 days of receipt of the application package, notify the Grantor whether the application package is administratively complete.
 - 1. If the application package is determined administratively incomplete, Grantor shall be notified in writing with a summary of deficiencies.
 - 2. If the application package is determined administratively complete, the Committee shall commence a technical review of the rehabilitation plan.
- (e) The rehabilitation plan technical review period shall be 90 days.
 - 1. If the Committee determines portions of the rehabilitation plan are missing technical information necessary to complete a technical review:
 - i. The Grantor shall be notified in writing; and
 - ii. The review period shall be paused pending submission of any requested information; and
 - iii. The Grantor shall have 30 days to supply the requested information; and
 - iv. Acceptance of the submitted information shall restart the review period; and
 - v. Failure to submit the documentation within the timeframe shall be considered a withdrawal of the application package.
 - 2. If the Committee determines the rehabilitation plan does not meet the technical Soil Rehabilitation Standards set forth in Appendix A, the Committee shall provide a written denial letter to the Grantor stating the reason(s) for the denial. The Grantor may request a hearing pursuant to N.J.A.C. 2:76-25.12 for any such denial.
 - 3. If the Committee determines the rehabilitation plan meets the technical Soil Rehabilitation Standards set forth in Appendix A, the Committee shall provide written notice advising the Grantor ~~to~~ that the Grantor may commence the rehabilitation process. Notice shall be by certified mail return receipt requested. The Grantor shall commence the rehabilitation project within 12 months of receipt of the notice to commence.

- (f) The Committee may extend the application review timeframes listed above with appropriate justification. Notice of all such extensions shall be in writing to the Grantor. Failure by the Committee to act upon an application package within the review period(s) shall constitute approval of the rehabilitation plan.
- (g) If the rehabilitation plan is approved, the Grantor shall complete rehabilitation in accordance with approved rehabilitation sequence.
1. The Grantor shall notify the Committee of intent to commence the rehabilitation plan at least 5 business days prior to start of physical work.
 2. Before each subsequent step in the rehabilitation sequence begins, interim approval of the previous step shall be obtained by the Grantor from the Committee.
 - i. If interim approval is not obtained, the Grantor shall have not more than one (1) year to meet the standards of that step or the rehabilitation plan shall be considered unsuccessful.
 - (1) Not more than one (1) extension not more than one (1) year long shall be approved per step.
 - (2) Not more than two (2) extensions shall be approved per rehabilitation plan.
 - ii. If interim approval is obtained, the Grantor shall retain the documentation for final certification and shall proceed with the rehabilitation sequence.
 3. The Committee, at its discretion, may require an inspection of the premises before, during, or after rehabilitation to determine compliance with rehabilitation criteria. The Committee shall provide at least 24-hours advance notice of the inspection to the Grantor.
 4. The Committee may conduct an inspection of the site and may collect soil samples or other relevant site information to determine if rehabilitation was conducted according to the rehabilitation criteria.
 5. The Committee reserves the right to issue a stop-work order upon evidence of work undertaken that violates the approved rehabilitation plan.
 6. Upon completion of all rehabilitation activities, the Grantor shall submit a final certification report in accordance with Appendix A.
 - i. The Committee shall complete an administrative review within 60 days of receipt of the final report.
 - ii. The Committee shall schedule a site visit and review all submitted materials for technical completeness.
 - iii. If the Committee determines rehabilitation was not completed according to the approved rehabilitation plan, the Committee shall notify the Grantor of deficiencies and recommend corrective measures to bring the rehabilitation area into compliance with the standards within the timelines described in Appendix A.
 - iv. If the Committee determines that the rehabilitation work is still deficient after all stated timelines have passed, a resolution shall be issued denying the certification of rehabilitation and the and the land will continue to be counted towards the soil

disturbance limitations set forth in N.J.A.C. 2:76-25.5. The Grantor may request a hearing pursuant to N.J.A.C. 2:76-25.12 for any such denial.

- v. If the Committee determines that rehabilitation has been completed according to the approved rehabilitation plan, the Committee shall issue a final certification that all Soil Rehabilitation Standards in Appendix A have been satisfied. A resolution memorializing the certification shall be issued and the rehabilitated land area will no longer be counted towards the soil disturbance limitations set forth in N.J.A.C. 2:76-25.5.

§ 2:76-25.10 Baseline mapping and monitoring

(a) Baseline mapping of soil disturbance on each premises shall be established as of the date of adoption of this subchapter.

(b) Written notice of the baseline soil disturbance mapping shall be provided to the Grantor and the Grantee, if applicable, by certified mail, return receipt requested, at the recipient's last known address.

1. If the notice is returned as unclaimed or undeliverable, then the Committee shall make good faith efforts to provide an alternate manner of notice.

2. The written notice shall include a baseline map and a link to the Committee's website connecting to an online version of the baseline map depicting the extent and classification of identified soil disturbance features on the premises.

3. The written notice shall include a statement that the Grantor and/or Grantee may provide comments on the preliminary calculated extent or assigned classification of baseline map features in writing to the Committee within 180 days of receipt of the notice.

i. The Committee shall conduct a site visit, as necessary, to premises that are the subject of written comments before issuing a final baseline map.

4. The written notice shall include a statement that underscores the importance of commenting on and finalizing the baseline map within the specified time period, particularly for purposes of establishing eligibility for a waiver in accordance with N.J.A.C. 2:76-25.6.

5. The written notice shall include a statement that a request for a hearing shall be made in accordance with N.J.A.C. 2:76-25.12 in cases where the Grantor and/or Grantee disagrees with the final baseline map.

(ce) The Grantor and/or Grantee may submit to the Executive Director an appeal of the calculated extent or assigned classification of soil disturbance map features at any time.

1. Upon request, the Executive Director shall confer with the Grantor and/or Grantee as appropriate, within 60 days of the revised soil disturbance map submission completed as part of the annual monitoring process to review the request and supporting documentation as set forth herein.

2. If Grantor and/or Grantee disagrees with the revised soil disturbance calculation Grantor and/or Grantee may request a hearing pursuant to N.J.A.C. 2:76-25.12.

