



PRODUCER _____ FARM NAME _____

LOCATION _____ COUNTY _____

FARM & TRACT # _____ CONTRACT # _____

DESCRIPTION OF WORK:

PRACTICE PURPOSE(S) (Check all that apply)

Reduce erosion from wind and water

Maintain or increase soil health and organic matter content

Reduce water quality degradation by utilizing excessive soil nutrients

Suppress excessive weed pressures and break pest cycles

Improve soil moisture use efficiency

Minimize soil compaction

EXISTING BENCHMARK OR TREATMENT LEVEL

Review the conservation plan, conservation plan map, resource assessment tools, and producer objectives to determine the scope of the cover crop project that is required.

Benchmark Comments:

DESIGN AND INSTALLATION REQUIREMENTS

Use this IR to document the CPS 340 Cover Crop design and installation requirements and include all required attachments. Different cover crop purposes, species, seeding rates, seeding methods, seeding dates, termination requirements, herbicide interactions, and characteristics of main crops grown, may require multiple design projects for the same farm or PLUs.



Weed Suppression for Pollinator Habitat Planting

If the NY 340 Cover Crop purpose is weed suppression for pollinator habitat plantings, refer to [the NY Wildflower Establishment Guide](#) for specific cover crop design requirements for this purpose. The *Calculator Tool* and *Cover Crop Decision Tool* referenced below are not required for this purpose however, table 1 in the *Calculator Tool* should be referenced for seeding dates and depths for this purpose. Use of the *Calculator* and *Decision* tools are required for all other Pest Management purposes including weed suppression on cropland following the instructions on the *Calculator Tool*.

NY 340 Cover Crop will be designed and installed for weed suppression in support of pollinator habitat.

Provide site specific design for species, seeding rate, seeding method, seeding depth, and seeding date using the *NY Wildflower Establishment Guide* and *Table 1 in the Calculator Tool*. Complete all other applicable sections of this IR to design and install for this purpose:

General:

List field or PLU numbers where this specific cover crop design project will be installed:

Total Cover Crop Acres: _____ Crop year(s) cover crop will be installed: _____

USDA Plant Hardiness Zone of cover crop project [USDA Plant Hardiness Zone Map](#) : _____

Based on current cropping system, list the main crop species grown prior to or at the time of seeding this cover crop project: _____

Or, if non-cropland list cover type prior to cover crop seeding: _____

List the main crop species or cover type planned after the termination of this cover crop project:



**Site Drainage:**

The cover crop species selected from the *Cover Crop Decision Tool* has a soil drainage rating appropriate for the site drainage condition considering natural soil or artificial drainage:

Seeding Rates, Date, Depth and Method:

Use the NY 340 Cover Crop Calculator Tool (*Calculator Tool*) to determine site specific cover crop seeding rates based on the cover crop purpose(s), monoculture or mix, species seeding dates, and seeding methods selected. Read the step-by-step instructions on the *Calculator Tool*'s instruction tab before using the tool. Once the seeding plan is final, print and attach the .pdf to this IR.

In the *Calculator Tool*, Table 1 provides the required seeding dates by USDA Plant Hardiness Zone and season for cover crop species. If a fall seeded mix is used, there will be multiple seeding date requirements. Use the species with the earliest seeding date requirement for the entire mix. For spring/ summer mixes that include both cool season and warm season species, planting dates may be incompatible as the latest seeding date for the cool season species may be too early for warm season species.

Recommended seeding depths are listed in Table 1 by species on the *Calculator Tool*. Document the required seeding depths on the *Calculator Tool* tab where indicated.

Seeding rates in the calculator are based on pure live seed (PLS). The actual seeding rates (bulk rate) may be higher based on seed test results. Follow the procedure in the seed quality section below.

Pre-designed commercial mixes need to meet the species and seeding rate requirements outlined in this IR with attachments. While minor discrepancies may be acceptable, species not recommended by the *Cover Crop Decision Tool*, or rates in pre-designed commercial mixes not supported by the *Calculator Tool* will need to be approved by the State Agronomist. Higher seeding rates than those specified by the calculator are allowed to meet higher biomass objectives.

