



SUMMARY:

Documentation Protocol for Implementing Sustainable Phosphorus Management Practices & Technologies on Vermont Dairy Farms

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September 2018

A VISION FOR A BETTER FUTURE

Imagine individuals, agencies and communities across Vermont having the tools necessary to determine how best to restore Vermont's surface waters to full health. Then envision having the economic incentives in place to actually see those efforts implemented.

Supported in part through a Vermont Clean Water Fund Grant, Newtrient prepared this Documentation Protocol for Implementing Sustainable Phosphorus Management Practices & Technologies on Vermont Dairy Farms - a critical component of how such a vision can come to pass. This report describes a step-by-step process allowing any interested party to voluntarily identify, invest in, document and implement projects that reduce phosphorus loading from farm operations in the most cost-effective manner possible.

When combined with a trusted environmental benefits calculator model, and appropriate market-like economic incentives, the result is water quality improvement, reduced taxpayer burden and the economic certainty necessary to drive the adoption of farm-based, sustainable practices and technologies that generate benefits for the entire State of Vermont.

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GLOSSARY OF TERMS, ENTITIES AND PARTICIPANTS

Act 64 of 2015, sometimes referred to as the Vermont Clean Water Act, was passed to establish new regulatory requirements for implementation of the Lake Champlain and other TMDLs. It included new regulatory requirements for management of stormwater on roads and developed lands, new Required Agricultural Practices (which apply to all farm operations in Vermont) and it established the Clean Water Fund Board.

Aggregators refer to entities that organize multiple farm operators to generate credits and support farm operators in the overall protocol process.

APEX refers to the Agricultural Policy/Environmental eXtender Model which is a watershed simulation model developed by the Blacklands Research and Extension Center in Temple, Texas. APEX is a flexible and dynamic tool that can simulate a wide array of management practices, cropping systems, and other land use across a broad range of agricultural landscapes, including whole farms and small watersheds.

Clean Water Initiative refers to the State of Vermont's over-arching strategy for achieving compliance with Vermont Water Quality Standards. The Clean Water Initiative comprises implementation of TMDLs, regulatory programs and investments. If adopted, the ESP would be part of the Vermont Clean Water Initiative.

Clearinghouse refers to a neutral operating entity that provides information and services to facilitate the implementation of the protocol and exchange of credits between farm operators and others in an ESP. The intent of the Clearinghouse is to provide farm operators with financial certainty to encourage credit generation and regulatory certainty for approved users of credits. Such credits are typically registered with and tracked by the Clearinghouse.

Documentation Protocol (Protocol) refers to this report which details the programmatic steps necessary to identify, quantify, document, verify and certify phosphorus loading reductions from Vermont farms.

The Ecosystem Agricultural Policy Environmental eXtender (APEX Model or Model) is a simulation model for determining environmental impacts of such parameters as water, sediment and nutrient loading as a result of implementing various land management strategies, practices and technologies on Vermont farms.

Ecosystems Services Program (or ESP) refers to the various programs, protocols and investments managed by the State of Vermont to identify, fund and advance cost-effective reductions of phosphorus loading into impaired waters coordinating the exchange of Phosphorus Credits between farm operators and the State of Vermont, its municipal corporations and other property owners.

EPA is the United States Environmental Protection Agency, whose role in Vermont is defined through a Performance Partnership Agreement and Performance Partnership Grant to Vermont ANR to implement the Federal Clean Water Act.

ESP Administrator is the agent hired by the Clean Water Fund Board or otherwise designated to oversee implementation and administration of the ESP.

ESP Inspectors are the agents of the ESP Administrator responsible for inspecting projects and verifying the phosphorus reductions associated with those projects to recommend certification of Phosphorus Credits for exchange. ESP Inspectors could be state employees or independently licensed operators.

Farm Operators are owners or operators of Vermont agricultural operations participating in the ESP.

Phosphorus Credit (Credit) is a fungible, tradeable commodity representing quantified, verified and certified reductions in phosphorus loading to surface waters.

Technical Consultants are the agents or representatives of Farm Operators responsible for assisting Farm Operators with the various steps in the ESP process.

A **TMDL** is a total maximum daily load, or pollution reduction plan for an impaired water body. In Vermont, several TMDLs have significance for the ESP, including for Lake Memphremagog, Lake Carmi and, most significantly, Lake Champlain.

Vermont ANR is the Agency of Natural Resources, a delegated agency implementing the Federal Clean Water Act in Vermont.

Vermont Clean Water Fund Board refers to the governing body for clean water investments created in Act 64 of 2015. The board includes State of Vermont officials and citizens and is charged with managing the state's clean water investments. The chair of the board is the Vermont Secretary of Administration.

Vermont Phosphorus Protocol is the integration of the Documentation Protocol and the APEX Model.

Vermont Water Quality Standards are numeric and narrative standards for surface water health as adopted by Vermont ANR under the Federal Clean Water Act.

REPORT SUMMARY

OVERVIEW

This report details the programmatic steps necessary to predictably, reliably, and credibly quantify, document, verify and certify the generation of phosphorus (P) reduction credits in Vermont. These environmental benefits result from the adoption of qualifying practices, management changes and/or technologies on Vermont dairy farms. This report describes the “Documentation Protocol” or “rules of the road” for creating a Phosphorous Reduction Credit. Such a Credit can be used in an open marketplace among all parties interested or obligated to achieve reductions of phosphorus into Vermont’s waterways.

This report will be supplemented with work already underway by Newtrient and its partners to integrate into the Documentation Protocol, a science-based model for calculating a numeric water quality benefit. The model estimates such benefits with each eligible farm, practice, management change and/or technology adoption. When the Model and this Protocol are fully integrated, the resulting Vermont Phosphorus Protocol will enable Phosphorus Credit generators to:

- i. Model their operation’s baseline leakage of phosphorus into surface waters,
- ii. Compare and optimize the potential water quality benefit of adopting various practices, management changes, technology adoptions and
- iii. Follow a prescriptive methodology for verifying, certifying and potentially selling phosphorus reduction credits via an Ecosystem Services Program (ESP).

Such a Protocol creates a transparent process that:

- i. Assures the citizens of Vermont they are getting the greatest water quality benefits at the lowest overall cost,
- ii. Positively incents all landowners to compete for low cost water quality benefits with the goal of selling such benefits to others with higher costs or a willingness to invest in certified phosphorus reduction credits, and
- iii. Results in both water quality improvement and economic stimulation across the state.

The target date for completion of the fully-integrated Vermont Phosphorus Protocol is late 2019. When complete, the procedural and quantitative rigor of the Vermont Phosphorus Protocol will afford Vermont dairies the opportunity to produce highly certain, low-risk phosphorus reductions to waterways and market those voluntary reductions in the form of Phosphorus Credits to the state, other parties with higher cost obligations, and any other entity interested in economically efficient water quality benefits.

Regulatory Underpinning and Vermont Management Structure

Under the current legal structure for clean water investments in Vermont, decision-making authority for investment of public dollars is vested in the Vermont Clean Water Fund Board. The Board makes final decisions regarding allocation of public dollars within the Clean Water Initiative based on recommendations from Vermont ANR and other executive branch agencies, clean water stakeholders and members of the public. If adopted as recommended in this report, the ESP will be a critical component of the Clean Water Initiative, with a hierarchy of authorities and players as follows:

Vermont ANR

Vermont ANR is responsible for ensuring statewide compliance with the Vermont Water Quality Standards. Working with EPA under the auspices of Section 303(d) of the Federal Clean Water Act, Vermont ANR has identified “impaired” surface waters around the state that do not meet the Vermont Water Quality Standards, including Lake Champlain and Lake Memphremagog.

In order to drive restoration of those waters to compliance with the Vermont Water Quality Standards, Vermont ANR and EPA have adopted TMDLs. The State of Vermont has promulgated tough land use laws and regulations, and the state is considering major public investments to ensure pollution reduction and reduced nutrient loading consistent with the Vermont Water Quality Standards. Collectively, these laws, programs and investments comprise the Clean Water Initiative which Vermont ANR announced during the legislative discussions that led to passage of Act 64 of 2015. As part of the Clean Water Initiative, Vermont ANR contemplates adopting the ESP in order to facilitate investment in non-regulatory nutrient management technologies, on-farm practices and natural infrastructure to achieve verifiable reductions in phosphorus loading to impaired waters in Vermont. Vermont ANR’s role includes driving regulatory requirements for stormwater management and reduction of nutrient loading from farm operations. Where regulatory programs cannot achieve sufficient phosphorus reductions to meet TMDLs, Vermont ANR will work with other executive branch agencies to establish additional targets for investment in phosphorus reduction practices, including through the ESP. Vermont ANR will monitor the results of regulatory and non-regulatory efforts and report results to EPA as required under the TMDLs and Performance Partnership Agreement.

The Clean Water Fund Board

The Clean Water Fund Board is comprised of State of Vermont officials and citizens. Its role in the Clean Water Initiative is to make final decisions regarding allocation of public expenditures to support both regulatory and non-regulatory investments in phosphorus reduction. If adopted, the Clean Water Fund Board acting through an Executive Director

would oversee the ESP as one component of the Clean Water Initiative, including oversight of the ESP Administrator.

The ESP Administrator

The ESP Administrator could work directly for the Clean Water Fund Board or independently with oversight from the board. The ESP Administrator is directly responsible to oversee implementation of the ESP, including providing outreach and education to Farm Operators and their Technical Consultants, and overseeing the credit verification process. The ESP Administrator could also be delegated by Vermont ANR and the Clean Water Fund Board to issue certified Credits.

Farm Operators

Farm Operators are responsible to make decisions about technology-based and practice-based projects using the Vermont Phosphorus Protocol on individual farms as part of the ESP.

Technical Consultants

Technical Consultants are responsible to work for Farm Operators to provide technical assistance in implementation of the Vermont Phosphorus Protocol.

ESP Inspectors

ESP Inspectors are responsible to verify credits following implementation of projects so that those credits can be certified by the ESP Administrator. ESP Inspectors would be overseen by the ESP Administrator or Vermont ANR.

Newtrient

Newtrient is a private company comprised of dairy cooperatives and trade organizations that collectively represents virtually all of the milk produced in the United States. Newtrient's mission is to "REDUCE THE ENVIRONMENTAL FOOTPRINT OF DAIRY AND MAKE IT ECONOMICALLY VIABLE TO DO SO". Newtrient has created a fully transparent, open source catalog of all nutrient management technologies readily available to dairy farmers in North America. This catalog evaluates, among other things, the technical and economic viability of each of these technologies particularly for the management of manure nutrients.

Newtrient also acts as an incubator for some the most promising of those technologies and the products produced therefrom. Newtrient has observed that almost all of these technologies suffer from economic challenges making it nearly impossible for dairy farmers to incorporate them on a wholesale basis. Accordingly, Newtrient has brought significant expertise and effort to development of market-like mechanisms, such as described in this report. The adoption of such technologies will allow dairy farmers to

deliver environmental and ecosystem services, such as reduced phosphorus loading, to their communities. This will lead to a better environment, economic stimulation in rural communities and lower costs of compliance for municipalities, manufacturers, developers, etc.

The Documentation Protocol as envisioned by Newtrient is a quantified, defensible mechanism to calculate and track sustainable phosphorus reductions. The Protocol will also provide predictable economic incentives for agricultural producers who implement new technologies and best management practices on their farms. Applicable in a variety of water quality protection and improvement settings, the Protocol will have immense practical value. This will be realized by environmental regulators, clean water stakeholders, individual agricultural producers and the agricultural sector broadly speaking. It will also facilitate successful implementation of the Lake Champlain and Lake Memphremagog TMDLs and requirements of Act 64 of 2015. The Protocol can be implemented as a stand-alone mechanism for tracking public water quality investments to support the State of Vermont's water quality goals. It can additionally be incorporated into a broader program to facilitate nutrient credit trading and investments among various actors within impaired watersheds like Champlain and Memphremagog.

Fully implemented, the Vermont Phosphorus Protocol and ESP are ideally suited for implementation on Vermont dairies. However, Newtrient anticipates interest from other stakeholders. This would include a broader role for Newtrient to the extent that the Vermont Phosphorus Protocol can be used with non-dairy farm operations, as well as to drive investments in natural infrastructure restoration (e.g., floodplain or wetland restoration projects) purchased by municipalities, developers, philanthropists, etc.