(de) Review of soil disturbance mapping shall occur regularly as part of the monitoring of each premises required pursuant to N.J.A.C. 2:76-6.13, N.J.A.C. 2:76-6.18A, N.J.A.C. 2:76-11.1, N.J.A.C. 2:76-16.1, or N.J.A.C. 2:76-17A.16, or upon request of the Grantee.

~~1. — 1.~~ The current version of soil disturbance mapping shall be available to the Grantor and/or Grantee at any time upon written request.

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~~2. Any increase in total soil disturbance of 2 acres or more shall be identified in the annual monitoring report submitted to the Committee by the Grantee.~~

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~~32. For farms within 75% of the soil disturbance limit established at N.J.A.C. 2:76-25.5, newly identified potential soil disturbances discovered during annual monitoring must be reported to the Committee as part of the requisite annual monitoring report or within 60 days upon identification, for those farms within 50% of the soil disturbance limit established at N.J.A.C. 2:76-25.6.~~

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~~(d) The Grantor and/or Grantee may submit to the Executive Director an appeal of the calculated extent or assigned classification of soil disturbance map features at any time.~~

~~1. Upon request, the Executive Director shall confer with the Grantor and/or Grantee as appropriate, within 60 days of the revised soil disturbance map submission completed as part of the annual monitoring process to review the request and supporting documentation as set forth herein.~~

~~2. If Grantor and/or Grantee disagrees with the revised soil disturbance calculation Grantor and/or Grantee may request a hearing pursuant to N.J.A.C. 2:76-25.12.~~

~~(ef) When new soil disturbances are identified For farms within 50% of the soil disturbance limit established at N.J.A.C. 2:76-25.5 through the monitoring process, the Grantee and/or Grantor shall include submit to the Committee the following documentation as part of its annual monitoring report submission to the Committee report supporting documentation:~~

1. Description of newly identified or amended disturbances characterized by type, location and size (in sq./ft.) as follows:

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i. Soil disturbance types as defined in N.J.A.C. 2:76-25.3:

- (1) Altered soil; and/or
- (2) Surfaced soil; and/or
- (3) Compacted soil.

ii. Property location identified by tax block and lot number and general description (for example, Northeast corner of Block A, Lot X) and with georeferencing using latitude and longitude being preferred.

iii. Size measured coarsely using basic field tools, including but not limited to tape measures, pacing, or hand-held Global Positioning System (GPS) units with GPS measurements being preferred. Vegetative cover should

be measured in accordance with Appendix A - Method for Measuring Vegetative Cover.

- iv. For areas where classification of soil disturbance is initially unclear, such as with soil alteration (cut/fill) or minimum vegetative cover, or exemptions, the monitor shall err on the side of including the potential disturbance and additional follow-up may be required to more accurately quantify disturbance areas with more precise tools.
2. Photos of each new disturbance shall be taken and provided to the Committee in digital format.
 3. Any additional information that the Committee determines is reasonable and necessary.

§ 2:76-25.11 Enforcement

(a) The Grantee and/or the Committee, upon a finding that the owner of a preserved premises has violated this subchapter, may pursue any remedies available in N.J.S.A. 4:1C-33 and the deed of easement pursuant to N.J.A.C. 2:76-6.15.

§ 2:76-25.12 Request for hearing

(a) Any Grantor and/or Grantee who is aggrieved by an action of the Committee pursuant to this subchapter may submit a written request to the Committee for a hearing.

1. A request for a hearing shall be sent to the Committee within ~~20~~ 45 days of receipt of notice of the Committee's action.
2. Requests shall be sent to the Executive Director, State Agriculture Development Committee, New Jersey Department of Agriculture, P.O. Box 330, Trenton, New Jersey 08625-0330.
3. Grantor and/or Grantee shall be afforded the opportunity for a hearing thereon in the manner provided for contested cases pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq.
4. The decision of the Committee shall be considered a final administrative agency decision, subject to the right of appeal to the Appellate Division of the Superior Court.

§ 2:76-25.13 Severability

Should any section, subsection, sentence, clause, phrase or term of this subchapter be declared void, invalid, illegal or unenforceable, for any reason, by the adjudication of any court or other tribunal having jurisdiction, such a declaration shall not affect the validity of the remaining provisions, which are hereby declared to be severable and which shall continue to remain in full force and effect.

SUBCHAPTER 25A. SUPPLEMENTAL SOIL DISTURBANCE STANDARDS

§ 2:76-25A.1 Applicability

This subchapter applies to premises subject to farmland preservation deed restrictions recorded pursuant to the Agriculture Retention and Development Act, N.J.S.A. 4:1C-11 et seq, P.L. 1983, c.32.

§ 2:76-25A.2 Purpose

The purpose of this subchapter is to promulgate technical standards for certain agricultural practices for which a singular definition as set forth in N.J.A.C. 2:76-25.3 is infeasible. Where those agricultural practices are undertaken in a manner noncompliant with the supplemental standards established in the subchapter, the acreage where those activities have occurred will count towards the soil disturbance limitation set forth in N.J.A.C. 2:76-25.5.

§ 2:76-25A.3 Definitions

"Basal cover" means the portion of the soil surface covered by plant bases. It does not include foliar cover (the vertical projection of exposed leaf area), or canopy cover (the vertical projection of outermost perimeter of natural spread of foliage, may be more than 100% if plants overlap).

"Bulk Density" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

~~"Degraded Soil" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.~~

"Dense Vegetative Cover" means more than 90% live vegetative cover over a topsoil stockpile year-round.

"Low Ground Pressure Equipment" means construction and/or agricultural equipment specifically designed to distribute the weight of the equipment over a larger area with tracks or other design features. Examples include a tracked excavator, tracked skid steer or wide tracked tractor.

"Low Intensity Topsoil Stockpile" means an option for stockpiling topsoil designed in accordance with N.J.A.C. 2:76-25A.5.

"Maximum Dry Bulk Density" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Minimum Rooting Depth" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Minimum Vegetative Cover" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Moderate Intensity Topsoil Stockpile" means an option for stockpiling topsoil from which hay may be harvested pursuant to N.J.A.C.2:76-25A.5.