Herbicide program for main crop prior to cover crop seeding:

Herbicide: _____ Rate: _____ Application Timing: _____

Herbicide: _____ Rate: _____ Application Timing: _____

Herbicide: _____ Rate: _____ Application Timing: _____

Based on herbicide label requirements and carry over potential, the herbicide program documented above is compatible with cover crop establishment and growth, and if applicable for use as forage: _____

Provide any additional information or guidance regarding herbicide program:



Planned Application of Manure or Compost

Manure or compost applied to an early or mid-stage cover crop and in support of the main crop fertility program must be applied at rates and methods that will not adversely affect cover crop establishment and growth. For example, fall applied manure to a winter hardy cover crop cannot smother or destroy the cover crop. Higher rates of manure applied at or near termination is acceptable providing application is within acceptable Nutrient Guidelines for the main crop.

Manure will be applied to early or mid-stage living cover crop _____

Provide a planned not to exceed rate (tons/acre or gal./acre) _____

Method manure of application _____

Seed Quality:

Ensuring that cover crops are planted with high quality seed is critical to meeting the Conservation Practice Standard 340 Cover Crop. Producers must be able to prove that their seed was cleaned properly and meets the requirements for germination, purity, and presence of weed seed following guidelines established through the Federal Seed Act and accompanying state laws.

It is the responsibility of the cover crop installer to determine that the cover crop(s) seeded reflects the rate specified in the attached *Calculator Tool* report and adjusted for Pure Live Seed as outlined below.

Section 137, Chapter 69, Article 9 of NY Ag & Markets Law, 'Inspection and Sale of Seeds' states that any seed sold for planting must be tested and labeled and must meet minimum germination and purity (weed seed limits) standards. No lot of seed can contain more than 1% weed seed by weight, in NYS.

Seed grown and used on farm or seed grown on farm, delivered on premises to a vendor and not advertised for sale is allowed (bin run seed). The seed must have been properly cleaned and stored and undergone seed testing for germination, purity, and noxious weeds. Regardless of who grows or sells the seed, a copy of the current (within 9 months) seed analysis test must be provided. An approved seed testing lab must perform this test. Seed purchased outside of New York must comply with all federal seed laws.

For more information about the importance of seed quality, see *Plant Materials Technical Note No. 7 The Importance of Seed Quality for Natural Resource Conservation Practices*.
[natpmtn13724.pdf \(usda.gov\)](https://www.nrcs.usda.gov/sites/default/files/2022-08/natpmtn13724.pdf)

Always purchase and use seed on a pure live seed (PLS) basis to guarantee the planting meets the seeding rate recommendations of the NRCS Conservation Practice Standards and Implementation Requirements.

Seeding rates provided by the *Calculator Tool* are assumed to meet high seed purity and germination requirements for successful cover crop seeding (PLS). Use the seed label or test report to adjust the seeding rates to a PLS basis for each seed lot based on the following calculations:



PLS Calculation: $PLS = \frac{\text{percent purity} * \text{percent germination}}{100}$

(Germination = % germination + % dormant seed + % hard seed)

Final Seeding Rate (bulk rate) = $\frac{\text{Seeding Rate from Calculator Tool}}{PLS \text{ value}}$

Example:

From the seed label, the germination is 90%, seed purity is 80%. Therefore, 90 x 80 divided by 100 = 72% PLS.

If the required seeding rate for the species in the *Calculator Tool* is 50 lbs./acre, divide 50 lbs. by the PLS value of .72. The adjusted seeding rate (bulk seed) is 69 lbs. This is the amount of seed that must be procured and planted for that species/acre.

Seed Inoculants (applicable only to legumes)

Inoculate all legume seed with a pure culture of nitrogen-fixing bacteria specifically for the species selected no more than 8 hours prior to sowing unless pre-inoculated coated seed is used. If hydroseeding, use 4 times the recommended amount of inoculant and inoculate immediately before hydroseeding.

Do not use inoculants after the expiration date. Store the inoculant according to manufacturer's recommendations until ready for use. Use a mixing medium recommended by the manufacturer to bond the inoculant to the seed. When used with hydraulic seeding equipment with fertilizer in the mix, add the inoculant to the mix last so it does not remain in the seeder longer than 4 hours. For further guidance and specific inoculant requirements refer to PMC Tech Note 5 [National Plant Materials Technical Note 5: Using the Appropriate Legume Inoculant for Conservation Plantings \(usda.gov\)](https://www.usda.gov/technical/national-plant-materials-technical-note-5-using-the-appropriate-legume-inoculant-for-conservation-plantings).