The Documentation Protocol: A Step-wise Process

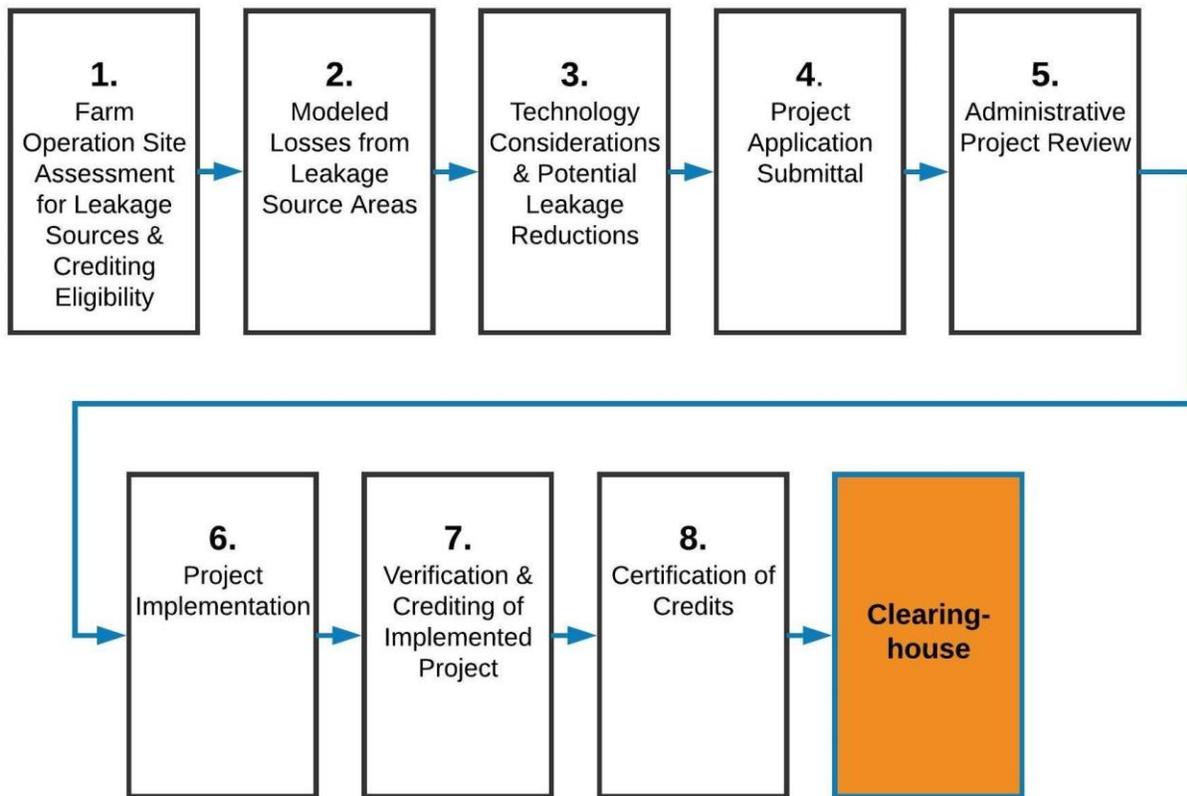
The Documentation Protocol represents the necessary steps to quantify, document, verify and certify the generation of phosphorus reduction credits through the adoption of practices or technologies that lead to improved water quality. The protocol assumes that with these changes, there are real opportunities to reduce the loss (or leakage) of P to surface waters. The step-wise process ensures that expected reductions are appropriately characterized, quantified, verified and tracked. Such reductions can then be credited towards various forms of water quality improvement efforts formally recognized by regulatory agencies or others.

As illustrated herein, the protocol will underpin the consolidation, tracking and exchange of credits through a recognized entity or functional body such as a clearinghouse. A clearinghouse could manage a variety of programs that can collectively be referred to as Ecosystem Service Programs (ESP). These programs may be conservation investments by a state agency or market-like programs such as water

quality trading for regulatory requirements under Act 64. Across the U.S., clearinghouses have been utilized in several settings to support market-based approaches for water quality improvements. There are examples of state and local agencies, non-profits, and for-profits leading such clearinghouses. Irrespective of the leadership structure, there is a need in ESPs to assess, compute, verify and track the environmental benefits that are typically exchanged as credits.

The documentation Protocol outlines the process for generating phosphorus credits resulting from the adoption of practices and/or technologies.

The 8-step protocol process is illustrated below:



With this eight-step protocol, phosphorus reductions have the veracity to stand up to scientific scrutiny when claimed as environmental credits by a clearinghouse-type of entity for use in an ESP. There will be several actors involved in each protocol step. Some will be chosen by the Farm Operator (farmer), while others will be assigned roles (such as independent third parties and agencies). The likely support and funding roles of various parties are highlighted within the description of each protocol step. Appendix C contains a variety of forms that would be used to facilitate these steps. How these steps and related forms could be used in a functioning ESP is illustrated in Appendix A.

STEP 1: Dairy Operation Site Assessment for Leakage Sources & Crediting Eligibility

The primary purpose of an on-site assessment of a dairy operation (using *Form 1 Leakage Sources & Eligibility Inspection*) is to identify sources of P losses to surface water. This would include documenting the off-site disposition of P-containing materials that could otherwise lead to leakage at other locations. Identified sources of P leakage would present potential reduction opportunities at the operation that, with application of conservation practices or technology, could result in phosphorus load reductions to local waterways. This on-site assessment would: a) identify on-site leakage sources, and b) evaluate what practices/management efforts are regulatorily or programmatically required. This part of the assessment could identify eligible source reduction opportunities for crediting.

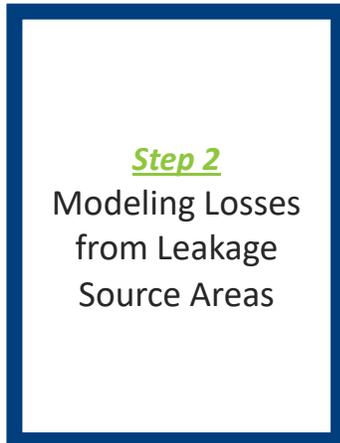
Step 1
Farm Operation
Site Assessment
for Leakage
Sources &
Crediting
Eligibility

WHO SUPPORTS: An independent crop consultant, a dairy consultant, or other party (such as a Natural Resources Conservation Service [NRCS] technician, Conservation District technician, Ag extension agent) who understands non-point runoff associated with agricultural operations will need to assess current farming operations. A standardized inspection form is used for the protocol assessment. It is possible that an agent representing the ESP Administrator (or a clearinghouse as the administrator) could perform this inspection.

WHO FUNDS: The Farm Operator will most likely pay for these services. It is possible that a credit aggregator could provide these services as part of their overall protocol and technical support package that they might offer a farm operator for securing phosphorus reduction credits they seek for ESP market offerings. States may also wish to subsidize these inspection efforts. In Vermont, this could potentially be part of the commitment to help fund Best Management Practices (BMPs) associated with Required Agricultural Practices (RAPs) under Vermont's Act 64.

STEP 2: Modeled Losses from Eligible Source Areas

Once eligible sources of crediting and associated on-farm inputs for these sources have been identified and documented in Step 1, an APEX-based model will be used to calculate the current nutrient losses off the farm to local waterways. This baseline nutrient loss calculation will be documented in *Form 2 Baseline Calculation*.

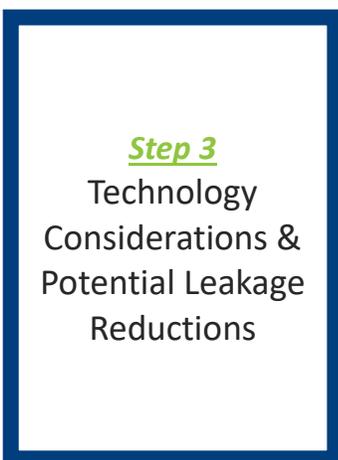


WHO SUPPORTS: The calculation methods to quantify leakage from an operation will require qualified technical consultants, an aggregator, extension agents, NRCS technicians or possibly even state agency technicians to run these computations. The tool being contemplated in Vermont is a state-specific adaptation of the APEX-based model. In other ecosystem services programs, those responsible for conducting these calculations can range widely, and in some cases, even various calculation tools may be applied. Recognizing there can be professionally subjective decisions made by any one of these entities, farm by farm required input data needed for the APEX-based model will be finite to limit variability in outputs. Training with the model can be a state or clearinghouse-specified requirement. Moreover, Step 8 of the protocol will involve a state agency review of all calculations to certify they are valid according to accepted program requirements and/or policy.

WHO FUNDS: Funding for Step 2 may be dependent on the Farm Operator's use of private consulting assistance, part of an aggregator contract, or at no cost with local county or extension technicians. No financial commitments from the state would likely be applied to this step.

STEP 3: Technology Considerations & Potential Leakage Reduction

With the help of an expert, Farm Operators can explore the nutrient loss reduction potential from a suite of technologies, conservation practices and/or management changes (calculated by changing inputs in the baseline calculation). Practices, technologies and management changes that meet the needs of their farm operation would be selected and evaluated. (There is no form associated with this step.)



WHO SUPPORTS: The Farm Operator may choose to work directly with technology providers seeking to sell their equipment or have trusted consulting support for this decision process. A range of practice and technology options may be considered during this step. The APEX-trained technician or consultant would work with the farmer to assess P reduction opportunities, costs associated with such implementation efforts and how environmental services program credits could address economic decision-making. (The Newtrient Technology Catalog would be a primary source of information in these regards.¹)

WHO FUNDS: Because these are business decisions, costs for this step fall to the Farm Operator, possibly under a contract with an aggregator. State funding for this effort is not likely.

¹ See: www.newtrient.com/Catalog/Technology-Catalog

STEP 4: Project Application Submittal

Once the Farm Operator has selected the technologies, conservation practices and/or management changes, the Farm Operator and their technical consultant will send in *Form 4 Project Application* to the ESP Administrator. The Project Application will provide the ESP Administrator with project specifications and calculated water quality improvements from the project(s).



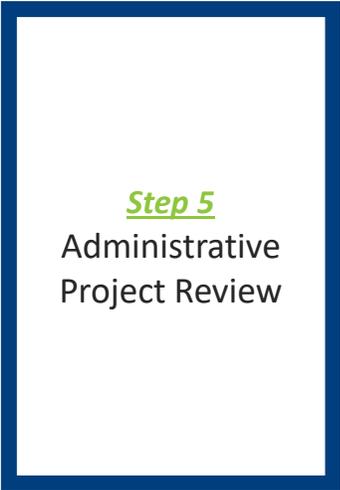
Step 4
Project
Application
Submittal

WHO SUPPORTS: The Farm Operator is ultimately the final decision-maker for any investments in conservation practices and/or technology at their operation. The technical consultant that helped calculate the P loss reduction baseline and crediting of the proposed project could work with the Farm Operator to submit a project application.

WHO FUNDS: The Farm Operator will likely fund the project application submittal. The cost may be covered in a contract with an aggregator.

STEP 5: Administrative Project Review

An administrative application review will be conducted (*Form 5 Application Review*) and the Farm Operator will be notified of approval or deficiencies in the application. Upon application approval, the Farm Operator can implement the project(s) on the farm operation with the expectation that if they follow submitted designs, calculated P reduction credits will remain eligible through the remaining step-wise process.



Step 5
Administrative
Project Review

WHO SUPPORTS: The ESP Administrator (could be a state agency), is key during this step and responsible for reviewing project applications submitted from Farm Operators, their technical consultants and aggregators. This would involve a completeness review and a check of protocol calculations forecasting P reduction credits and result in approval or denial of an application.

WHO FUNDS: The administrative project review would likely require dedicated review time from existing state agency staff. The number of project applications received by the ESP Administrator would influence whether current agency staffing is adequate to complete these reviews in a timely fashion.

The process flow for the first five steps is illustrated in *Figure 1* below.

Environmental Services Program: Protocol General Application Process

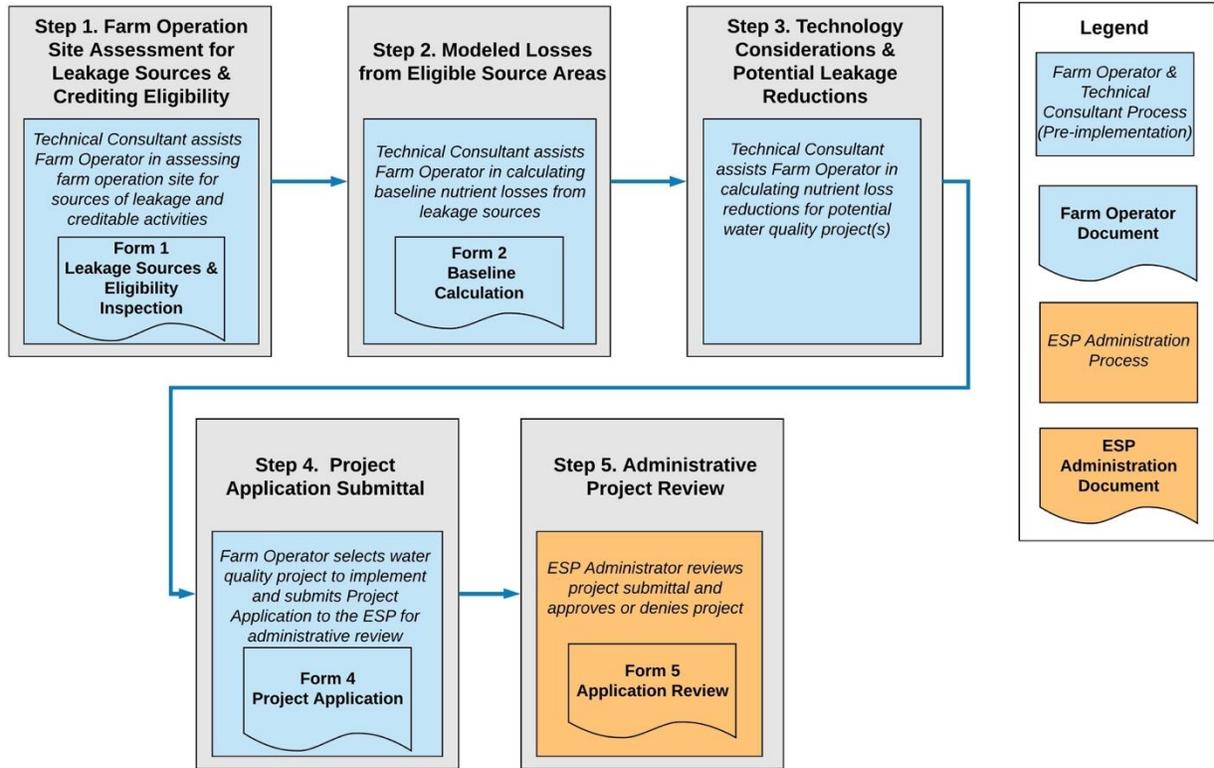


Figure 1. Framework describing the protocol processes Steps 1-5 and relevant documents associated with a farm's application to participate in the Environmental Services Program.