"Normal Tillage" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"On-farm utilities" has the same meaning as that term is defined in N.J.A.C. 2:76-25.34.

"Premises" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Soil" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Soil compaction" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Soil disturbance" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Soil horizon" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Soil Loss Tolerance Rate (T)" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Soil profile" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Soil structure" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Solar energy" has the same meaning as that term is defined in N.J.A.C. 2:76-24.3.

"Solar energy facilities" has the same meaning as that term is defined in N.J.A.C. 2:76-24.3.

"Solar panels" has the same meaning as that term is defined in N.J.A.C. 2:76-24.3.

"Solar-related disturbance area" means the total contiguous or noncontiguous area(s) supporting the solar energy facilities and related infrastructure. The total area calculation shall include all areas of land that are devoted to or support the solar energy facilities; any areas of land no longer available for agricultural or horticultural production due to the presence of the solar energy facilities; any areas of the farm used for underground piping or wiring to transmit solar energy or heat where the piping or wiring is less than three feet from the surface. Solar-related disturbance area ~~it~~ does not include building-mounted solar energy facilities.

"Step-point method" means the quantitative means of determining minimum vegetative cover pursuant to N.J.A.C. 2:76-25A.4 and Appendix A.

"Stockpile" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Subsoil" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Topsoil" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"Topsoil Stockpile" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

"USDA" has the same meaning as that term is defined in N.J.A.C. 2:76-25.3.

§ 2:76-25A.4 Vegetative Cover

(a) Temporary parking areas, temporary storage areas, livestock confinement, and livestock training areas are exempt agricultural practices pursuant to N.J.A.C. 2:76-25.4 when minimum vegetative cover as defined in N.J.A.C. 2:76-25.3 is maintained.

(b) The measurement of vegetative cover shall be conducted according to the method detailed in Appendix A.

(c) The Committee and Grantee, as appropriate, shall consider the following factors affecting the quality of vegetation and the ability of a field to maintain minimum vegetative cover:

- i. The weight of the equipment, livestock, or vehicles; and
- ii. The frequency of use of the area each day or season; and
- iii. The yield potential of the pasture; and
- iv. Pasture management (i.e. mowing, irrigating, fertilizing, seeding, and pasture rotation); and
- v. Plant species present; and
- vi. Drainage; and
- vii. Soil type; and
- viii. Weather conditions and season.

§ 2:76-25A.5 Topsoil stockpiling

(a) General performance criteria:

1. Topsoil stockpiles shall not be located in regulated areas such as wetlands, waters of the state, floodplains, or wetland transition areas.
2. Topsoil stockpiles shall be oriented to allow drainage around the stockpile, to keep the topsoil well drained and aerobic, and to avoid ponding water around the soil.
3. Topsoil movement shall only take place when soils on the site are significantly below field moisture holding capacity to minimize soil compaction.
4. Topsoil shall be removed and placed using low ground pressure equipment unless work is done from ground protection mats or existing travel lanes.
5. The area to be stripped of topsoil:
 - i. Shall have existing vegetation removed by harvesting, mowing, or treating with herbicide according to the manufacturer's label.
 - ii. Shall not be tilled before excavating topsoil to maintain the soil structure.
 - iii. Bulky vegetation (e.g., mulch, corn stover, excessive grass) shall not be incorporated into topsoil stockpiles but shall be harvested or otherwise removed.
6. When moving, handling, and grading topsoil, care shall be taken to avoid overhandling and compaction.
 - i. Topsoil shall not be moved using any equipment that substantially reduces soil aggregate structure, increases soil compaction, or leads to excessive soil smearing.
 - ii. When possible, the topsoil shall be placed directly onto the final stockpile location or shall be placed directly into a vehicle to be transported to the stockpile location.
7. Topsoil stockpile placement shall avoid overlying prime farmland soils when feasible.
8. Topsoil shall be managed in a way to maintain its soil structure to the maximum extent practicable (e.g., avoid deliberately pulverizing soil clods).
9. Care shall be taken to avoid soil smearing; if the soil is smeared during construction, soil shall be scarified to allow for water and air infiltration and exchange.
10. Topsoil stockpiles shall be maintained to be free of woody vegetation unless specifically permitted herein.
11. Topsoil stockpiles shall be created as either low intensity topsoil stockpiles or moderate intensity topsoil stockpiles, depending on the goals of the farming operation, as described below.
12. If equipment travel over the topsoil stockpile is necessary for construction or maintenance of the stockpile, travel shall be limited to the minimum number of passes required. Travel shall not increase soil dry bulk density above the values listed in the following table as set forth in [USDA-NRCS-SSESC website link]:

Maximum Dry Bulk Densities (grams/cubic centimeter) by soil type Soil Type/Texture Bulk Density

Soil Type/Texture	Bulk Density (g/cc)
Coarse, Medium and Fine Sands and Loamy Sands	1.80
Very Fine Sand and Loamy Very Fine Sand	1.77
Sandy Loam	1.75
Loam, Sandy Clay Loam	1.70
Clay Loam	1.65
Sandy Clay	1.60
Silt, Silt Loam	1.55
Silty Clay Loam	1.50
Silty Clay	1.45
Clay	1.40

Source: USDA Natural Resource Conservation Service, Soil Quality Information Sheet, Soil Quality Resource Concerns: Compaction, April 1996 and Table 19-1 of the Standards for Soil Erosion and Sediment Control in New Jersey, July 2017(b)

(b) Low Intensity and Moderate Intensity Topsoil Stockpiles

1. Low intensity topsoil stockpile areas cover a smaller area than moderate intensity topsoil piles but do not grow a harvestable crop. For low intensity topsoil stockpile areas:
 - i. Existing vegetation shall be removed before placement of topsoil fill.
 - ii. The existing topsoil shall be tilled or ripped to eliminate any transition zone between the existing topsoil and the topsoil stockpile to be placed on the area.
 - iii. Topsoil shall be stockpiled to a maximum height of three (3) feet above original grade.
 - iv. The side-slopes of the topsoil stockpile shall be no greater than 4 Horizontal:1 Vertical (25%) to reduce erosion potential and allow for routine mowing.
 - v. When topsoil is planned to be stockpiled for more than 30 days it shall be seeded and mulched according to the Critical Area Planting (342), Tables 3 and 4 available electronically here:
<https://efotg.sc.egov.usda.gov/references/public/NJ/NJ342.pdf> , where the purpose of planting is to stabilize berms and low embankments.
 1. Seeding will occur within the recommended planting dates in table 2 for the species selected.
 2. Any stabilization outside the seeding window shall be mulched in accordance with the *Standards for Soil Erosion and Sediment Control in New Jersey, Stabilization with Mulch only* available electronically here:
<https://www.nj.gov/agriculture/divisions/anr/pdf/2014NJSoilErosion>

[ControlStandardsComplete.pdf](#), until permanent seeding occurs within the seeding window.

