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Pilot Program Description

VESP is a newly developed pilot program that encourages agricultural producers to achieve environmental excellence through responsible land stewardship. Pursuing VESP certification demonstrates a farm's commitment to regenerative, responsible agricultural practices, and successful completion of VESP certification will result in public recognition of a farmer's commitment to environmental stewardship on their farm.

The VESP certification process uses science-based environmental indicators to assess the impact of a farm's management on water quality, soil health, greenhouse gas emissions and carbon sequestration. Participating farms are assessed by technical staff using a combination of field observations and assessment tools to determine if a farm is meeting VESP stewardship thresholds. Farms that meet the program thresholds in each category will be certified as a Vermont Environmental Stewards. Farms that aren't meeting program thresholds will have the option to enter into a conservation planning process to enhance their farm management to become VESP certified. Certification will last 5 years, with an option to recertify, and yearly assessments will be conducted to ensure that farm management is still meeting the program criteria.

A pilot program is needed to inform the final development of the VESP. We are currently looking for 10-12 farms from across the State to participate in the VESP pilot program. Pilot program applicants understand that they are helping us refine the assessment process to inform a full program.

Certified VESP farmers will receive a high quality on-farm sign recognizing the farm as an environmental steward. Additionally, pilot participants will receive up to ten Cornell Soil Health tests on their farm that will help us calibrate assessment tools to field-verified soil health indicators. Participants that undergo conservation planning to achieve certification will be eligible for existing financial assistance for the implementation of conservation practices on their farm, and funding will be prioritized where possible.

The Agency of Ag and other partner organizations including VT NRCS, VT DEC, UVM Extension, and VACD will be administering the Pilot Program. The VESP Pilot will be utilizing the Natural Resource Conservation Service's (NRCS) new Resource Stewardship Evaluation Tool (RSET) which is an online platform that streamlines over a half-dozen individual field assessment tools.

NRCS has recently released an updated online version of RSET, and the Agency is in discussion with NRCS to confirm the final metrics which are being utilized to set different resource targets, and are working to develop a VESP specific RSET which will tailor the national tool to VT specific targets. The Agency had prepared a discussion table which illustrates which tools are utilized and where the Agency and partners will be initially setting the tool for testing during the Pilot process. The table (Figure 2) will need to be updated with the final information from the new RSET update, however the Agency will work to develop a VESP specific RSET standard and index which maintains the threshold values provided below, unless pilot program development demonstrates additional revisions to the standards are necessary.

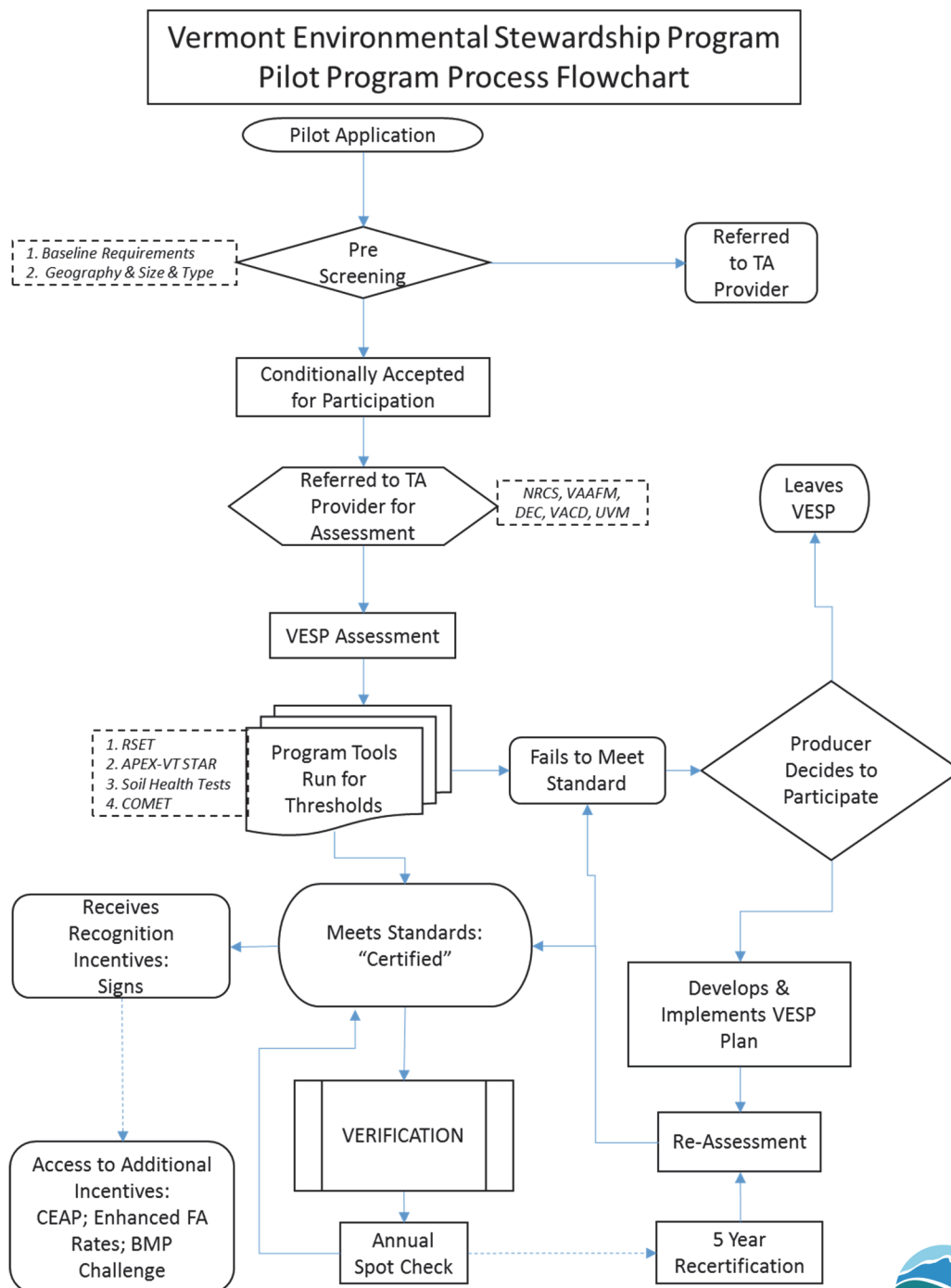
The VESP Pilot will utilize the following Assessment tools, integrated into RSET. Figure 2 outlines the draft thresholds for the Pilot Program.