STEP 6: Project Implementation

Upon receiving application approval from the ESP Administrator, the Farm Operator can proceed to implement the proposed project according to the specifications submitted in the project application. Once the project is complete and functioning, the Farm Operator and technical consultant may submit *Form 6 Request for Inspection for Project Completeness Verification*.



WHO SUPPORTS: Farm Operators will likely need to rely on: 1) county technicians or consulting assistance to design conservation practices, and 2) consulting engineers or technology providers for installation of manure-nutrient separation equipment.

WHO FUNDS: In Vermont, there is likely state cost-share funding to support some level of conservation practice installation in alignment with RAPs. Practices going beyond RAPs and/or technology implementation would likely be the responsibility of the Farm Operator, though this could be sought through loans or NRCS Farm Bill program cost-share funding. Other innovative financing mechanisms could be offered through the ESP either as credits or some other combination of credits and financing. Seed funding to and through the program from the state or other private sources could be used to kick-start investments.

STEP 7: Verification and Crediting of Implemented Projects

The verification process, usually involving a third-party entity, begins after the project has been implemented and completed. The primary purpose of the verification process is to provide validation to the certifying entity of the program (usually a state agency) that technologies and/or practices are fully implemented and functioning. The third-party ESP Inspector, will provide this verification through *Form 7 ESP Inspector Verification Inspection* verifying the project has been implemented according to the specifications the operator proposed to the ESP. Verification will also denote that no significant changes have been made on the farm that would substantially affect estimated phosphorus load reductions. Projects that have been successfully

implemented will receive verification approval and notice that the project can advance to a certification process. Third-party verification will typically include inspection of maintenance and operational activities for the duration of credit generation. Projects that do not pass verification inspections will have the opportunity to remediate and reinstate credits once deficiencies have been addressed.

Step 7
Verification &
Crediting of
Implemented
Project

WHO SUPPORTS: This is the first step of the protocol where a third party would engage in the process to verify that practices or technologies were installed as designed to convert P reductions into credits. Site inspections, review of as-built drawings, and any monitoring data would be used to update APEX-based model computations on P load reductions by the third party (also trained in the use of the APEX-based model). New computations would be necessary to make any appropriate crediting adjustments from the Step 4 calculations if final implementation varied from earlier designs and/or plans. This verification step would ensure the implemented project matches the credits previously proposed for submission to the ESP.

WHO FUNDS: If the third party were not a state agency, either the Farm Operator or the program administrator would pay for the review of information and verification of credits in Step 7. A state agency could choose to be the verifier; something not unprecedented in other programs.

STEP 8: Certification of Credits

Once the program administrator has received a verification notice, a final certification review will be conducted using *Form 8 Certification Review*, typically by a governmental entity such as a presiding state agency. The certification includes a review of all submitted information to assure that all considerations and information included in the previous steps are complete as per program guidelines. Certified credits are then typically registered and tracked in a clearinghouse. Long-term credit generating projects will be subject to five-year audits (no farm site can be audited more than once every five years) to ensure credits are still appropriate. Credits may be adjusted if new science, new calculation methods or other program adaptations are implemented requiring adjustment to credit volume.



Step 8
Certification of
Credits

WHO SUPPORTS: This is primarily the responsibility of a state agency or other state-approved entity to conduct a completeness review of all protocol process steps. This would include review of all protocol forms and computations such that if deemed complete and accurate, credits submitted to or purchased by the ESP are certified for use and application.

WHO FUNDS: This step would likely become part of state agency assignments to existing staff. The number of necessary certifications would influence whether current agency staffing is sufficient to complete these periodic reviews. With standardized crediting information compiled in the protocol, simple site updates such as conservation practice implementation could take one hour for certification while complex sites with newly installed technology potentially could take four to eight hours. Iterative approaches in Step 8 to gather additional data for certification would be the responsibility of the program with some potential additional agency burden.

Steps 6 through 8 outline the process that takes place once the ESP administration has approved a project application and the project is implemented, verified and credits are certified. An appeal and complaint process also would be available to the operator throughout these steps, if needed. The process elements for these implementation steps are illustrated in Figure 2.

Environmental Services Program: Protocol General Certification Process

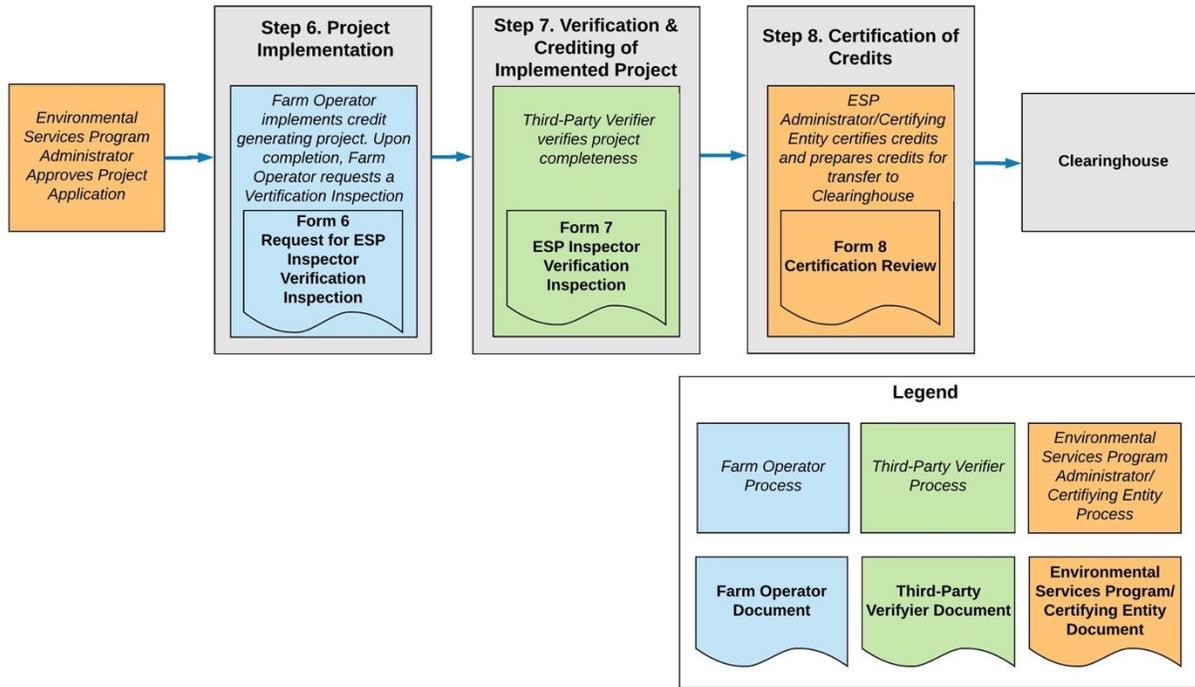


Figure 2. Framework describing the protocol processes Steps 6-8 and relevant documents associated with the certification of credits generated from projects in the Environmental Services Program

APPENDIX A

APPENDIX A.

TECHNICAL OVERVIEW OF ENVIRONMENTAL SERVICES PROGRAM PROTOCOL

This technical overview provides a detailed outline of how the Environmental Services Program (ESP) protocol operates. In Vermont, an ESP could provide a funding and accounting vehicle for implementation of conservation practices, technologies or other related projects that specifically result in the reduction of phosphorus (P) loading to a waterbody. This type of program could also take the form of water quality trading or offsets with regulated buyers investing in agricultural load reductions. In any of these programmatic approaches, the protocol provides the opportunity to readily assess and track benefits of on-farm investments. As envisioned with the introduction of this protocol, program implementation could be facilitated by a clearinghouse-type entity. Use of the protocol will provide the opportunity to consistently and reliably administer project investments and determine cost-sharing provisions. Details on how the protocol will function are outlined below; all forms referenced in this section can be found in the document “Environmental Services Program Protocol Forms” provided in Appendix C.

A-1. Protocol Step 1: Dairy Operation Site Assessment for Leakage Sources & Crediting Eligibility

Each farm and dairy operation is different and thus manure nutrient leakage can occur at different areas and with different farming activities. Figure A-1 is an example of simplified leakage pathways for nutrients on a typical farm operation. Farm Operators seeking to reduce their environmental footprint can conduct an on-site farm/dairy assessment to define and document where potential sources of leakage exist on the operation.

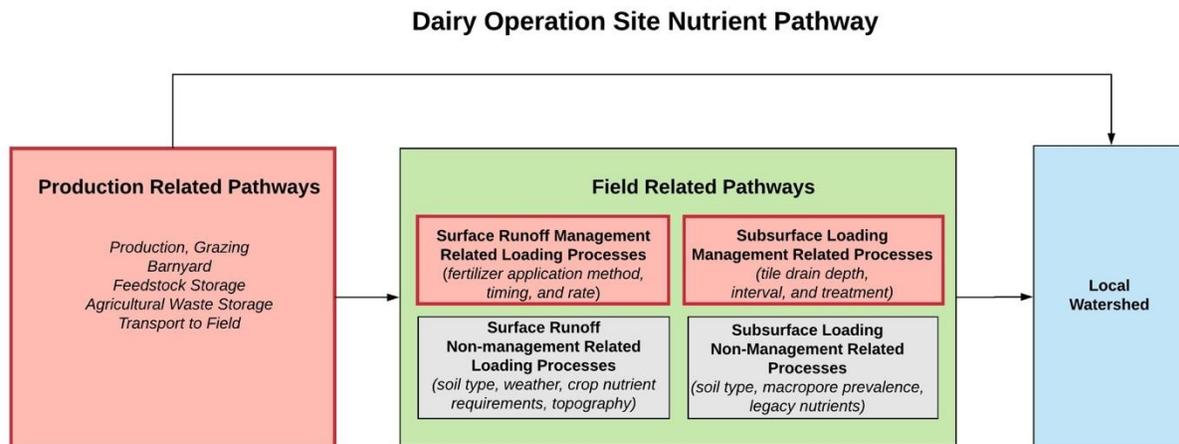


Figure A-1. Nutrient application pathways and potential leakage sources for farm/dairy operations (potentially eligible leakage sources for crediting in red).

On-site Assessment

The information required to complete *Form 1 Leakage Sources and Eligibility Inspection* can be input directly into an APEX-based model in Step 2 to calculate the current baseline nutrient loss. Much of the information required to complete the form can be easily sourced from existing records depending on the type of farm. If one is inspecting a Certified Small Farm Operation (CSFO), Medium Farm Operation (MFO), Large Farm Operation (LFO), or inspecting any farm utilizing a field-by-field nutrient management plan (NMP), much of the required information can be found in the NMP and required recordkeeping.

Eligible Leakage Sources for Crediting

Farms in Vermont fall into four compliance categories in regard to required practices. These categories are defined by the Vermont Act 64 Required Agricultural Practices Rules & Draft, Required Agricultural Practices Rules, Draft Medium Farm Operation General Permit, and Large Farm Operation Permit Rules.

These compliance categories include:

- **Farms not required to follow Required Agricultural Practices (RAPs):** category includes Non-RAP Operations (NROs).
- **Farms required to follow partial or all RAPs but no Permits:** category includes NROs determined to have adverse water quality impacts, Small Farm Operations (SFOs), and Certified Small Farm Operations (CSFOs).
- **Farms required to follow RAPs and Draft Medium Farm Operations (MFO) General Permit:** category includes MFOs (note that the draft MFO General Permit is currently undergoing public comment and subject to change).
- **Farms required to follow RAPs and Large Farm Operation (LFO) Permit Rules:** category includes LFOs.

Regulatorily required agricultural practices are generally considered not eligible for use in Environmental Services Programs. The breadth of creditable sources decreases as one moves from farms not subject to RAPs towards farm operations subject to all RAPs and additional General Permit or Permit Rules. The relationship between the category of required practices and what general sources are eligible for crediting is depicted in Table A-1. This table also notes whether these general sources are currently modeled through APEX.