2. Moderate intensity topsoil stockpile areas are lower in height than low intensity stockpiles, and cover more land area, but may be cropped with hay, providing an economic opportunity not available on low intensity topsoil stockpiles. For moderate intensity topsoil stockpile areas:
 - i. All vegetation shall be removed prior to placement of topsoil fill.
 - ii. The existing topsoil shall be tilled or ripped to eliminate any transition zone between the existing topsoil and the topsoil stockpile to be placed on the area.
 - iii. Topsoil shall be placed at a depth of not less than 12 inches and not more than 18 inches.
 - iv. Side slopes shall be no greater than 6 Horizontal: 1 vertical.
 - v. Seeding shall be an appropriate long-term, deep rooting perennial hay crop within 30 days.
 - vi. During establishment, no harvesting shall occur until the crop has reached a sufficient height to ensure vigorous, deep root establishment.

(c) Maintenance of Topsoil Stockpiles:

1. Agronomic nutrient testing of the surface of the topsoil stockpile shall be completed as soon as the stockpile is constructed. Appropriate amendments shall be added to the soil to establish and maintain dense vegetative cover as recommended by the soil test results.
2. Dense vegetative cover shall be established and maintained on the topsoil stockpiles within 30 days of final soil placement and grading. Topsoil stockpiles shall be reseeded as necessary to maintain dense vegetative cover. There shall be no tillage of topsoil stockpiles after initial establishment except as expressly provided herein.
3. Permanent vegetation on low intensity soil stockpiles shall be mowed no lower than six (6) inches and shall be maintained free of woody vegetation unless otherwise specified herein. Equipment travel over the stockpiles shall be minimized and shall only occur when the stockpile is significantly below field moisture capacity.
4. Permanent vegetation on moderate intensity soil stockpiles shall be mowed or harvested not less than 4 inches and shall be allowed to regrow at least 12 inches prior to subsequent harvests. Care shall be taken to avoid excessive equipment traffic over the topsoil stockpile. Hay bales shall not be stockpiled on the soil stockpile and shall not be removed from the field unless the ground is significantly below field moisture capacity or the ground is frozen.
5. Tillage may occur on moderate intensity topsoil stockpiles to establish a hay crop not more than once every 5 years. Seeding or overseeding of hay crops may occur at any frequency necessary to maintain the hay.

6. Trees, shrubs, and woody vegetation shall not be planted or be allowed to establish on topsoil stockpiles unless specifically approved by the Committee through resolution. Nursery stock shall not be established on topsoil stockpiles.
7. Signage shall be maintained on each topsoil stockpile preventing improper use. Topsoil stockpiles shall not be used for picnic areas, parking, travel, pasture or other livestock use, growing crops, filling depressions or containers, or any other use unless specifically provided for herein.
8. All erosion rills that form on the stockpile shall be addressed promptly by stabilization with seed and mulch or biodegradable erosion control matting, if necessary, for vegetation to establish.

§ 2:76-25A.6 On-farm utilities construction

(a) On-farm utilities general construction criteria are as follows:

1. Construction activities shall be completed while soil moisture is significantly below field moisture capacity.
2. Low ground pressure equipment and/or ground protection mats shall be used during construction to reduce soil compaction. Gravel construction roads and unprotected construction roads are counted towards soil disturbance limitation set forth in N.J.A.C. 2:76-25.5 and shall adhere to N.J.A.C. 2:76-25.9. after construction is complete.
3. No mechanical or structural soil compaction (e.g. with a sheep-foot compactor or vibratory compactor, or similar) shall occur prior to or during installation.
4. Topography shall not be altered as part of utility construction.
5. After construction is complete, bare soil over, under, and around the utility shall be seeded to a permanent vegetative cover that is compliant with the *Standards for Soil Erosion and Sediment Control in New Jersey* available electronically here: <https://www.nj.gov/agriculture/divisions/anr/pdf/2014NJSoilErosionControlStandardsComplete.pdf>, or compliant with a farm conservation plan approved by the Soil Conservation District.
6. Soil loss from the utility area shall be maintained at or below the Soil Loss Tolerance Rate "T".

1) (b) Buried utility construction criteria are as follows: All underground utilities (electric, sewer, water, gas, communication lines, or similar) shall be buried below the minimum rooting depth, or compliant with the depths required by building code or other relevant regulations, if greater.

- i) To the maximum extent practicable, underground utilities shall be buried using a trenching machine.
- ii) If use of a trenching machine is not feasible, an open (excavated) ditch may be used and should be the minimum width necessary to install the utility. The following conditions apply when underground utilities are installed using an open ditch;
 1. Topsoil and subsoil shall be staged separately from each other and stored in accordance with N.J.A.C. 2:76-25A.5 et seq.
 2. Topsoil shall not be used as bedding beneath buried utility pipe.
 3. After installation, topsoil shall be replaced to an equivalent depth as existed before installation. Excess subsoil may be removed from the premises or reused on site in compliance with an approved farm conservation plan.
- iii) Horizontal directional drilling may be utilized as appropriate below the minimum rooting depth. Access areas shall follow Soil Rehabilitation N.J.A.C.2:76-25.9