Pilot Program Overview

- The goal of VESP is to **accelerate water-quality improvements** through additional voluntary implementation efforts, and **provide recognition to farmers who strive for environmental excellence.**
- **Baseline Requirements:** Must be actively farming, must meet existing environmental regulations
- **Assessment:** Nutrient management, sediment and erosion control, soil health, greenhouse-gas emissions and carbon sequestration, and pasture health
- **Conservation Planning:** For farms that need to change management, conservation planning services are available through existing NRCS and partner programs
- **Incentives:** Focuses on recognition based incentives, potential to expand into financial incentives
- **Certification Structure:** 3rd party verification, 5 year certification period

Figure 1



VESP Assessment Areas and Tools

Nutrient Management

- Review of Nutrient Management Plan, existing soil tests
- VT Phosphorus Index Tool

Sediment and Erosion Control

- RUSLE 2
- NRCS RSET tool

Green House Gas Emissions and Carbon Sequestration

- COMET Planner Tool

Soil Health

- RUSLE2 SCI tool
- RSET tool
- WNPST
- Cornell Soil Health Tests: Includes Penetrometer reading, aggregate stability tests.

Pasture Health

- NRCS pasture condition scoring

DRAFT VESP Pilot Tools and Thresholds / Standards

Figure 2

| Cropland Resource Concern | Tool | Threshold |
|--|---|--|
| Soil erosion: Sheet and rill | RUSLE2 | Score $\leq 1/2T$ |
| Soil erosion: Streambank | Visual Assessment | No active streambank erosion, or erosion that is present not caused by farm's management |
| | Riparian buffer | Riparian Zone Quality and Quantity score > 4.0 |
| Soil Health and Organic Matter | RUSLE2 | SCI > 0.5 |
| | Cornell Soil Health Assessment | No red categories, plan to improve yellow categories |
| Water quality: Nitrogen runoff, nitrogen leaching, phosphorus runoff | Stewardship Tool for Environmental Performance (STEP) | STEP Threshold rating of 55 or higher |
| | Nutrient management plan | Developed to meet 590 standard, and implemented as planned |
| Water quality: Edge-of-field sediment loss | STEP | STEP point total |
| Water quality: Pesticides transport | WIN-PST | WIN-PST risk levels provide inputs for STEP |
| | STEP | STEP point total |
| | Integrated pest management plan | Developed and implemented |
| Greenhouse gas emissions | COMET-Farm | Net negative value for CO ₂ equivalents |

Draft VESP Pilot NRCS RSET Assessment Tool and Certification Criteria

NRCS RSET is a powerful planning tool which will integrate many of the conservation planning tools outlined above. RSET will enable Conservation Planners and farmers to evaluate how their current farm’s management lines up with VESP standards and develop a plan which evaluates multiple options to align farm management with environmental standards.