Table A-1. Table of eligible sources for water quality improvement crediting based on farm category of required practice. (see key on following page)

Sources of Eligible Water Quality Improvement Credits for Vermont Farms			
	CSFO	MFO	LFO
Production Area			
Animal Mortality	✓	✓	✓
Bedding Material Storage	X	X	X
Live Exclusion from Surface Water	X	X	X
Production Area Cleaning	X	X	X
Feed Storage	X	X	X
Agricultural Waste Storage			
Liquid Manure Lagoon Storage and Pumping	X	X	X
Processed Manure Fertilizer Product Storage	X	X	X
Commercial Fertilizer Product Storage	X	X	X
Nutrient Budget			
Exported P	✓	✓	✓
Transport to Field			
Liquid Manure Transport	✓	✓	✓
Compost Management			
Composting Area & Storage	✓	✓	X
Field			
Compost Application	✓	✓	X
Bedding Field Disposal	✓	✓	✓
Crop Byproduct	✓	✓	✓
Crop Management	✓	✓	✓
Runoff Potential (traditional field conservation practices)	✓	✓	✓
Tillage	✓	✓	✓
Liquid Manure Application Rates	✓	✓	✓
Liquid Manure Application Timing	✓	✓	✓
Liquid Manure Application Method	✓	✓	✓
Processed Manure Fertilizer Product Application Rates	✓	✓	✓
Processed Manure Fertilizer Product Application Timing	✓	✓	✓
Processed Manure Fertilizer Product Application Method	✓	✓	✓
Commercial Fertilizer Application Rates	✓	✓	✓
Commercial Fertilizer Application Timing	✓	✓	✓
Commercial Fertilizer Application Method	✓	✓	✓
Tile Drain Treatment	✓	✓	✓

Key	
✓	= Eligible Practices for Crediting
X	= Not Eligible Practices for Crediting
Red	= Not currently APEX Compatible
Green	= APEX Compatible
	= Farms subject to partial or all RAPs
	= Farms subject to all RAPs & Draft MFO General Permit
	= Farms subject to all RAPs & LFO Permit Rules

Identifying Farm-specific Eligible Practices and Sources for Crediting

The completed *Form 1 Leakage Sources and Eligibility Inspection* will help Farm Operators determine where their farm belongs in terms of regulatory eligible sources and practices. Form 1 will also produce the farm-specific list of all eligible practices and sources that a Farm Operator can use to generate water quality improvement credits.

A-2. Protocol Step 2: Modeled Losses from Eligible Source Areas

Once all potential sources of nutrient losses have been identified and documented in Step 1, a baseline of nutrient loss can be calculated for current conditions, technologies, conservation practices and management on a farm using the APEX-based model. Results for calculated nutrient loss baselines are recorded on *Form 2 Baseline Calculation*.

A-3. Protocol Step 3: Technology Considerations & Potential Leakage Reductions

Farm Operators will work with a technical consultant that is trained in using the APEX-based model to determine what project or suite of projects to implement on the farm that meet producer needs and may generate phosphorus load reductions. This process will rely heavily on the preferences and needs of the Farm Operator, their specific operation, and the expertise of the technical consultant. There is no form associated with Step 3.

After receiving farm-specific inputs used to calculate current base nutrient loading in Step 2 (including Farm Operator preferences or restrictions for generating water quality improvement credits), the technical consultant can create technology, conservation practice and management change scenarios for the Farm Operator to choose.

A-4. Protocol Step 4: Project Application Submittal

Once the Farm Operator selects a project/project(s), the technical consultant will assist in completing the *Form 4 Project Application* detailing the proposed project(s), nutrient leakage reduction and associated water quality improvement credits calculation. An interface for the technical consultants to input relevant Step 4 information into an APEX-based model is illustrated in Figure A-2.

The screenshot displays the webAPEX interface for Protocol Step 4. The interface is divided into a sidebar and a main content area. The sidebar includes navigation links for 'HOME', 'FARM DETAILS', and 'LOGOUT'. The main content area shows a form for 'CF1' with the following sections:

- Soils:** Complete
- Crop/Tillage/Manure Information:** Complete
- Operations Information:** Clear form

The 'Operations Information' section is expanded, showing 'Spring Operations' and 'Fall Operations' with the following fields:

Spring Operations	Fall Operations
Tillage: Conventional and Reduc	Tillage: Reduced
Manure Application Method: Incorporated	Manure Application Method: Incorporated
Manure Application Rate (lbs P ₂ O ₅ /ac): 25	Manure Application Rate (lbs P ₂ O ₅ /ac): 25
Commercial P Fert (lbs P ₂ O ₅ /ac):	Cover Crop Variety: None
Commercial N Fert (lbs N/ac):	Cover Crop Planting Date: None

At the bottom of the form, there are 'Cancel' and 'Save and close' buttons. The background of the interface is an aerial map of a farm with several fields labeled CF1 through CF5.

Figure A-2. Technical consultants will develop project recommendations to the Farm Operator by inputting different technologies, conservation practices, and management changes within the APEX-based model to calculate water quality improvement credits. Above is an example of Protocol Step 4 interface for technical consultants to interface with the APEX-based model.

A-5. Protocol Step 5: Administrative Project Review

Upon receiving application documents, the program administrator is responsible for the Administrative Project Review. The purpose of the Administrative Project Review is to review for completeness, verify proper credit calculations and provide feedback to the Farm Operator if warranted (as illustrated in Figure A-3). If the project or projects from the applicant pass the Administrative Project Review, the ESP Program Administrator will send the Farm Operator, Farm Operator’s Technical Consultant and/or Aggregator (if applicable) *Form 5A.1 Project Approval* notifying the Farm Operator that the project has been approved and implementation may proceed. If issues are found during the Administrative Project Review, document *Form 5A.2 Notice of Project Denial* will be sent to the Farm Operator, Farm Operator’s Technical Consultant and/or Aggregator outlining project application deficiencies.

Step 5 & 6: Administrative Project Review & Project Implementation Process

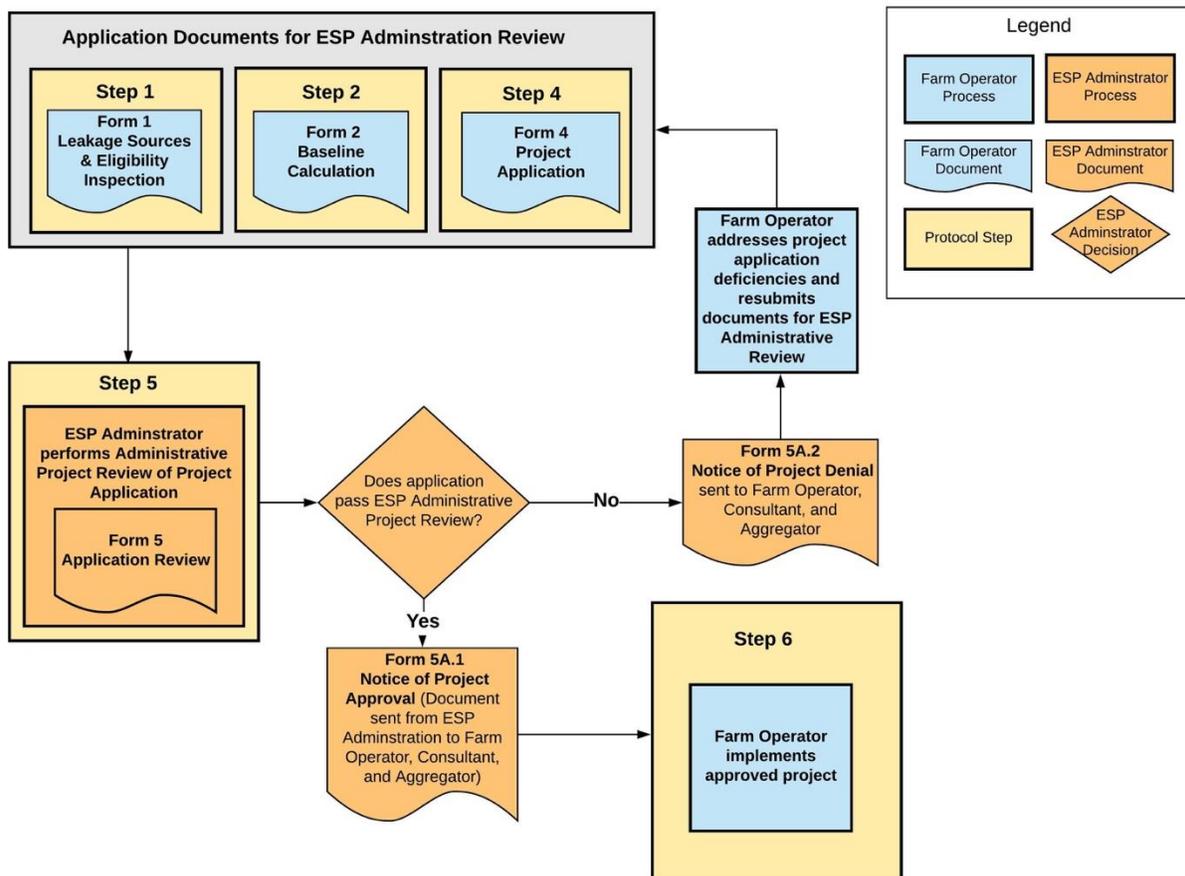


Figure A-3. Framework for Protocol Steps 5 & 6 and relevant documents.

A-6. Protocol Step 6: Project Implementation

The Farm Operator can begin the implementation of technologies, conservation practices or changes in management for the purposes of generating credits through the ESP after receiving the *Form 5A.1 Notice of Project Approval* from the program administrator. Once the project is complete and functioning, the Farm Operator and technical consultant may submit *Form 6 Request for ESP Inspector Verification Inspection*.

A-7. Protocol Step 7: Verification & Crediting of Implemented Project

Verification of project installation and adherence to proposed designs must be completed before certification of project credits. The overall process is illustrated in Figure A-4. To avoid conflicts of interest, Project Completeness Inspections will be conducted by a third-party verifier known as an ESP Inspector. During the *ESP Inspector Verification Inspection (Form 7)*, the third party will verify: i) if there are significant changes to the operation that could create water quality impacts, ii) if there are changes to the design or implementation of the project that vary from the *Form 4 Project Application*, and iii) project completeness and performance.

Plans for project implementation and design may be altered during implementation due to operational considerations on a farm. Changes to the proposed specifications, design, or implementation of a project, or significant changes to the operation can alter the water quality benefits and associated phosphorus reduction credits generated. Such changes should be noted by the farm operator and will necessitate the need to complete an updated *Form 4 Project Application* for appropriate adjustments to the credit calculation for the project. Noted changes by the third-party reviewer will also trigger a re-calculation via Form 4.

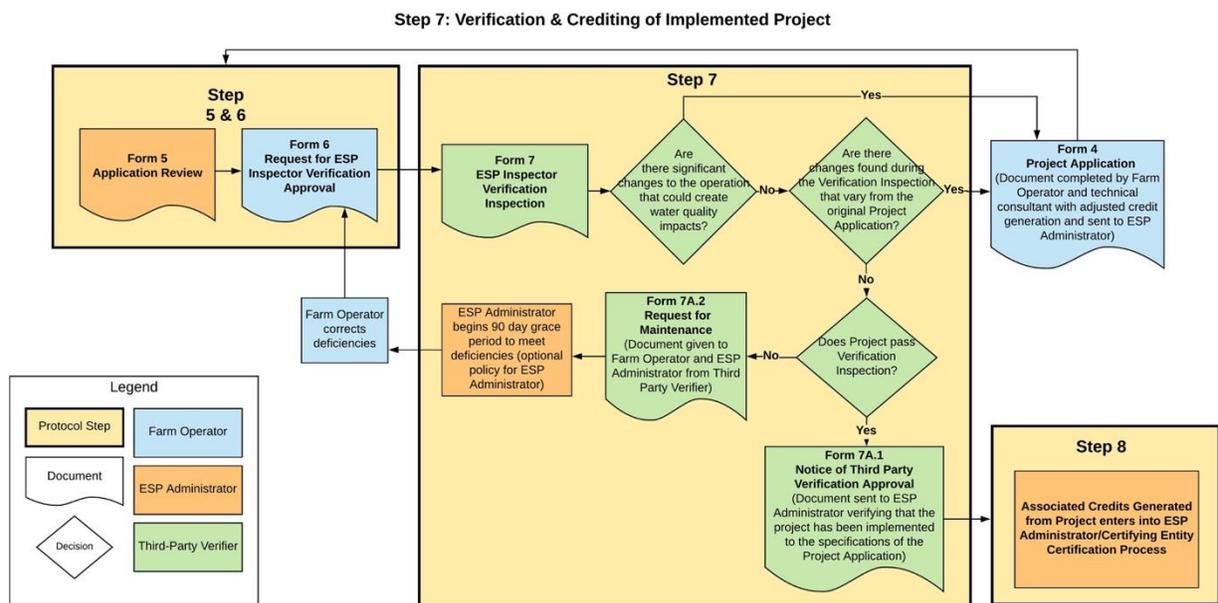


Figure A-4. Framework for Protocol Step 7 Verification and Crediting of Implemented Project and relevant documents associated with the process.

Once the updated *Form 4 Project Application* is approved by the ESP Administrator, the ESP Inspector will conduct another ESP Inspector Verification Inspection to verify project completeness according to the updated project application. Projects that pass the ESP Inspector Verification Inspection are verified and associated credits from the project will be certified in Step 8 by the ESP Administrator/Certifying Entity. If there are deficiencies found during the ESP Inspector Verification Inspection, the ESP Inspector will detail the deficiencies and give the Farm Operator a *Form 7A.2 Request for Maintenance*. Depending on the ESP policies, a copy may be sent to the Clearinghouse to begin a grace period for the Farm Operator to correct deficiencies. Annual verification will be required to ensure that projects generating credits over several years are being properly maintained.

A-8. Protocol Step 8: Certification of Credits

The certification process is the step of the protocol that authorizes the credits and prepares credits to be transferred to the clearinghouse to be registered and tracked. The certification entity, typically a state agency, would receive and review all protocol documents and calculations to ensure completeness. Certified credits are then ready to be registered and tracked by the clearinghouse as illustrated in Figure A-5.