(c) Solar energy facility construction criteria

1. The solar energy facility (SEF) must be approved pursuant to N.J.A.C. 2:76- 24.1 et seq. prior to construction. If built prior to approval, as-built designs and a site visit by SADC are required. At ~~their~~^{its} sole discretion, the SADC may determine if an installation is compliant with this standard or may recommend modifications to bring the installation into compliance with the standard.
2. SEFs shall be designed in a manner to minimize the solar-related disturbance area.
3. The land within the SEF may be utilized for crop production, pasture/grazing, or other soil-based agriculture when part of an approved farm conservation plan.
4. Only the land underneath solar panels, buried utilities, and solar arrays installed according to this standard shall be exempt from the soil disturbance limitation set forth in N.J.A.C. 2:76-25.5. The footprint for all other infrastructure required for the SEF shall be counted towards the soil disturbance limitation set forth in N.J.A.C. 2:76-25.5.
5. Travel lanes used solely to access the SEF do not qualify for the unimproved travel lane exemption pursuant to N.J.A.C. 2:76-25.4.
6. Nothing in this BMP will abrogate, supersede, or replace the solar energy generation rules at N.J.A.C. 2:76- 24.1 et seq. or N.J.S.A. 4:1C-32.2 or N.J.A.C. 2:76-23.1.
7. Mounting Requirements for SEF are as follows:
 - i. For SEF mounted to the ground by a screw, piling, or similar system that does not require a footing, concrete, or other permanent mounting there are no additional installation requirements.
 - ii. For SEF mounted using ballast such as gravel contained within structures, concrete block, or similar materials for the purpose of providing ballast for mounting the SEF:
 - a. Ballast structures shall be designed to minimize the overall footprint of the ballast area.
 - b. All topsoil shall be stripped from the footprint of the ballast structure, concrete block, or similar material and stockpiled according to N.J.A.C. 2:76-25A.5.
 - c. No structural compaction of topsoil or subsoil shall occur within the ballast area.
 - d. The area of the ballast structure is not exempt from the soil disturbance limitation set forth in N.J.A.C 2:76-25.5.
 - iii. For SEF mounted using permanent mounting techniques (i.e. concrete footings) where written justification from a licensed professional engineer has been approved:
 - a. Footings shall be minimized to the maximum extent practicable.
 - b. The area around the footings shall be protected from soil compaction.
 - c. The area of the footings is not exempt from the soil disturbance limitation set forth in N.J.A.C 2:76-25.5.
8. Maintenance

- i. Minimum vegetative cover shall be maintained over the entire solar-related disturbance area to minimize runoff and soil erosion.
- ii. The SEF shall be kept in good working order. Land beneath defunct panels does not qualify for soil disturbance exemptions in N.J.A.C. 2.76-25.4.

9. Removal:

- i. At the end of its useful life, all infrastructure associated with the SEF shall be removed from the soil and properly disposed of. All permanent footings, concrete structures, conduits, and underground utilities shall be removed to a minimum depth of 36 inches. Infrastructure buried deeper than 36 inches may be left in place.
- ii. The entire solar-related disturbance area shall follow the rehabilitation standards pursuant to N.J.A.C. 2.76-25.9 once the infrastructure has been removed.

§ 2:76-25A.7 Severability

Should any section, subsection, sentence, clause, phrase or term of this subchapter be declared void, invalid, illegal or unenforceable, for any reason, by the adjudication of any court or other tribunal having jurisdiction, such a declaration shall not affect the validity of the remaining provisions, which are hereby declared to be severable and which shall continue to remain in full force and effect.

Appendix A - Soil rehabilitation standards

(a) To be considered for a certified soil rehabilitation project pursuant to N.J.A.C. 2:76-25.9, the Grantor shall submit:

1. A narrative description of:
 - i. The extent and type of existing soil disturbance,
 - ii. The proposed future agricultural use of the area once rehabilitated including how the proposed use prioritizes focusing farm development on already disturbed or previously rehabilitated areas instead of on undisturbed locations,
 - iii. A complete description of each horizon within the soil profile to:
 - (1) Two feet below the depth of the disturbance if the disturbance was soil alteration deeper than the minimum rooting depth, or
 - (2) A depth of two feet below the minimum rooting depth, or parent material, whichever is greater,
 - iv. Permits required by other government agencies,
 - v. An evaluation of the applicability of rehabilitation criteria described herein,
 - vi. A discussion of how the proposed rehabilitation activities will meet the applicable criteria,
 - vii. Justification for requests for waivers and/or leniency from the requirements of NJAC 2:76-25.9
2. Charts showing:
 - i. Historic and/or current yield for the disturbed areas including:
 - (1) Documented justification of the yield chosen in compliance with yield criteria below,
 - (2) Relevant cropping data including irrigation status, fertilizer applied, etc.)
 - ii. A proposed sequence and timeline for rehabilitation. Excluding any crop-testing requirements, the timeline for rehabilitation shall not exceed three (3) years.
 - iii. The proposed cropping rotation for the five years following rehabilitation, including:
 - (1) Crop type and variety;
 - (2) Irrigation;
 - (3) Tillage practices;
 - (4) Soil inputs (fertilizer, herbicide, etc)
 - iv. The proposed crop yield comparison methodology with proposed sampling frequency and locations.
 - v. Identification of the following soil properties for the soil map units to be rehabilitated. The properties identified below shall be reported as both NRCS typical values and the Official Series Description, available through Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>) and the NRCS Soil Survey website

(https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/soils/survey/class/data/?cid=nrcs142p2_053587); and current *in-situ* conditions as identified by in-field evaluation.

- (1) Soil chemical properties:
 - (A) Cation-exchange capacity
 - (B) Electrical conductivity
 - (C) pH/ soil reaction
- (2) Soil health properties:
 - (A) Available water capacity
 - (B) Bulk density
 - (C) Organic matter
 - (D) Sodium adsorption ratio
- (3) Soil physical properties:
 - (A) Saturated hydraulic conductivity (Ksat)
 - (B) Texture
- (4) Soil qualities and features:
 - (A) Depth to restrictive layer
 - (B) Drainage class
 - (C) Hydrologic soil group
 - (D) Depth of rooting zone
- (5) Official series description of:
 - (A) Color
 - (B) Structure
 - (C) Topsoil and subsoil thickness (A&B horizons)

3. Additional attachments:

- i. A copy of a current farm conservation plan for the premises that identifies changes in use.
- ii. If the current conservation plan is outdated, a revised farm conservation plan describing the proposed cropping sequence, including tillage methods and cover crops for a minimum of five (5) years following the completion of rehabilitation.
- iii. A map or maps of the premises. Maps may be created from a new survey, an edited version of the original farmland preservation survey, an edited aerial image with a scale and date of image, a map created with Geographic Information System (GIS) software, or any similar data source. Submitted maps shall be at a scale that clearly depict the following:
 - (1) All areas of existing soil disturbance and the associated acreage,
 - (2) The areas of proposed soil rehabilitation,
 - (3) Soil types in the area of remediation.