Pre-inoculated coated seed used: Inoculants to be applied at time of seeding: NA:

Cover Crop Termination:

Effective cover crop termination management is essential to the success of the subsequent main crop. Effectiveness of cover crop termination requires the correct termination method at the correct cover crop stage. Species selected from the *Cover Crop Decision Tool* should have at least a rating of termination property of 4 for combined method and stage for effective cover crop termination.

Planned cover crop termination stage _____

Planned termination method _____

Termination rating from Cover Crop Decision Tool (if mix lowest species rating) _____

High Carbon to Nitrogen (C:N) ratio cover crop residues may immobilize Nitrogen (N) in the soil during residue breakdown and reduce yields for the next main crop. Higher lasting residue values from the *Cover Crop Decision Tool* may indicate higher C:N ratios of cover crop residue.



High C:N (>25:1) cover crop residue is likely after cover crop termination_____

If high C:N residue is likely, implement one or more of the following management strategies to mitigate potential N immobilization and/or Allelopathy:

Providing adequate time between cover crop termination and main crop planting (2-3 week minimum) to allow for residue breakdown and any allelopathic effects.

Increasing the N supply to account for N immobilization (increasing starter N for main crop or provide manure application prior to or at cover crop termination).

Reducing soil incorporation of residue (no tilling the next main crop).

Terminating at an earlier vegetative stage with a lower C:N ratio.

Incorporating legume species in a mix with species that have high C:N residues.

Additional cover crop termination guidance and strategies:

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Planned cover crop termination is compatible with National NRCS Termination Guidelines to maintain crop insurance eligibility for subsequent main crop:

[Termination_Guidelines_Designed_6.28_10.24am_\(002\).pdf \(usda.gov\)](#) _____

If cover crops are to be grazed or harvested for forage, a plan is in place that specifies the timing, method, and amount of biomass removed while still meeting the 340 Cover Crop purpose and Planning Criteria for the resource concern(s) addressed by 340 Cover Crop. Use and attach appropriate design tools such as RUSLE 2 to determine a level of biomass that can be removed vs. what needs to be left in the field to maintain cover crop purpose(s).

Maximum biomass that will be removed if cover crop is grazed or harvested for forage (DM lbs./acre) _____

Required minimum height of cover crop left after harvest or grazing to meet required in field remaining biomass levels (inches): _____

If cover crop is grazed, include stocking rates and residency time that will maintain target biomass removal levels by field in a grazing plan. Attach plans for grazing or provide here:

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ATTACHED PRACTICE DESIGN DOCUMENTATION

Geo-referenced aerial imagery (plan maps) with management units identified at the field or sub-field level where this CPS 340 project will be installed. Acres for each field or subfield are labeled.

The *Calculator Tool* seeding report that documents species, seeding method, seeding rates, seeding depth, and seeding date for the cover crop project (not required if cover crop project is in support of weed suppression for pollinator habitat)

If applicable, a soil loss/SCI report for wind and water that accurately reflects the cover crop design alternative in terms of results.

Resource inventory maps and information including topographic maps, soil maps and all relevant soil interpretations for management units where CPS 340 is planned for installation.

ADDITIONAL INSTALLATION INSTRUCTIONS:

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ASSOCIATED PRACTICES REQUIRED TO COMPLETE CONSERVATION MANAGEMENT SYSTEM (Separate IRs Needed)

Practice Code	Practice Name	Units	IR/Design Completed and Attached

OPERATION AND MAINTENANCE PLAN- PRACTICE LIFESPAN = YEARS

- Evaluate and monitor the cover crop through the planned protection period to determine if the cover crop is meeting the planned growth and biomass levels to meet the practice purpose(s). Adjust cover crop management as needed to meet planned biomass levels.
- Consider potential effects of cover crop to management and nutrient status of subsequent main crop. Adjust management as needed to main crop.
- Follow NRCS Termination Guidelines to avoid any conflicts with potential insurance programs for the main crop.