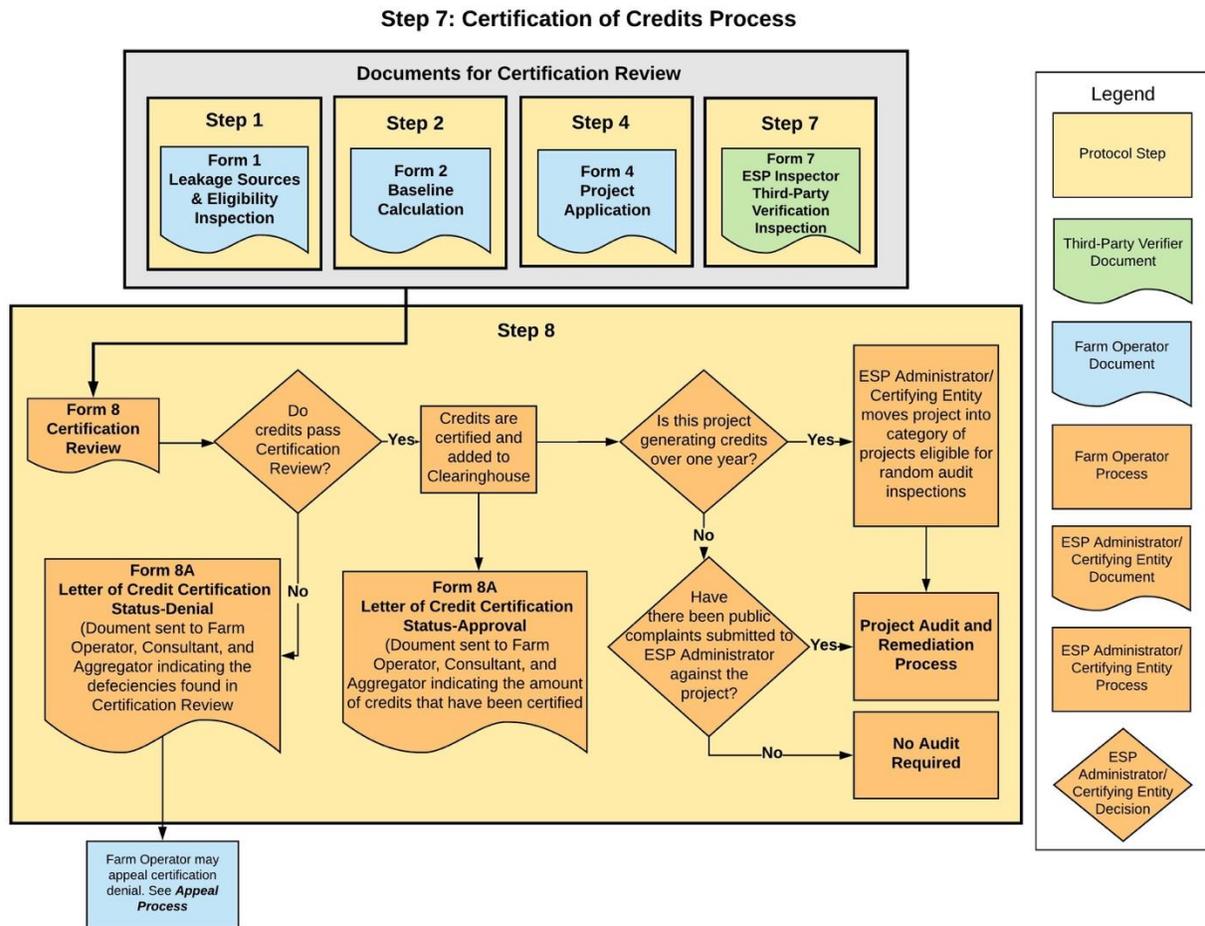


Figure A-5. Framework for Step 7 certification of credits process and relevant documents associated with the process.

Project Audit Process

Projects that will generate certified credits for over a year will be moved into a category of projects that are eligible for random audits to ensure that water quality improvement credits reflect the on-farm performance improvement/any new program adaptations. The Project Audit process will be similar to the Step 7 Verification & Crediting Process with Project Audit Inspections performed by an ESP Inspector to the same standards as the Project Completion Inspection. Projects that pass the Project Audit Inspection will be placed into a category of projects ineligible for a random audit for another five years.

Projects with formal complaints submitted to the program will automatically be selected for an on-site audit. The project audit process is illustrated in Figure A-6.

Project Remediation Process

Projects where annual verification shows deficiencies will have 90 days to correct the deficiencies noted. Once the ESP Inspector notifies the program administrator that a project has failed a Project Audit Inspection, the program will send notice to the Registry to suspend credits generated from the project until the end of the 90-day grace period. After the 90-day grace period, an ESP Inspector will conduct another *ESP Inspector Verification Inspection (Form 7)* to verify that deficiencies have been corrected. Projects that pass the second *ESP Inspector Verification Inspection (Form 7)* will have credits reinstated. The project audit process is illustrated in Figure A-6.

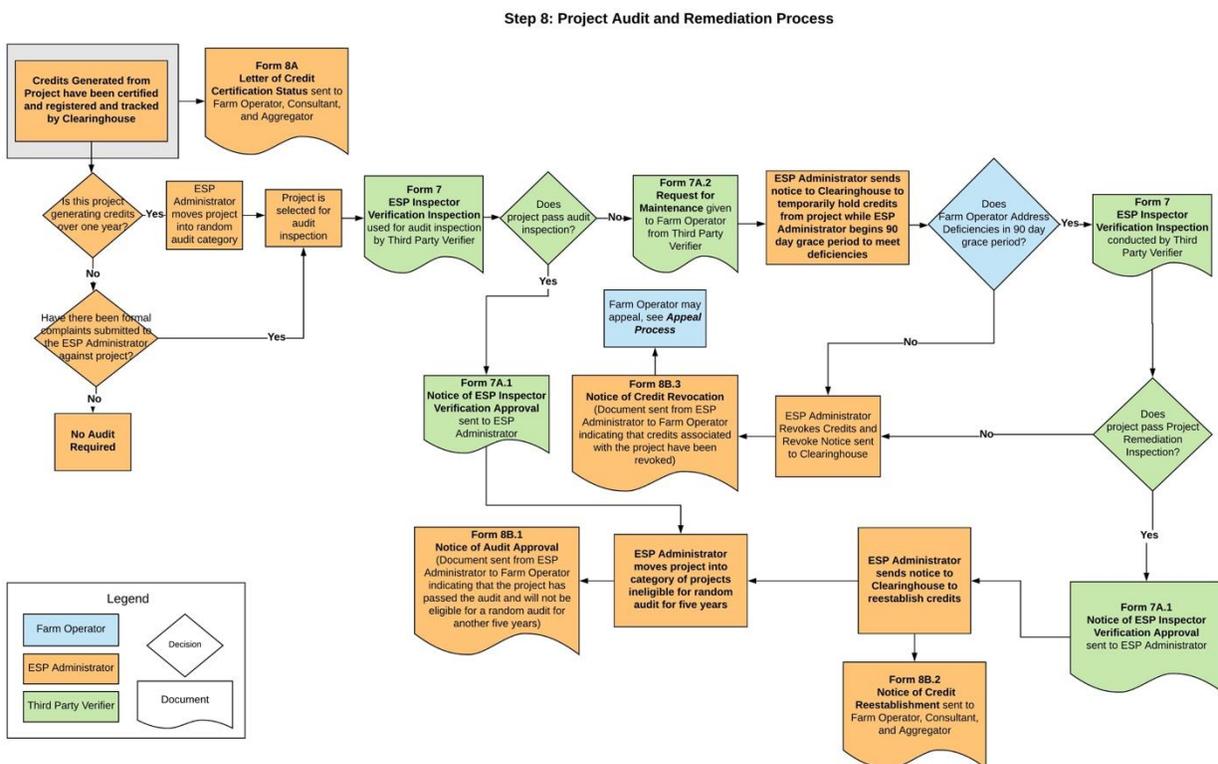


Figure A-6. Framework for Step 8 Project Audit and Remediation Process and relevant documents associated with the process.

A-9. Steps 5 – 8: Appeal Process

There may be occasions during Protocol Steps 5-8 where a Farm Operator’s experience interfacing with the ESP Inspector or Program Administrator may not be satisfactory. These occasions may include: the Administrative Project Review Process (Step 5), Third-party Project Verification & Crediting Process (Step 7), Certification Process (Step 8), or Project Audit and Remediation Process (Step 8). The Farm Operator may file either a complaint or an appeal to the Clearinghouse which will be processed through the

program in the process below (Figure A-7). To address complaints and appeals while reducing unnecessary administrative costs, the guiding principle for the program should be to utilize the least cost option first and escalate to other options as necessary to address the Farm Operator’s complaints and appeals.

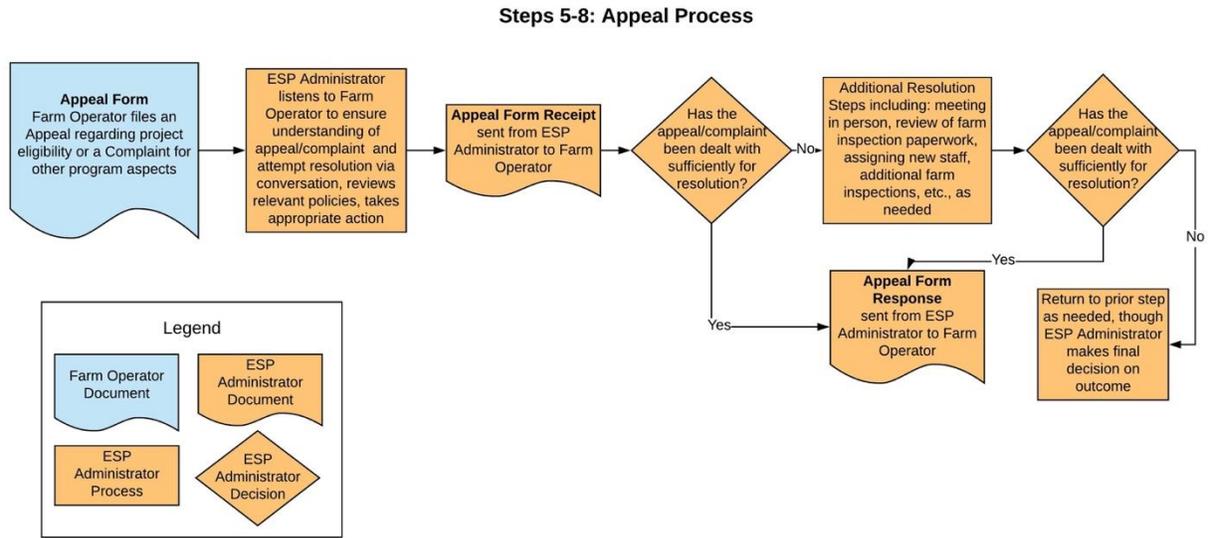


Figure A-7. Framework for Steps 5-8 Appeal Process and relevant documents associated with the process.

APPENDIX B

APPENDIX B.

FUTURE STEPS: PROTOCOL OPERATION PLATFORM

The processes required to implement the Phosphorus Protocol involve interaction and information transfer between many participants with a multitude of documents and data. The ESP will utilize a simple, user-friendly Protocol Operation Platform to: i) significantly reduce the administrative and logistical barriers for Farm Operators interested in the ESP; ii) substantially decrease the administrative burden for state agencies, certifying entities, program administrators and all other ESP actors participating in the ESP; iii) provide a simple avenue of data transmission between the program and the credit registry; and iv) create an instrument for public accountability and transparency.

The Protocol Operation Platform that will facilitate the protocol is an integrated Windows-based application and browser-based server database that significantly simplifies, standardizes and streamlines the transfer of documents and data throughout the 8 steps of the protocol. The integrated Windows-based application will be a streamlined tool for Farm Operators, their technical consultants and ESP Inspectors to use in the field to conduct assessments, calculate nutrient reductions, select optimal projects and interface with the program. The browser-based server database will provide a straightforward way for all participants in the ESP to access protocol documents and data for viewing, reviewing, editing, managing and certifying. Simplified below are the objectives for each protocol step and how the Protocol Operation Platform can facilitate meeting those objectives. All forms referenced in this section can be found in the document entitled “Environmental Services Program Protocol Forms.”

B-1. Step 1: Dairy Operation Site Assessment for Leakage Sources & Crediting Eligibility

Protocol Step 1 Objectives:

- Identify sources of phosphorus losses or loss pathways to surface water
- Verify any farm operation prerequisites for participating in an ESP through a clearinghouse or other application
- Determine which leakage sources and practices are regulatorily eligible for crediting

Operation Platform Facilitation of Step 1 Objectives:

The Windows-based application provides a paperless format for the on-site assessment of leakage sources that can be electronically submitted to the program (along with other application documents). Additionally, it simplifies and verifies completeness of manual inputting of the field-by-field information during the on-site farm assessment required to run the APEX-based model later in the protocol. The application standardizes which

leakage sources are eligible for crediting by Regulatory Farm Operation Category (with eligible sources for crediting defined by the program). It also eliminates the need for the person conducting the on-site assessment to determine which sources are creditable and any associated missed opportunities for crediting.

B-2. Step 2: Modeled Losses from Leakage Sources Areas

Protocol Step 2 Objectives:

- Calculate baseline nutrient loss with farm-specific conditions

Operation Platform Facilitation of Step 2 Objective:

Pending the integration of the APEX-based model into the Windows-based application, the application would take site assessment information and directly calculate baseline nutrient leakage and prepare the Farm Operator's project application for electronic submission. If APEX is not integrated into the application, the application can provide guidelines to the user for how to input information from the site assessment into the APEX-based model.