- iv. A site plan showing:
 - (1) A grading and topography plan showing the following within 100 feet of the rehabilitation area,
 - (2) Existing and proposed contours, clearly labeled,
 - (3) Regulatory areas (e.g. wetlands and wetland buffers),
 - (4) Existing infrastructure within 100 feet (e.g. buried utilities, buildings),
 - (5) Existing and proposed staging and stockpile areas for topsoil and subsoil.
 - (6) Relevant construction details to protect the soil during and after construction, including but not limited to:
 - (A) Notes about limiting soil compaction,
 - (B) Notes and details about preventing erosion during rehabilitation,
 - (C) Notes about soil stabilization after grading is complete.
 - (7) Any other relevant data the Grantor feels is necessary to describe the proposed rehabilitation activities.
- (b) After rehabilitation activities and testing have been completed the Grantor shall submit to the Committee the Final Certification Report which, at minimum, shall include:
 - 1. Records of interim approvals for each step in the approved rehabilitation sequence;
 - 2. A comparison of the pre-existing and rehabilitated soil properties;
 - 3. Documentation of acceptable bulk density tests with a map depicting the approximate location of the tests, and date(s) of testing;
 - 4. Certification of clean fill, including source of soil, if applicable;
 - 5. Results of soil tests, including quantity and type of amendments applied;
 - 6. Crop yield comparisons, farming practices, and sampling pattern and locations; and
 - 7. An as-built survey showing slopes if grading occurred.
- (c) All certified rehabilitation projects shall consider the following general rehabilitation criteria:
 - 1. All rehabilitation earthwork shall be completed while the soil moisture is sufficiently below field moisture capacity to avoid rutting and damage to soil structure.
 - 2. Soil rehabilitation earthwork shall be timed to complete grading at the onset of the optimal seeding period to minimize the duration and area of exposure of disturbed soil to erosion. Immediately after rehabilitation, vegetative cover shall be established in accordance with the specified cover crop mixture or crop rotation.
 - 3. Low-ground-pressure equipment (i.e. tracked) and/or ground protection mats shall be used during soil rehabilitation.
 - 4. Minimum depth of soil and/or substitute soil material to be reconstructed shall be 48 inches; or
 - i. A lesser depth if the Official Series Description lists the solum (A, E, B horizon) thickness as less than 48" deep.

- ii. A greater depth if determined by the Committee to be necessary to restore the original soil productive capacity.
- 5. The depth to the soil restrictive layer from above (citation needed) the pre-disturbance soils will be used as a basis for determining replacement rooting zone depth. The depth and quality of the rooting zone of the reconstructed soil should be equal to or greater than the pre-disturbance soil rooting zone or the rooting zone of a reference site if pre-disturbance rooting zone depth is unknown.
- 6. Topsoil should be returned to the area to a thickness not less than that of the pre-disturbed soil.
- 7. The following soil properties shall approximate or be more favorable for plant growth than pre-disturbance conditions:
 - i. Surface infiltration rate
 - ii. Hydraulic conductivity
 - iii. Texture
 - iv. Structure
 - v. Porosity (e.g. Bulk Density)
 - vi. Consistency
 - vii. Penetration resistance
- 8. The reaction (pH) and other chemical properties of the major horizons of the reconstructed soil must be within the ranges of the pre-disturbed soil or be similar to or as favorable for plant growth.
- 9. Final grading of the reconstructed soil should provide for adequate surface drainage and for slope gradients within a 1% slope gradient of the original topography.
- 10. After topsoil replacement, soil shall be tilled appropriately to encourage root and water penetration into the subsoil to reduce runoff and erosion.
- 11. Any reconstructed subsoil horizons shall be deep-tilled with appropriate implements to ensure root penetration and that restricting layers do not limit downward water percolation.
- 12. Erosion control measures consistent with the Standards for Soil Erosion and Sediment Control (citation needed) shall be implemented prior to rehabilitation unless rehabilitation is part of an approved farm conservation plan.
- 13. Average annual soil erosion for each rehabilitated area shall be maintained at or below the tolerable rate until rehabilitation is certified complete.
- 14. The rehabilitated area shall maintain a positive Soil Conditioning Index (SCI) until rehabilitation is certified complete.
- (d) Rehabilitation projects which require the removal of surfaces and/or structures shall also consider the following criteria:
 - 1. All structures, surfaces, and associated foreign materials and debris, including buried infrastructure shall be removed in their entirety within the soil profile. Buried infrastructure below parent material may remain in place.

