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## MEMORANDUM

**To:** Commission on Act 250: The Next 50 years  
**From:** Anson Tebbetts, Secretary  
**Date:** March 23, 2018  
**Re:** Farming Exemption and Public Process



The Vermont Agency of Agriculture, Food and Markets (“AAFM” or “Agency”) is responsible for the regulation and enforcement of agricultural nonpoint source pollution for all size farms in Vermont. The Vermont legislature first directed AAFM to develop a comprehensive Agricultural Non-Point Source Pollution Reduction Program in 1992. The Accepted Agricultural Practices Rules (AAPs), which regulate farming activities in order to protect water quality, became effective in 1995 and were amended in 2006.

As a result of Act 64 of 2015—the Vermont Clean Water Act—the Agency of Agriculture was tasked with updating the AAPs to further reduce the impact of agricultural activities to water quality across the State. The Required Agricultural Practices Rules (RAPs) are an updated version of the AAPs, re-written to a higher level of performance. This rule was renamed in 2015 and amended in December of 2016 and the Agency has been engaged in significant implementation of the rule utilizing education and outreach, technical and financial assistance, complaint driven and regularly scheduled inspections, as well as – where appropriate and necessary – enforcement to ensure compliance with the RAPs by farms of all sizes in Vermont.

The Commission on Act 250 posed a hypothetical question to the Agency regarding whether Act 250 jurisdiction over ‘farming’ would have improved water quality. The Agency can only speak to the history of its water quality programming as well as the comprehensive and expanded scope of work it has been tasked to undertake and achieve at the direction of the legislature and cannot posit an answer to a hypothetical question which has no relation to how the Agency conducts its day-to-day operations to ensure agricultural water quality rules are understood, followed and enforced by farms of all sizes in Vermont. In lieu of approaching this hypothetical exercise, the Agency has provided reasons for why ‘farming’ should not be covered by Act 250 regulatory jurisdiction and how, in the Agency’s opinion, oversight by Act 250 would slow or prevent the implementation of conservation practices required of farms to protect and improve water quality on their operations.

Also contained with this response is the Agency’s 1-year review and 5-year plan to improve water quality statewide. This provides context for the programs within the Agency to address ag non-point source pollution. The Agency included a sample application for an Large Farm Operation (LFO) permit that also provides insight into this permitting process. While the Agency understands there may continue to be questions, it hopes this information assists the Commission in understanding its regulatory programs designed and implemented to maintain and improve water quality and prevent non-point source pollution from agricultural operations in Vermont.



## 1. Would Act 250 jurisdiction over “farming” have improved water quality?

On December 13, 2017, AAFM provided testimony to the committee focused on how natural resource protection regulations, including Act 250, developed concurrently with Federal and State water quality requirements, and the administration of these regulations have changed and improved over time. In addition, the Required Agricultural Practices (RAP) rule, amended in 2016, are recognized by the Environmental Protection Agency as a critical part of meeting the phosphorus TMDL for agricultural land use in the Lake Champlain basin. The current new rigorous requirements, new certifications and training in the RAP rules, increased Water Quality staffing levels at AAFM, and the Agency’s enhanced enforcement authority will further protect Vermont’s ground and surface waters from non-point source agricultural pollution.

The RAPs are standards to which all types of farms must be managed. The most recent revision to the RAPs included amendments to:

- Establish requirements for a Small Farm Certification Program;
- Establish nutrient, manure, and waste storage standards;
- Make recommendations for soil health;
- Establish requirements for vegetated buffer zones;
- Establish requirements for livestock exclusion from surface water;
- Establish nutrient management planning standards; and
- Establish standards for soil conservation such as cover cropping

The standards and rules included in the RAPs are intended to improve the quality of all of Vermont’s waters by reducing and eliminating cropland erosion, sediment losses, and nutrients losses through improved farm management techniques, technical and compliance assistance, and where appropriate, enforcement. The RAP rule strives to balance the complexity, variability, and requirements of farm management with the need to improve that management in order to meet the State’s goals in improving and protecting water quality. These requirements have existed and have been administered by AAFM since 1995.

Farming is a dynamic industry that responds quickly to changing technology and innovation, markets, weather, and field conditions. Recognizing that AAFM does not administer the Act 250 program, it is certain that if “farming<sup>1</sup>” - including cultivating crops, producing maple syrup, raising livestock or installing required or voluntary conservation practices to improve water quality - required Act 250 permitting, it would unnecessarily delay the installation of conservation practices (including those necessary due to corrective actions), prevent operators from voluntarily making changes that would improve water quality, and negatively impact the agricultural industry, a major contributor to rural economic development and the preservation of the rural working land in Vermont. It would also increase the cost to make improvements that protect natural resources, resulting in increased barriers to implementation and profitability and viability of farm operations in already uncertain times for the industry. It is AAFM’s opinion that if farming was brought under Act 250 review, it would not improve water quality and would not add value to natural resource protection that isn’t already addressed by AAFM through its industry knowledge and expertise, and its regulation and enforcement programs.