B-3. Step 3: Technology Considerations & Potential Leakage Reduction

Protocol Step 3 Objectives:

- Farm Operator selects the technologies, conservation practices and management changes for the project
- Calculate credit generation from proposed project

Operation Platform Facilitation of Step 3 Objectives:

Pending APEX-based model integration into the application, optimization routines in the application can account for a Farm Operator's preferences and constraints and create farm-specific project recommendations of which technologies, conservation practices and management changes to adopt to provide the maximum nutrient loss reductions or highest return on investment.

B-4. Step 4: Project Application Submittal

Protocol Step 4 Objective:

- Farm Operator submits the project specifications for the technologies, conservation practices and management changes for the project

Operation Platform Facilitation of Step 4 Objective:

After completing Steps 1 – 3, the Farm Operator and technical consultant can complete *Form 4 Project Application* and electronically submit it for the administrative application review. Pending APEX-based model integration into the application, most of the inputs would internally validate calculations and auto-populate for this step to reduce administrative review requirements in Step 5.

B-5. Steps 5-8: Application Review, Project Implementation, Verification and Certification

Protocol Steps 5-8 Objectives:

- Review project applications
- Verify project completeness
- Certify credits generated
- Complete Project Audit and Remediation
- Manage Complaints and Appeals
- Interface with Credit Registry

Operation Platform Facilitation of Steps 5-8 Objectives:

An integrated Windows-based application and server database facilitates an administrative process and protocol experience that is completely paperless for all participants in the ESP. This includes instant document and data transfer between Farm Operator & ESP Administrator, Farm Operator & ESP Inspector, ESP Inspector & ESP Administrator, ESP & Certifying Entity and ESP and Credit Registry Management.

The Protocol Operation Platform would include a browser-based server database for ESP applicants, their technical consultants, ESP Inspector, program administrators (possibly the same entity as the certifying entity), certifying entity, credit registry management and the public to upload, view, manage and review protocol documents.

This is accomplished by assigning different levels of permission through an account with login credentials (Figure B-1). An exceptional model of a browser-based server database used in a similar application is California's Stormwater Multiple Application and Report Tracking System (SMARTS).²

² California Water Boards State Water Resources Control Board. 2018. Storm Water Multiple Application and Report tracking System. https://www.waterboards.ca.gov/water_issues/programs/stormwater/smarts

Table B-1. Sample table of permission levels of access to protocol documents and data by ESP Participants.

ESP Participants	Permission
Public	<ul style="list-style-type: none"> • Limited viewing of protocol documents/data (no viewing of confidential information) • Submitting formal complaints
Farm Operators & Technical Consultant	<ul style="list-style-type: none"> • Uploading, editing, and managing protocol application documents and data • Submitting complaints or appeals
ESP Inspector	<ul style="list-style-type: none"> • Viewing protocol application documents and data • Uploading protocol inspections, audits, and notices
Environmental Services Program Administrator	<ul style="list-style-type: none"> • Viewing, managing, and reviewing protocol documents and data • Uploading relevant protocol documents
Certifying Entity	<ul style="list-style-type: none"> • Viewing, reviewing, and certifying protocol documents and data • Uploading relevant protocol documents

The server database will interface with the Windows-based application, allowing streamlined document and data transfer between Windows-based application users (Farm Operators and their technical consultants) and users of the browser-based server database.

APPENDIX C

Environmental Services Program Forms

Form	Form Name
1	Leakage Sources & Eligibility Inspection
2	Baseline Calculation
3	Reserved for future use; No current forms
4	Project Application
5	Application Review
5A	Notice of Project Response
5A.1	Notice of Project Approval
5A.2	Notice of Project Denial
6	Request for ESP Inspector Verification Inspection
7	ESP Inspector Verification Inspection
7A	Notice of Verification Response
7A.1	Notice of ESP Inspector Verification Approval
7A.2	Notice of ESP Verification Inspection Request for Maintenance
8	Certification Review
8A	Letter of Credit Certification Status
8B	Notice of Credit Certification Response
8B.1	Notice of Credit Certification Approval
8B.2	Notice of Credit Reestablishment
8B.3	Notice of Credit Revocation
Appeal Form	Appeal Form
Appeal Form A	Appeal Form Receipt
Appeal Form B	Appeal Form Response

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Environmental Services Program and Vermont Nutrient Protocol Overview

The Environmental Services Program (ESP) provides farm operations the ability to obtain credits for projects and activities on the farm operation that generate, verify and quantify phosphorus reductions. The Vermont Nutrient Protocol serves as the guideline and basis for credit generator participation in the ESP by providing instructions and means for determining modeled losses from eligible sources (pre-project phosphorus loss baseline), modeled losses from phosphorus reduction generating projects and activities (pre-installation), project verification (post-installation) and continuing participation eligibility (on-going credit verification).

Environmental Services Program Application

This application is for a whole farm eligibility determination that will, if approved, provide for entry into participation in the ESP. Completion of this application by the Applicant serves as the basis for the Vermont Nutrient Protocol eligibility review process.

Applicant Full Name (Print)		Email
Address		Home Phone
City		Work Phone
State	Zip	Mobile Phone
County		Fax

The data collection during your participation in the ESP program will only be used for review and acceptance of phosphorus reduction generating activities in the ESP. Only people with a need to access your data in support of the ESP will have the authority to access your data; only summaries of total nutrient reductions, total acres, and other summed benchmark data required for program transparency will be released to the public. If you are not in compliance and free of any violations per the questions contained in this form, your Technical Consultant can assist you with information on technical and financial assistance to resolve eligibility.

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

I testify that the application information is complete and accurate to the best of my knowledge. I understand that to participate in the ESP, I must be in compliance with and free of any unresolved violations of existing applicable state water protection rules and regulations and meet all the requirements in the ESP. I agree that any compensation I receive from the ESP is contingent upon complying with all conditions and requirements of the ESP.

I hereby give my permission for the Certified Technical Consultant to share my personal and operation information with the ESP Aggregator's Office and ESP Inspector. I hereby give my permission for the Certified Technical Consultant, ESP Aggregator's Office and ESP Inspector to share operation information with the ESP Administration as needed to administer the ESP. (If initialed below, I also release personal and operation information to the Administration as needed to promote the ESP.)

I further agree that I have been informed about the conditions and requirements of the program to my satisfaction. I understand that ESP Administration reserves the right to make all final determinations regarding program eligibility, compliance, and complaint and appeal processes.

Applicant Name

Date

Applicant Signature

_____ In addition to the above release of information, my initials here indicate my agreement to release my personal and operation information to the Administration as needed to promote the ESP to the public.

I testify that the above information is complete and accurate to the best of my knowledge. To the best of my knowledge this farm operation has been determined to be eligible for the ESP. The information submitted for review and the site inspection is complete and comprehensive. I understand the farm operation to be in compliance with existing applicable state water protection rules and regulations.

Technical Consultant Name

Date

Technical Consultant Signature

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Environmental Services Program Prerequisites

When you are able to answer each of the below questions, you are eligible for application to the ESP. All phosphorus reduction generating projects and activities are subject to audit of compliance with the terms of your phosphorus reduction credit release.

		Circle One	
1	Are you in compliance with Required Agricultural Practices regarding Animal Feedlots and, if applicable, do you have a valid National Pollutant Discharge Elimination Systems (NPDES) and State Disposal System (SDS) permit for your feedlot operation?	Yes	N/A
2	Are you in compliance with (not cited with any unresolved violations of) the applicable Vermont Wetland Rules as defined by the Vermont Agency of Natural Resources and approved by the Vermont Agency of Agriculture, Food and Markets?	Yes	N/A
3	Do you have a Septic System that is deemed an imminent threat to public health and/or has been cited in violation of local ordinance and is requiring an immediate upgrade?	No	N/A
4	Are you in compliance with the Federal Insecticide, Fungicide, and Rodenticide Act regarding pesticide and fertilizer distribution, use, storage, handling, and disposal?	Yes	N/A
5	Are you in compliance with current State rules and statutes pertaining to shoreland and riparian protection (Shoreland Protection Act)?	Yes	N/A

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Environmental Services Program Leakage Source Inspection

The primary purpose of the Nutrient Leakage Sources Field Inspection of a dairy operation is to identify sources where there are phosphorus losses or loss pathways to surface water. These sources would present potential reduction opportunities at the operation that, with application of conservation practices or technology, could result in water quality improvements. This Field Inspection would also verify any farm operation prerequisites for participating in an ESP through an Administration or other application.

Farm Operation Site Information

Site Name	Date		
Owner Name	Phone Number		
Street Address	City	State	Zip Code
County	Latitude	Longitude	
Number of Milking Cows	Number of Dry Cows		
Number of Heifers	Number of Young Stock		

Farm Operation Category

Check the applicable Farm Operation Category below. Definitions for each category can be found at: <http://agriculture.vermont.gov/water-quality/regulations/rap#who>.

This farm operation is a...	Check <u>one</u> box below:
Non-RAP Operation (NRO)	
Non-RAP Operation (NRO) with designation of Adverse Impacts to Water Quality	
Small Farm Operation (SFO)	
Certified Small Farm Operation (CSFO)	
Medium Farm Operation (MFO)	
Large Farm Operation (LFO)	

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Nutrient Management Plan (NMP)

Vermont State regulations require record keeping and written plans for nutrient management for many farm operations. Much of the information for this inspection can be found in nutrient management records or nutrient management plans. For reference:

- All **MFOs and LFOs** in Vermont must have a field-by-field NMP developed by a certified nutrient management planner or by the permittee, and the NMP shall exceed the standards of the Vermont Required Agricultural Practices and the Vermont USDA NRCS Nutrient Management Plan 590 Standard.
- All **CSFOs** are required by the Required Agricultural Practices to have a field-by-field NMP (although it does not need to be certified).
- **All other farm operations subject to the Required Agricultural Practices** are required to record nutrient application and sample fields receiving mechanical application of manure, agricultural wastes, or fertilizer at least once in every five years using modified Morgan's extractant or other equivalent standards approved by the Secretary.

Has an NMP been developed for your operation?	Yes	No
------------------------------------------------------	------------	-----------

If **Yes**, there is an NMP, complete the following:

Are application rates and conservation practices called for in the NMP currently being implemented?	Yes	No
Is the NMP developed by a nutrient management planner or permittee?	Yes	No
NMP Developer Name:		
Are the following in the NMP (Per Field with Field Name/Location)?		
Soil Analysis	Yes	No
Aerial Site Photo (with applicable RAP setbacks and buffers)	Yes	No
Soil Map	Yes	No
Land Application Map	Yes	No
Nutrient Budget	Yes	No
Soil Risk Assessment Analysis (HEL, RUSLE2, Leaching Index, Vermont Phosphorus Index)	Yes	No
Cropland Inventory	Yes	No
Animal Waste Application Schedule	Yes	No

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Are the following waste management methods in the NMP?

Animal Waste Storage	Yes	No
Compost and Other Waste Storage	Yes	No
Production Area Runoff	Yes	No

If **No**, there is no NMP, complete the following:

If an NMP has not been developed for this operation, are the following records available, per field, on site in accordance with Vermont Required Agricultural Practices Rules (6.03(c), 6.03(f))?

Soil Analysis (Modified Morgan's extractant or another equivalent standard)?	Yes	No
Date of Application	Yes	No
Application Rate	Yes	No
Field Location of Application	Yes	No
Source of Nutrient	Yes	No
Weather and Field Conditions at Time of Application	Yes	No

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Production Area Source Assessment

Vermont Agency of Agriculture Food & Markets defines the Production Area as “those areas of a farm where animals, agricultural inputs, or raw agricultural products are confined, housed, stored, or prepared whether within or without structures, including barnyards, raw materials storage areas, heavy use areas, fertilizer and pesticide storage areas, and waste storage and containment areas. Production areas include egg washing or egg processing facilities, milkhouses, raw agricultural commodity preparation or storage, or any area used in the storage, handling, treatment, or disposal of mortalities.”

Manure Storage

Document manure storage management and practices on site below.

Liquid Manure Storage		
Type of Storage (Anaerobic Treatment Lagoon, Storage Ponds, Tanks)		
Lagoon/Storage Pond Year Built		
Lagoon/Storage Pond Type of Liner		
Size (Cubic Feet)		
Liquid Manure Storage Adequacy		
Sludge Removal Management		
Stackpads Required	Yes	No
Sludge Removal Management Adequacy		

Notes: _____

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Compost and Other Agricultural Waste Storage

Document compost and other agricultural waste storage management and practices below.

Compost and other Agricultural Waste Storage	
Compost Quantity (lbs.)	
Type of Material Composted	
Type of Leachate Collection	
Leachate Collection Adequacy	
Compost Disposal Management	
Compost Disposal Management Adequacy	
Other Agricultural Waste	
Type of Agricultural Waste	
Type of Leachate Collection	
Leachate Collection Adequacy	
Other Agricultural Waste Disposal Management	
Other Agricultural Management Adequacy	

Notes: _____

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Fertilizer Storage (Commercial or Processed Manure)

Document fertilizer storage management and practices below.

Fertilizer Storage (Commercial or Processed Manure)	
Type of fertilizer	
Phosphorus Content (%)	
Type of Storage	
Storage Capacity (Cubic Feet)	
Fertilizer Storage Adequacy	

Notes: _____

Feedstock Storage

Document feedstock storage management and practices below.