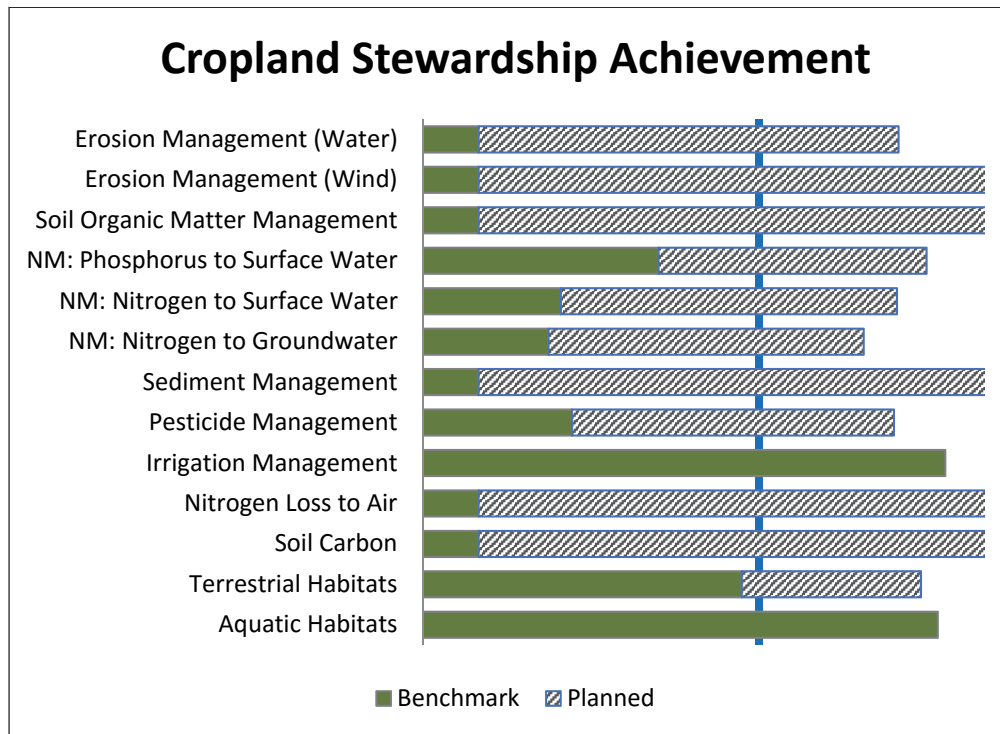
VESP Pilot guidance sets out that a farm will need to meet the threshold requirements on at least 90% of their land base and have a plan in place to meet requirements for those fields not meeting VESP standards.

Included below is an example of an output from RSET which will enable producers to visualize how their farm’s management currently stacks up against VESP Standards (Figure 4). Modeled below is an example of converting a farm field that is a corn, soybean rotation in the Northeast to a permanent hay management (Figure 3).

Figure 3



Figure 4



Pilot Program Process 2017-2018

- Goal: 10-12 farms to participate from 2016-2018, looking for a diversity of farm types, sizes, and geographic locations.
- Vetting new assessment tools and cross referencing with existing modeling and sampling standards: RSET-STEP and VT APEX assessment. RSET standards and thresholds will be indexed against Cornell Soil Health Tests on representative fields which will enable VESP to monitor actual physical, chemical, biological and soil carbon levels in the soil to ensure that RSET modeled predictions actually result in improved soil health and carbon sequestration.
- Workload assessment to quantify amount of time necessary to support a farm through the certification process to develop cost estimates for the full program.
- Needed environmental baseline of various agricultural management styles
- Will result in recommendations for a full program structure

Incentives for Stewardship

- **Pilot**
 - Recognition Based Incentives
 - Soil Health Tests
 - Increased technical and financial assistance for farms needing conservation plans
 - BMP challenge opportunity to protect against yield loss risk
- **Full Program: Seeking Partnerships**
 - Flexible Lending Options
 - Insurance Rates Adjustments
 - Other ideas?



Figure 5 Example of On-Farm Sign for a Certified VESP Farmer

What Makes This Program Unique?

- Soil Health Metric Central to Program
- You don't need to have a management problem to be eligible
- Science backed recognition based program – focuses on promoting the culture of environmental stewardship

This program was developed, in part, as a result of the 2013 VT Agricultural Working Group which provided a forum for a diversity of farm sizes and types to share their input on what conservation programs they felt were most needed; almost all described the need for a program to provide public recognition for those farmers that are going 'above and beyond' the baseline rules to protect and improve water quality on their farms.

The Vermont Environmental Stewardship Program is a partner effort by the Agency of Agriculture, Food and Markets, the USDA Natural Resources Conservation Service, the Vermont Association of Conservation Districts, Vermont Department of Environmental Conservation, and the University of Vermont Extension.



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