ADDITIONAL OPERATION AND MAINTENANCE REQUIREMENTS:

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DESIGN APPROVALS:

I have reviewed the design, installation, special provisions, maps, specifications, operation, maintenance, and record keeping requirements and agree to install, operate, and maintain this project in accordance with these design provisions. I agree to meet all local, state, and federal laws and regulations and obtain any necessary permits required by this practice installation. I agree to have a pre-installation meeting with NRCS prior to installing this practice to ensure final design requirements are met including adjusted seeding rates based on quality of seed procured for each crop year. If delays in installation are anticipated, I will contact NRCS immediately to discuss design alternatives.

Producer: _____ Date: _____

This practice is planned and designed according to NRCS-NY CPS 340

Crop year(s) this design approval applies: _____

Total acres or units designed per crop year meeting NRCS-NY CPS 340: _____

NRCS Planner: _____ Date: _____

NRCS Designer: _____ Date: _____

CPS 340 Planning JAA Level Required: _____

CPS 340 Design JAA Level Required: _____

OR:

Certified Tech Reg TSP for CPS 340 Design (if under contract for design TA):

TSP: _____ Date: _____

TSP Number: _____ Tech Reg Expiration Date: _____



DOCUMENTATION OF INSTALLATION

Crop Year _____

As-Built Seeding Rate Documentation:

Species	Design Rate from Calculator Tool (lbs./A) PLS	Final Adjusted Bulk Seeding Rate (lbs./A)	Date Seeded	Variety if stated on seed label

Documentation of species seeded and seeding rates are attached. Include seed labels, bills of sale, weigh slips etc. used to determine seeding rates.

Seed labels or seed test reports are provided indicating the level of seed quality. As-built seeding rates are documented and reflect any increase in rates required to meet PLS seeding recommendations from *Calculator Tool*.

If applicable, a plan to apply manure or other organic soil amendments that will not adversely affect cover crop growth has been developed and accepted by the installer.

A main crop herbicide program that avoids carry over to the cover crop seeding has been implemented.

Proper seed inoculation of legumes is documented with label or other product information.

Planned termination of cover crops is documented, is compatible with cover crop species, methods, and main cropping system.

As-built plan maps document fields and units where cover crop is installed and certified based on the design.

Pictures of established cover crop are attached and referenced by field and date.



If cover crop is hayed or grazed, a plan is in place and accepted by the installer to ensure that designed biomass removal rates are not exceeded.

Designed seeding method, species, seed quality, seeding rate, seeding date, and seeding depth, can be verified in the field and installation certified upon verification the cover crop has successfully been established. *Note: Delays in installation will adversely impact designed biomass levels and may not meet the 340 CPS. Management options may be designed, documented, and implemented to compensate for lower front end biomass levels due to minor installation delays due to documented weather conditions. Delay certification until such measures are implemented and final biomass levels verified. For example: delaying cover crop termination to meet target bio-mass levels for a soil organic matter resource concern, not an option for all purposes.*

If installation is delayed, appropriate management options have been implemented and analyzed to meet target cover crop biomass levels and purpose. Document below.

INSTALLATION OBSERVATIONS OR NOTES:



PRACTICE INSTALLATION AND CHECKOUT- NRCS CPS NY NRCS 340 COVER CROP:

For NRCS to pay on contracted work, all work must be done per this IR. Note that NRCS can only reimburse for specific units where work was completed in the field.

The project CPA-52 documents and covers the practice implementation specified in this IR and documents the appropriate conclusion as an acceptable federal action that requires no further analysis. Special Environmental Concerns are not present or have been properly addressed.

Total Acres Installed Meeting NRCS-NY 340: _____

Date Reviewed: _____ Date Field Checked: _____

I hereby certify that this practice has been installed in accordance with NRCS-NY CPS 340 Cover Crop

NRCS Checkout Approved by: _____ Date: _____

Approval CPS NY 340 JAA Level Required: _____

Total Units Approved: _____ For Crop Year: _____

OR

Certified Tech Reg TSP for CPS NY 340 Installation (if under contract for installation and checkout TA):

TSP: _____ Date: _____

TSP Number: _____ Tech Reg Expiration Date: _____

Total Units Approved: _____