Feedstock Storage	
Silage Type	
Ensilage Storage Type	
Ensilage Storage Adequacy	
Bedding Material Type	
Bedding Material Storage	
Bedding Material Storage Adequacy	
Other Feedstock Storage Design and Management	
Other Feedstock Storage Adequacy	

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Notes: _____

Heavy Use Areas/Barnyard/Confined Animal Facilities

Document Heavy Use Areas, Barnyard and, as needed, Confined Animal Facilities Operation management and practices on site below.

Heavy Use Areas	
Loafing Pen Area Adequacy*	
Barnyard Area Adequacy	
Exercise Area Adequacy	
Lanes Adequacy	
Calving Area Adequacy	
Calf Pen Adequacy	
Stormwater Diversion Design and Management	

*runoff and leachate collection systems, diversion, or other management strategies in order to prevent the discharge of agricultural wastes to surface water or groundwater

Notes: _____

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Manure Transport to Field

Document Manure Transport to Field management and practices on site below.

Manure Transport to Field		
Spill Reduction Management (During Agitation or Pumping)		
Impervious Pad with Ramp*	Yes	No
Pumping Equipment		
Pumping Equipment Adequacy**		
Hauling Equipment		
Hauling Equipment Adequacy		

*not a RAP

**meets standards required by Custom Applicator Certification

Nutrient Budget

Document Nutrient Budget management on site below.

Nutrient Budget		
Manure Exported from Site	Yes	No
Manure Exported from Site Quantity (tons)		
Manure Imported to Site	Yes	No
Manure Imported to Site Quantity (tons)		

Notes: _____

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

Field

For the purposes of calculating the current nutrient loss per field, complete the form below. If the farm operation manages more than 3 fields, fill out additional copies of the following two pages. The Subsurface Tile Drainage section is optional but should be filled out if the farm operator seeks credit generation from changes in practices, technology, or management.

	Field # ____	Field # ____	Field # ____
Field Details			
Field Name			
Field Location			
Total Acres			
Crop Management			
Type of Crop			
Rotation Timing (D/M/Y)			
Cover Type (field contoured, quartile estimates of ground cover)			
Seed Density			

Notes:

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

	Field # ____	Field # ____	Field # ____
Nutrient Application			
Type of Nutrient Applied	Liquid Manure	Processed Manure/ Commercial Fertilizer	Liquid Manure
Phosphorus Content			
Rate applied (lbs/acre)			
Method of Incorporation			
Applicator Equipment			
Timing (D/M/Y)			
Tillage			
Equipment			
Timing (D/M/Y)			
RUSLE2			
Soil Content			
Crop Available Phosphorus Concentration			
Aluminum Concentration			
pH			

Notes:

Environmental Services Program Leakage Sources & Eligibility Inspection

**Form
1**
Internal
Program
Use Only

Farm Operation Site ID: _____

	Field # ____		Field # ____		Field # ____	
Grazing						
Start Date						
End Date						
Limit to Operation Selected Crop	Yes	No	Yes	No	Yes	No
Animal Stocking Rate						
Grazing Method						
Animal Exclusion from Surface Waters Management						
Animal Exclusion from Surface Waters Adequacy						
Subsurface Tile Drainage						
Tile Drain Present	Yes	No	Yes	No	Yes	No
Year Tile Drain Built						
Depth to Tile Drain						
Interval between Tile Drain						
Phosphorus Treatment System	Yes	No	Yes	No	Yes	No
Type of Phosphorus Treatment System						

Notes: _____

Environmental Services Program Baseline Calculation

**Form
2**
Internal
Program
Use Only

Farm Operation ID #: _____

Environmental Services Program (ESP) Baseline Calculation

This Baseline Calculation is for a whole farm operation estimated phosphorus (P) baseline that will set the starting point for a farm operation participating in the ESP. Completion of this form serves as the baseline for the Vermont Nutrient Protocol calculation process, and is calculated using the APEX-based model.

Date: _____

Farm Operator Name:	Address:	Project Location
Phone:		Watershed:
		County:
		Township:
Acres:	Project ID #:	Range:
	Project:	Section:
		<i>or</i>
		Lat/Long:

Area or Field #	Location/Name	Number of acres	Estimated annual P (lbs/yr)
Total Farm Operation Estimated P baseline:			

Environmental Services Program Baseline Calculation

Form
2
Internal
Program
Use Only

Farm Operation ID #: _____

I testify that the above information is complete and accurate to the best of my knowledge.

Applicant Name

Date

Applicant Signature

I testify that the above information is complete and accurate to the best of my knowledge.

Technical Consultant Name

Date

Technical Consultant Signature

Environmental Services Program Project Application

**Form
4**
Internal
Program
Use Only

Farm Operation ID: _____

The primary purpose of the Project Application is to submit a conservation practice, technology, or management change and provide required information, including project specifications, to calculate potential nutrient loss reductions due to the project or activity. The Project Application will provide modeled phosphorus (P) loss reductions based on the practice or implementation plans that could result in water quality improvements. This Project Application will also forecast modeled credits generated through the Environmental Services Program (ESP) Administrator associated with the project or activity.

Technical Consultant Information

On behalf of the ESP, I certify that I have inspected the plans of the project(s) listed below and, to the best of my knowledge, this Project Application and the associated documentation accurately represents the modeled P reductions based on the practice or implementation plans.

Technical Consultant Name	Date of Submission		
Phone Number	Office Location		
Street Address	City	State	Zip Code
Planning Participants			

Farm Operation Information

Farm Operation Name	Date		
Farm Operator Name	Preferred Phone Number		
Street Address	City	State	Zip Code
Type(s) of Conservation Practice/Technology/Management Change Planned			
Is this an Original Project Application or an Update to an Existing Project Application? (Circle one)	Original Project Application	Updated to Existing Project Application	

Environmental Services Program Project Application

**Form
4**
Internal
Program
Use Only

Farm Operation ID: _____

Required Attachments

Project Application and Required Attachments	Included with Submission?	
	Yes	No
Completed project application (this form)	Yes	No
Verification of ownership	Yes	No
Preliminary project details	Yes	No
Project map - aerial photo or topographic map depicting project location	Yes	No
APEX-based modeled phosphorus (P) loss reduction/APEX-based modeled credit generation output	Yes	No
Appropriate signature block and language for applicable technical consultants providing assistance	Yes	No
Sales manifest confirming sale of phosphorus beneficial product and buyer agreement to abide by appropriate use, if applicable	Yes	No

Optional Attachments

Optional Attachment	Included with Submission?	
	Yes	No
Service area map (implementation boundaries)	Yes	No
Wetland delineations	Yes	No
Wells	Yes	No
Monitoring plan	Yes	No
Maintenance plan	Yes	No
List of other permit approvals required	Yes	No

Environmental Services Program Project Application

**Form
4**
Internal
Program
Use Only

Farm Operation ID: _____

Other:	Yes	No
Other:	Yes	No
Other:	Yes	No

Project Activities

For the purposes of calculating the modeled phosphorus (P) loss reductions based on the practice or implementation plans, complete the form below. If the operator plans to implement more than 3 practices, fill out additional copies of the following two pages. The Subsurface Tile Drainage section is optional but should be filled out if the farm operator seeks credit generation from changes relevant in practices or management.

	Project # ____	Project # ____	Project # ____
Farm Operation Details			
Farm Operation Number/Name			
Total Acres on Farm Operation			
Conservation Project/Technology/Management Practice Details			
Brief Project Name			
Field Number/Name			
Project Location (Lat/Long)			
Total Acres affected by Project			
Phosphorus (P) beneficial product sales moved off farm operation*	Yes No	Yes No	Yes No

*Must attach sales manifest confirming sale of P beneficial product and buyer agreement to abide by appropriate use.

Environmental Services Program Project Application

**Form
4**
Internal
Program
Use Only

Farm Operation ID: _____

Notes: _____

Summary of Project Activities

List practice(s) below along with summary information regarding acreage, estimated phosphorus reduction, cost and project lifespan.

Project # (from table above)	Brief Project Name/ Description	Number of acres in project, if applicable	Estimated annual P reduction (lbs/yr)	Estimated credits generated	Project lifespan (years)
Totals:					
Total Estimated P reduction over project duration:					

Environmental Services Program Project Application

**Form
4**
Internal
Program
Use Only

Farm Operation ID: _____

I testify that the above information is complete and accurate to the best of my knowledge.

Applicant Name

Date

Applicant Signature

I testify that the above information is complete and accurate to the best of my knowledge.

Technical Consultant Name

Date

Technical Consultant Signature

Environmental Services Program Application Review

**Form
5**

Internal
Program
Use Only

Applicant: _____

Contact Information: phone _____ email _____

Technical Consultant: _____

Applicant Farm Operation # assigned: _____

Date Received: _____

		Circle One	
Contact information complete from Form 1		Yes	No
Application signed for permission to share information as needed to administer the program		Yes	No
Compliances confirmed from Form 1		Yes	No
Nutrient Leakage Sources Field Inspection complete from Form 1		Yes	No
Baseline Calculation complete from Form 2 according to APEX-based model		Yes	No
Total nutrient baseline calculated correctly		Yes	No
Form 4 Project Application complete according to APEX-based model		Yes	No
Total nutrient reduction calculated correctly		Yes	No
Other:			

List of Concerns (if any): _____

Environmental Services Program Application Review

**Form
5**

Internal
Program
Use Only

Farm Operation ID #: _____

	Circle One	
Application is complete and accurate.	Yes	No

Follow up action required (if any): _____

ESP Administrator Completing Checklist: _____

Date Checklist Completed: _____

Copies to: Farm Operator; Technical Consultant; ESP Program File; ESP Aggregator, if applicable; ESP Inspector if applicable

Environmental Services Program

Form 5A: Notice of Project Response

**Form
5A**

Farm Operation ID #: _____ Project #: _____

Internal
Program
Use Only

Dear _____,

On behalf of the Environmental Services Program, please find the attached notice identifying the results of the administrative project review for Project #: _____.

The project has passed the Environmental Services program administrative project review. Please refer to the attached **Notice of Project Approval** (5A.1) for more details.

The project has NOT passed the Environmental Services program audit and has been deemed ineligible for initial entry into the ESP at this time. Please refer to the attached **Notice of Project Denial** (5A.2) for more details.

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector, if applicable; ESP Aggregator, if applicable

Environmental Services Program Notice of Project Approval

**Form
5A.1**

Farm Operation ID #: _____ Project #: _____

Internal
Program
Use Only

Environmental Services Program Administrator

Address

City

VT

Zip

Date _____

Applicant/Farm Operator Full Name

Address

City

VT

Zip

Dear _____,

Congratulations, this letter is to notify you that your Environmental Services Program (ESP) Application and Project Notice of Intent have been evaluated and your reported phosphorus reduction generating projects and activities have been approved for credit generation. If there are any substantive changes to any of your conservation practice, technology or management practice project plans, please complete an updated Project Application (Form 4).

If you have any additional questions about your participation or next steps, please contact your Technical Consultant, _____(name) at _____(phone). Your efforts to reduce phosphorus will not only advance your operation's goals but will also help provide environmental protection for Vermont's waters that benefit the entire community and state. Again, congratulations on your successful ESP approval. On behalf of the Environmental Services Program, we are grateful for our opportunity to work with you.

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector, if applicable; ESP Aggregator, if applicable

Environmental Services Program Notice of Project Denial

**Form
5A.2**

Farm Operation ID #: _____ Project #: _____

Internal
Program
Use Only

Environmental Services Program Administrator

Address

City _____ VT _____ Zip _____

Date _____

Applicant/Farm Operator Full Name

Address

City _____ VT _____ Zip _____

Dear _____,

This letter is to notify you that your Environmental Services Program Application and Notice of Project Intent have been evaluated and deemed ineligible for initial entry into the ESP at this time. The following projects and activities were found to have the deficiencies noted below and require the requested maintenance or update measures:

Project #		Description:	

Environmental Services Program Notice of Project Denial

**Form
5A.2**

Farm Operation ID #: _____ Project #: _____

Internal
Program
Use Only

Form Describing Deficiency		Brief Description of Certification Performance Deficiency	Requested Action
Form #	Page #		

You can work with your Technical Consultant, _____(name), _____(phone), to ensure the desired action is completed and your project is adjusted in order to bring your project(s) into compliance for eligibility approval. At the completion of the requested action, your Updated Project Application will be reviewed for credit generation in the ESP program.

If you have any additional questions about your participation or next steps, please contact the ESP Administrator at _____. On behalf of ESP, we are grateful for our opportunity to work with you.

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector, if applicable; ESP Aggregator, if applicable

Environmental Services Program Request for ESP Inspector Verification Inspection

**Form
6**

Internal
Program
Use Only

For Farm Operation Site ID #: _____

Date: _____

Farm Operator Name:	Address:	Project Location
		Field ID:
		Watershed:
		County:
Acres:	Project ID #:	Township:
	Conservation Project/Technology/ Management Practice Change:	Range:
		Section:
		<i>or</i>
		Lat/Long:

Farm Operator / Technical Consultant/ ESP Administration Representative: (circle one)

Printed Name _____

Signature _____

Copies to: Technical Consultant; ESP Administrator File; ESP Aggregator, if applicable

Environmental Services Program ESP Inspector Verification Inspection

**Form
7**

Internal
Program
Use
Only

For Farm Operation Site ID: _____

Date: _____

Farm Operator Name:	Address:	Project Location Field ID: Watershed: County:
Acres:	Project ID #: Conservation Project/Technology/ Management Practice Change:	Township: Range: Section: <i>or</i> Lat/Long:

This inspection is for: (check one)

Project completeness verification

Project audit inspection

Other: _____

Project re-establishment after request for maintenance

Appeal or complaint resolution

ESP Inspector Name: _____

ESP Inspector Program ID: _____

ESP Inspector will use Form 1 Leakage Sources & Eligibility Inspection and Form 2 Baseline Calculation and supporting documentation for both to verify farm operation and field information and will use Form 4 Project Application or the Form 4 Updated Project Application, as appropriate, along with the following pages to complete the certification field inspection.