2. Demolished structures and surfaces shall be removed from the premises for disposal, reuse, or recycling, or may be retained on the premises for beneficial reuse if approved in the rehabilitation plan.
 3. Removal of gravel or other surfacing shall be completed in a manner that minimizes gravel mixing with subsoil and compaction of the subsoil. The removal equipment shall remain on the gravel or ground protection mats during rehabilitation and egress from the site by backing out to avoid driving on undisturbed soil.
 4. Human made or processed artifacts (e.g. concrete, glass, brick, asphalt, etc.) in each horizon remaining in excess of 5% by volume of native soil shall not be considered rehabilitated.
- (e) Rehabilitation projects which require subsoil replacement and/or grading shall also consider the following criteria:
1. Return land to pre-existing slopes by importing subsoil or removing fill using low ground pressure equipment.
 2. Rehabilitated areas shall be consistent with the pre-disturbance contour of the land. The rehabilitated slope shall be within 1% of the pre-disturbance slope.
 3. If subsoil was removed from the site, certified clean subsoil of shall be imported to a depth informed by NRCS typical values and the *in-situ* analysis completed for the application (reference section above). Replacement subsoil shall have similar physical characteristics to the native subsoil unless the Grantor can demonstrate using soil with similar physical characteristics will prohibit rehabilitation (e.g. excessive clay content).
 4. Subsoil shall be tested for bulk density according to the soil bulk density and decompaction rehabilitation criteria (reference section below).
 5. Scarify subsoil surface before placing additional subsoil or topsoil layers.
 6. Replace subsoil to equivalent depth as undisturbed location. Subsoil shall be placed in lifts of not more than 6" and excessive voids shall be removed prior to placement of additional subsoil.
 7. Follow topsoil replacement criteria below (reference section).
- (f) Rehabilitation projects which require topsoil replacement shall also consider the following criteria:
1. Check subsoil surface for excessive compaction following the soil bulk density and decompaction rehabilitation criteria (reference section below).
 2. Scarify subsoil surface to eliminate slippage surfaces and promote root penetration.
 3. Identify replacement material
 - i. Topsoil may be used from an on-site topsoil stockpile, or
 - ii. If a topsoil stockpile is not available, topsoil may be imported from offsite. Certified rehabilitation shall not be granted to projects where topsoil is graded off other parts of the farm.
 - (1) Imported topsoil or substitute soil material shall be friable, loamy, with similar coarse fragment content to the original topsoil, free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or

physical condition that may be harmful to plant growth. In all cases, topsoil shall have not more than 15% coarse rock fragments greater than one (1) inch in size.

- (2) Imported topsoil shall have an organic matter content greater than or equal to that of the pre-existing soil.
- (3) Organic matter content may be raised by additives not explicitly prohibited by the Deed of Easement. Paper-mill byproducts, sludge, biosolids, and other waste products shall not be permitted as soil amendments without Committee approval and as part of a farm conservation plan.
- (4) Manure from the farm operation may be incorporated into the soil as part of a manure management plan.

iii. If off-site topsoil is not available, substitute soil material may be utilized,

- (1) With written justification and committee approval,
- (2) If the soil properties are equivalent to the pre-existing topsoil or adjacent existing topsoil.

4. When replacing topsoil, soil structure and bulk density shall be prioritized by limiting soil handling to the minimum necessary for replacement.
5. Topsoil shall have similar soil properties to the pre-existing soil as identified in the application (reference section).
6. When placing topsoil, an allowance shall be made for settling so the final depth of topsoil is equivalent to or greater than pre-disturbance conditions.
7. Topsoil shall be tested in accordance with the soil testing standard (reference section) and amended accordingly.
8. After final placement, the surface shall be prepared for vegetation establishment using standard tillage practices and seeded as soon as conditions permit.
9. Any former topsoil stockpile areas shall be prepared using standard tillage practices and vegetated as soon as conditions permit.

(g) For the sections of the rehabilitation criteria requiring soil bulk density testing and decompaction, the ensuing criteria shall be followed:

1. Test the soil in at least five (5) locations per acre at the minimum rooting depth and at the surface for excessive compaction using the soil test methods described below.
2. Rehabilitated soils shall have bulk density values less than or equal to bulk density values in an undisturbed reference location and not more than those listed in Table 19-1 of the Standards for Soil Erosion and Sediment Control in New Jersey (reference needed):
 - i. Maximum Dry Bulk Densities (grams/cubic centimeter) by soil type

Soil Type/Texture	Bulk Density (g/cc)
Coarse, Medium and Fine Sands and Loamy Sands	1.80
Very Fine Sand and Loamy Very Fine Sand	1.77
Sandy Loam	1.75
Loam, Sandy Clay Loam	1.70
Clay Loam	1.65
Sandy Clay	1.60
Silt, Silt Loam	1.55
Silty Clay Loam	1.50
Silty Clay	1.45
Clay	1.40

Source: USDA Natural Resource Conservation Service, Soil Quality Information Sheet, Soil Quality Resource Concerns: Compaction, April 1996 and Table 19-1 of the Standards for Soil Erosion and Sediment Control in New Jersey, July 2017

3. Soil test methods shall be selected from the handheld soil penetrometer test method, tube bulk density test method, or nuclear density test method described in the Standard for Land Grading in the Standards for Soil Erosion and Sediment Control in New Jersey.¹
 4. If soils are determined to be excessively compacted after testing, the soil shall be tilled/scarified to the minimum rooting depth using a chisel plow, subsoiler, or other similar equipment. Vegetative measures designed to loosen the soil (forage radish, cover crops, etc.) may be utilized alone or in conjunction with other mechanized methods.
 5. After decompaction, the soil density shall be retested at least at the minimum rooting depth, the subsoil surface, and the topsoil surface until compaction has been rehabilitated. The committee may require additional bulk density sampling within the soil profile for especially compacted soils.
 6. Once soils have bulk density values below the maximum bulk density (reference chart) the Soil Testing and Amending Rehabilitation Criteria shall be followed.
- (h) As part of a rehabilitation plan, soils shall be tested and amended according to the following criteria:
1. Collect topsoil samples after all grading, soil replacement, and decompaction has been completed. Collect five (5) to ten (10) representative topsoil samples across each disturbance area to create a composite mixture for testing at a rate of at least 1 soil test per disturbance area (i.e. a removed lane gets one test, and a rehabilitated arena gets another lab test) but not less than one sample per three acres.
 2. Sample collection shall follow laboratory standards.