Environmental Services Program ESP Inspector Verification Inspection

Form 7

Internal
Program
Use
Only

For Farm Operation Site ID: _____

Project #1				
Name:				
Attach Inspection Checklist				
Project functioning properly (Y/N)?				
Comment:				
Project #2				
Name:				
Attach Inspection Checklist				
Project functioning properly (Y/N)?				
Comment:				
Project #3				
Name:				
Attach Inspection Checklist				
Project functioning properly (Y/N)?				
Comment:				

Environmental Services Program ESP Inspector Verification Inspection

Form 7

Internal
Program
Use
Only

For Farm Operation Site ID: _____

Project Inspection Checklist for Project # _____	Satisfactory	Unsatisfactory	N/A	Comments/Actions Required*
Construction Plan				
Project in place according to plans or technology functioning as intended				
Vegetation Management				
Unwanted vegetation managed				
Exposed ground evident				
Vegetation stand density adequate				
Erosion				
No evidence of soil erosion present				
Site Drainage				
No evidence of standing water				
Runoff pathways appropriate				
Sedimentation				
Sediment accumulation managed				
Energy Dispersion				
Condition of dispersion devices				
Condition of level spreaders				
Condition of check dams/drop structures				
Condition of weirs				
Permanent Structures				
Condition of dissipaters				
Condition of inlet/outlets				
Condition of terraces/dikes				
Condition of spillway/tiles				
Other				

* Add additional pages for additional projects and/or for comments/actions required if needed.

Environmental Services Program ESP Inspector Verification Inspection

Form 7

Public
Transparency
Document
This Sheet
Only

For Farm Operation Site ID: _____

Farm Operation Site ID:	
Inspection Date:	
Final Inspection Assessment (circle one)	
Satisfactory	Unsatisfactory (maintenance actions required)

On behalf of the Environmental Services Program, I certify that I have inspected the records, field and Project area(s) and, to the best of my knowledge, the project and the associated documentation accurately represents the current condition of the farm operation at the time of inspection.

ESP Inspector:

Printed Name _____

Signature _____

Date _____

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector; ESP Aggregator, if applicable

Environmental Services Program Notice of Verification Response

**Form
7A**

Internal
Program
Use Only

Dear _____,

On behalf of the Environmental Services Program (ESP), please find the attached notice identifying the status of Project #: _____.

The project has passed the ESP Inspector Verification Inspection or Project Audit Inspection. Please refer to the attached **Notice of ESP Inspector Verification Approval (7A.1)** for more details.

The project has NOT passed the ESP Inspector Verification Inspection. Please refer to the attached **Notice of ESP Verification Inspection Request for Maintenance (7A.2)** for more details.

Sincerely,

Technical Consultant Name

Date

Technical Consultant Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector; ESP Aggregator, if applicable

Environmental Services Program Notice of ESP Inspector Verification Approval

**Form
7A.1**

Internal
Program
Use
Only

For Farm Operation Site ID: _____

[ESP Inspector Name]
Environmental Services Program ESP Inspector

Address

City VT Zip

Date _____

Applicant Full Name

Address

City VT Zip

RE: ESP Audit Approval for Project # _____,

Congratulations, this letter is to notify you that your Environmental Services Program (ESP) Project Verification Inspection has been completed and has been evaluated as being implemented according to the specifications provided.

Your efforts to reduce phosphorus not only advance your operation's goals but also help provide environmental protection for Vermont's waters that benefit the entire community and state.

Again, congratulations on your successful ESP implementation. On behalf of the Environmental Services Program, we are grateful for our opportunity to work with you.

ESP Inspector Program ID: _____

Printed Name _____

Signature _____

Date _____

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector; ESP Aggregator, if applicable

Environmental Services Program Notice of ESP Verification Inspection Request for Maintenance

**Form
7A.2**

Internal
Program
Use
Only

For Farm Operation Site ID: _____

[ESP Inspector Name]

ESP Inspector

Address

City

VT Zip

Date _____

Applicant Full Name

Address

City

VT Zip

RE: ESP Request for Maintenance for Project(s) # _____

Dear _____,

This letter is to notify you that your Environmental Services Program (ESP) project(s) has been evaluated as part of an ESP Inspector Verification Inspection or Project Audit Inspection and deemed to have deficiencies at this time that need to be remediated before it is eligible for crediting in the ESP. The following projects and activities were found to have the deficiencies noted below and require the requested restoration measures:

Project #		Description:	

Environmental Services Program Notice of ESP Verification Inspection Request for Maintenance

**Form
7A.2**

Internal
Program
Use
Only

For Farm Operation Site ID: _____

Form Describing Deficiency		Brief Description of Certification Performance Deficiency	Requested Action
Form #	Page #		

You can work with your Technical Consultant, _____(name), _____(phone), to ensure the desired action is completed and your project is adjusted in order to bring your project(s) into compliance. At the completion of the requested action, please submit a Form 6 Request for ESP Inspector Verification Inspection.

If you have any additional questions about your participation or next steps, please contact the ESP Administrator at _____. On behalf of ESP, we are grateful for our opportunity to work with you.

Sincerely,

ESP Inspector Name

Date

ESP Inspector Signature

Copies to: Technical Consultant, ESP Administrator File, ESP Aggregator, if applicable, ESP Inspector, if applicable

Environmental Services Program Certification Review

**Form
8**
Internal
Program
Use Only

Farm Operation Site ID #: _____

Contact Information: phone _____ email _____

Technical Consultant: _____

Date Received: _____

		Circle One	
Compliances confirmed on Form 1 Leakage Sources & Eligibility Inspection		Yes	No
Form 1 Leakage Sources & Eligibility Inspection attached to application		Yes	No
Form 2 Baseline Calculation attached to application		Yes	No
Total nutrient baseline calculated correctly		Yes	No
Form 4 Project Application (Notice of Intent) attached to application		Yes	No
Updated Form 4 Project Application (Notice of Intent) attached to application, if applicable	N/A	Yes	No
Total nutrient reduction calculated correctly		Yes	No
Form 7 Third-Party Verification Inspection completed correctly		Yes	No
All relevant attachments present		Yes	No
Other:			

List of Concerns (if any): _____

Environmental Services Program Certification Review

Form 8
Program
Transparency
Document
This Page
Only

Farm Operation Site ID #: _____

	Circle One		Number of Credits, if applicable
	No	Yes	
Project is approved for crediting.			

Follow up action required (if any): _____

Certification Entity Representative Completing Checklist: _____

Date Checklist Completed: _____

Copies to: ESP Administrator File

Environmental Services Program Letter of Credit Certification Status

**Form
8A**

Internal
Program
Use Only

Environmental Services Program Certification Entity

Address

City

VT

Zip

Date _____

Environmental Services Program

Address

City

VT

Zip

RE: ESP Credit Certification for Project # _____, further described as

Farm Operator Name: Phone:	Address:	Project Location Field ID: Watershed: County: Township: Range: Section: <i>or</i> Lat/Long:
Acres:	Project ID #: Description:	

Dear ESP Staff,

This letter is to notify you that an ESP Certification Review was completed for the above project on _____. The project was reviewed and:

<input type="checkbox"/>	The project has passed and is eligible for _____ (#) credits, as noted in the attached certification review information.
<input type="checkbox"/>	The project has NOT passed and is not eligible for credits, as noted in the attached certification review information. Please see page two of the Form 8 Certification Review for follow up actions needed to remedy this denial.

Sincerely,

[Certification Reviewer Name]
Environmental Services Program Certification Entity

Enclosure: Form 8 Certification Review

Environmental Services Program Notice of Credit Certification Response

**Form
8B**

Internal
Program
Use
Only

Farm Operation Site ID #: _____ Project #: _____

Dear _____,

On behalf of the Environmental Services Program, please find the attached notice identifying the status of Project #: _____.

- | | |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | The project has passed the ESP Certification Review. Please refer to the attached Notice of Credit Certification Approval (8B.1) for more details. |
| <input type="checkbox"/> | The project has passed the ESP Certification Review and associated credits have been reestablished. Please refer to the attached Notice of Credit Reestablishment (8B.2) for more details. |
| <input type="checkbox"/> | The project has NOT passed the ESP Certification Review and the project is now ineligible for credit generation. Please refer to the attached Notice of Credit Revocation (8B.3) for more details. |

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector; ESP Aggregator, if applicable

Environmental Services Program Notice of Credit Certification Approval

**Form
8B.1**

Internal
Program
Use
Only

Farm Operation Site ID #: _____ Project #: _____

Environmental Services Program Administrator

Address

City

VT Zip

Date _____

Applicant/Farm Operator Full Name

Address

City

VT Zip

RE: ESP Audit Approval for Project # _____

Dear _____,

Congratulations, this letter is to notify you that your Environmental Services Program audit has been completed and your reported phosphorus reduction generating projects and activities have passed the project audit inspection. Your efforts to reduce phosphorus will not only advance your operation's goals, but help provide environmental protection for Vermont's water that benefit the entire community and state. You will be contacted again to formalize your crediting after administrative review. Administrator staff will be available to provide program and crediting status updates upon request.

If you have any additional questions about your participation or next steps, please contact your Technical Consultant, _____(name) at _____(phone). Again, congratulations on your successful ESP audit completion.

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector; ESP Aggregator, if applicable

Environmental Services Program Notice of Credit Reestablishment

**Form
8B.2**

Internal
Program
Use
Only

Farm Operation Site ID #: _____ Project #: _____

Environmental Services Program Administrator

Address

City

VT Zip

Date _____

Applicant/Farm Operator Full Name

Address

City

VT Zip

Dear _____,

On behalf of the Environmental Services Program, based on the most recent Project Audit Inspection and Certification Review, your Project #: _____ is now eligible for credit reestablishment and is eligible for the following number of credits: _____. Your efforts to reduce phosphorus will not only advance your operation's goals but will also help provide environmental protection for Vermont's waters that benefit the entire community and state. Again, congratulations on your successful ESP approval. On behalf of the Environmental Services Program, we are grateful for our opportunity to work with you.

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Inspector; ESP Aggregator, if applicable

Environmental Services Program Notice of Credit Revocation

**Form
8B.3**

Internal
Program
Use
Only

Farm Operation Site ID #: _____ Project #: _____

Environmental Services Program Administrator

Address

City

VT Zip

Date _____

Applicant/Farm Operator Full Name

Address

City

VT Zip

Dear _____,

On behalf of the Environmental Services Program, based on the most recent Project Audit Inspection and Certification Review, your Project #: _____ is now ineligible for credit generation. If you have any additional questions about your participation or next steps, please contact your Technical Consultant, _____ (name) at _____ (phone).

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; Administrator; ESP Inspector; ESP Aggregator, if applicable

Environmental Services Program Appeal Form

Appeal Form

Internal
Program
Use
Only

As noted in Environmental Services Program Form 1 (Leakage Sources & Eligibility Inspection), I have agreed that I have been informed about the conditions and requirements of the program to my satisfaction. I understand that Environmental Services Program Administrator reserves the right to make all final determinations regarding program eligibility, compliance, and complaint and appeal processes.

Submitted by Name

Date

Submitted by Signature

Office Use Only:

Phone contact

Meeting

Reevaluation by _____

Other (If other please identify below)

Next Steps with scheduled dates:

Environmental Services Program Appeal Form Receipt

Appeal Form A

Internal
Program
Use
Only

Environmental Services Program Administrator

Address

City

VT Zip

Date _____

Full Name of person filing appeal

Address

City

VT Zip

Dear _____,

This letter is to confirm that the Environmental Services Program (ESP) has received your appeal regarding the incident which occurred on [date from Form 9]. We will be taking actions in response to your concerns, and you will be notified of those actions and the response to your appeal.

As noted, ESP Administrator reserves the right to make all final determinations regarding program eligibility, compliance, and complaint and appeal processes. Thank you for your patience while we look into your appeal.

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Aggregator, if applicable; ESP Inspector, if applicable; ESP Certifying Entity, if applicable

Environmental Services Program Appeal Form Response

Appeal Form B

Internal
Program
Use
Only

Environmental Services Program Administrator

Address

City

VT Zip

Date _____

Full Name of person filing appeal

Address

City

VT Zip

Dear _____,

This letter is to respond to your appeal regarding the incident which occurred on [date from Form 9]. The following actions were taken in response to your concerns. [insert actions from bottom of page 2 of Form 9]

As noted, Environmental Services Program Administrator reserves the right to make all final determinations regarding program eligibility, compliance, and complaint and appeal processes. Therefore, [resolution/outcome]

Sincerely,

ESP Administrator Name

Date

ESP Administrator Signature

Copies to: Technical Consultant; ESP Administrator File; ESP Aggregator, if applicable; ESP Inspector, if applicable; ESP Certifying Entity, if applicable