¹ New Jersey Standards for Soil Erosion and Sediment Control are incorporated by reference:
<https://www.nj.gov/agriculture/divisions/anr/pdf/2014NJSoilErosionControlStandardsComplete.pdf>

3. The soil test where no topsoil was Imported shall be the NJ Ag Experiment Station Full Farm Test or equivalent, including, nutrients, pH, estimated CEC & cation saturation, plant-available (inorganic) nitrogen, organic matter content, and recommendations from a Rutgers Cooperative Extension agent.
 4. For rehabilitation projects where topsoil was imported from offsite or created from component parts, the Topsoil Specification Test, Ecological Research Test, and/or Compost/Technical Test may be required based on site-specific conditions.
 5. The committee reserves the right to require any additional soil tests as is necessary to prove the quality of imported topsoil or substitute soil material.
 6. Amendments shall be applied according to soil test results.
 7. Topsoil shall be tilled to incorporate all necessary fertilizers and amendments using a large offset disk, roto-tiller, chisel plow or similar equipment, then seeded with a fast-growing cover crop until the appropriate crop planting time.
 8. Soil organic matter shall be measured within the rehabilitation area and in a representative portion of the surrounding cropland. The soil shall be amended with suitable organic matter sources until organic matter content within the rehabilitation area is within equivalent to pre-existing conditions or that of the surrounding farm fields.
- (i) As part of a rehabilitation plan, crop yield shall be verified according to the following criteria:
1. Establish a baseline comparison using one or more of the following methods:
 - i. Pre-recorded crop yields from no more than five (5) years prior to the date of rehabilitation with farming practices enumerated,
 - ii. Parallel crop yields from another field farm with the same soil type and with equivalent farming practices (irrigation, fertilizer application, seed type, tillage),
 - iii. If pre-recorded or parallel crop yields are not feasible, county yield values from the Soil Survey Report may be permitted at the discretion of the Committee.
 2. Determine post-rehabilitation crop yield:
 - i. After topsoil and subsoil rehabilitation the area shall be initially planted with a deep-rooted cover crop.
 - ii. The crop rotation established at the time of application shall be implemented in the following crop season.
 - iii. For measuring crop yield, crops may include corn, soybeans, or other small grain but may not include vegetables, tree fruit, or hay unless approved by the committee.
 - iv. Crop yield shall be measured at harvest time utilized a standardized protocol to be described and documented by the Grantor. Sampling locations and collecting protocol are site specific and shall be approved in the application prior to commencing soil rehabilitation.

- v. Crop production shall be measured for at least five (5) years after all other rehabilitation standards have been met and certified.
- vi. For sites where parallel crop yield comparison is not possible, adjustment for weather-induced variability in the annual crop production may be permitted by the Committee for not more than two of the five crop yield measurements.
- vii. Crop yield testing shall be considered a success when the 5-year averaged yield is not less than 90% of the pre-recorded crop yields or county values, or when the parallel crop yields are not less than 90% of the yields in the control fields for three of the five testing years.
- viii. Crop yields that fail to meet the minimum rehabilitation thresholds after ten (10) years will be considered unsuccessful and the land will continue to be counted towards the soil disturbance limitations set forth in N.J.A.C. 2:76-25.5.

Appendix A - Method for measuring vegetative cover

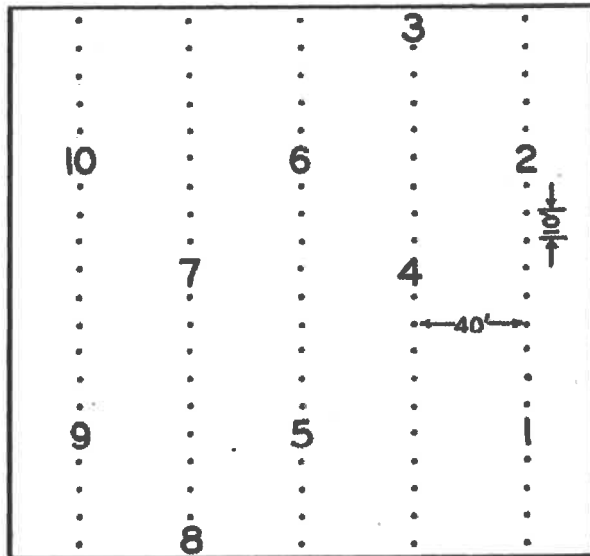
- a. Delineate land use area by physical breaks (e.g. fences, roads, hedge rows, etc.) and/or by visible evidence of soil degradation captured from a drone, aerial imagery, other remote sensing device, or in-person observation.
 - i. Measurement area to be sampled is determined by criteria of soil, topography, vegetative cover, and land use. Sampling results shall be stratified by soil and landform and correlated to a specific set of distinct and local environmental and land use factors.
 1. Each measurement area shall have similar vegetative cover to avoid diluting degraded areas in well vegetated acreage.
 2. Each measurement area shall be contiguous (a single polygon, instead of multiple parts).
 - ii. Measurement areas shall not exceed 1-acre;
 - iii. The minimum measurement of vegetative cover shall be 0.1-acre.
- b. Measurement areas shall be sampled at a frequency of 100 points per acre using the following methodology;¹
 - i. Establish 5 equally spaced transects of 20 equally spaced points;
 - ii. For smaller areas, proportionally reduce the number of points, not the spacing;²
 - iii. To the maximum extent practicable, utilize a pre-determined transect design with points spaced 10 feet apart and rows spaced 40 feet apart (see example figure below);
 - iv. Pace or measure to each sampling location and look at the land cover touching the middle of the boot tip. Alternatively, a measuring tape or pre-measured rope with knots may be used;
 - v. Record land cover at each sampling location on a chart or spreadsheet as "vegetation," "weed," "crop residue," "bare ground," or "other" (rocks, wood, etc.);
 - vi. A leaf hanging over bare soil shall be marked as bare soil;
- c. The step-point method is only to estimate basal cover of grass and is not a method to estimate vegetative cover beneath trees.³
- d. Tally points in each land cover category and divide by the total points collected in that measurement area; measurement areas with more than 70

¹ Evans, R. A., & Love, R. M. (1957). The step-point method of sampling—a practical tool in range research. *Journal of Range Management*, 10(5), 208-212.
<https://journals.uair.arizona.edu/index.php/jrm/article/viewFile/4810/4421>

² An experienced operator can sample an acre area using the step-point method in about one-half hour.

³ University of Idaho, College of Natural Resources, <https://www.webpages.uidaho.edu/range357/notes/cover.pdf>. Basal area measures the proportion of the plant that extends into the soil.

points per acre (70%) of “vegetation” and/or “crop residue” are not considered degraded soil.



- Step-point
- 3 Frame-point and step-point