The newly revised RAP rule requires agricultural waste and farm management practices (including nutrient management planning) that must be followed by all farm operators. This includes requirements for training and education of farmers and other agricultural service providers. AAFM is also required to develop and apply best management practices, which are site specific, and can further mitigate against agricultural pollutants entering surface and ground waters of the state. These practices provide the platform for responsible and sustainable farming that are recognized nationally as a model for

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<sup>1</sup> 10 VSA 6001 (22) “Farming” means:

(A) the cultivation or other use of land for growing food, fiber, Christmas trees, maple sap, or horticultural and orchard crops; or

(B) the raising, feeding, or management of livestock, poultry, fish, or bees; or

(C) the operation of greenhouses; or

(D) the production of maple syrup; or

(E) the on-site storage, preparation and sale of agricultural products principally produced on the farm; or

(F) the on-site storage, preparation, production, and sale of fuel or power from agricultural products or wastes principally produced on the farm; or

(G) the raising, feeding, or management of four or more equines owned or boarded by the farmer, including training, showing, and providing instruction and lessons in riding, training, and the management of equines.

protecting water quality. AAFM also has the authority to immediately take action to address alleged violations. These actions include cease and desist and emergency administrative orders to prevent an immediate threat of substantial harm to the environment or public health and welfare; the ability to reduce animal numbers, or install a conservation practice (construction of a manure pit, animal crossings at streams, concrete barnyard with curbs to manage waste or fencing). The Act 250 system of review, which is well suited to address fixed features, is not suited to regulate the dynamic agricultural industry nor able to respond to its challenges as quickly as the Agency through its regulatory and enforcement programs.

In addition, AAFM and ANR coordinate closely on agricultural enforcement cases and both agencies are committed to working together. Pursuant to 6 V.S.A. § 4810, AAFM has primacy on non-point source pollution and ANR has authority over point source pollution. Because complaints are received by both agencies, intake of complaints may not initially be received by the agency responsible for the specific complaint. For these reasons, coordination and cooperation between the two agencies is critical. AAFM has the technical on-farm expertise that helps to remedy pollution sources and an expanded enforcement capability to address non-compliance; while ANR has been delegated the authority of the Environmental Protection Agency to administer the Clean Water Act: each agency serves an important role in protecting water quality.

In the past year the process of receiving complaints, performing investigation and inspections, and utilizing enforcement began the process of going through a Lean improvement processes to ensure the resources of both agencies were used most efficiently and with a consistency that provides the regulated community with certainty about how the regulations are enforced. Our enforcement teams meet monthly to discuss the case workloads and identify the process that each case requires from each agency. We also meet quarterly with the Attorney General's Office to review current cases and potential future cases based on recent investigations. The legal teams at the Attorney General's Office and both agencies are in regular communication ensuring definitions and process are being followed as required by statute and federal Clean Water Act.

A summary of Agency water quality program actions taken in 2017 as well as the five-year plan to improve agricultural water quality is attached and will provide full details of the Agency's robust agricultural water quality programming. The Agency of Agriculture's annual enforcement report is also attached.

## **2. Public outreach efforts associated with its permitting process.**

A permit issued by the Agency of Agriculture is not necessary for construction of all farm structures<sup>2</sup>. Farm structures include but are not limited to equipment and hay storage, animal housing, waste storage facilities (since July 1, 2006 waste storage facilities must meet standards set by the USDA Natural Resource Conservation Service), sugar houses and sap storage. While the Agency does not issue permits for the construction of these structures; both the RAP rules in Section 9 and 24 V.S.A. §4413, require a farm operator to notify the municipality in writing of their intent to construct a farm structure. This notice must include an illustration of the proposal including setback distances to all property lines, road rights of way, and surface water. A farm operator must comply with local setbacks and no build areas as regulated by the municipality, unless the Secretary of the Agency approves an alternative setback. When an alternative setback is requested, the Agency provides a written notice to the municipality by certified mail. The municipality is required to post this notice for seven business days and comments concerning the proposal must be submitted to the Agency before 4:30 pm before the toll of the seventh day. A copy of the notice is mailed to the affected adjoining property owner, as well.

A proposal to construct within a regulated flood plain/floodway or river corridor must receive approval from the Department of Environmental Conservation. Stormwater permits for disturbance of one acre or greater for construction and wetland permits are also necessary prior to commencement of construction. These determinations of jurisdiction are made by the applicable regulatory body.

Large Farm Operations in Vermont have a public component of their permitting process and more information about the specifics of this process is included below.

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<sup>2</sup> Farm Structure means a structure that is used by a person for farming, including a silo, a building to house livestock or raise horticultural or agronomic plants, or customarily used to carry out the agricultural practices defined in Section 3.2 of [the RAP rules]. A farm structure includes a barnyard or waste management system, either of which is created from an assembly of materials, including the supporting fill necessary for structural integrity, but excludes a dwelling for human habitation. A farm structure also must be used by a person who can demonstrate meeting the minimum threshold criteria as found in Section 3.1 of [the RAP rules]. [RAP Section 2.15]

## Large Farm Operations

### a. When is a public process required?

Each Large Farm Operation permit and permit amendment issued by the Agency is an individual permit that addresses farms specific requests, needs and requirements. Most permits and permit amendments issued contain conditions that require farms to design and implement additional strategies to reduce water quality impacts, such as storm water management for impervious surfaces within the production area<sup>3</sup>, as well as impacts on neighboring communities due to odor, noise, traffic and other pests.

Public informational meetings are held for expansion which includes the following:

- Increasing herd size from Medium Farm Operation thresholds to over Large Farm Operation thresholds (e.g. increasing herd size to over 700 mature dairy cows);
- Increasing herd size above current Large Farm Operations permitted animal numbers;
- Expanding an existing barn for increased animal housing;
- Building a new barn that will house less than a Large Farm Operation animal threshold; and
- Construction of a “new large farm barn”.

### b. What are the notice requirements?

Below is an outline of the required steps, available information and timeframes related to public information meetings for Large Farm Operation permit and permit amendment requests for expansion:

#### Step 1 – Select Date of Public Meeting with Agency of Agriculture, Food & Markets (AAFM)

Farm shall coordinate with AAFM to select date.

#### Step 2 – Select Town of Public Meeting

Informational meetings shall be held in the town were the project is occurring or where the primary facility is located as applicable.

Note: If the project includes construction in more than one town each town shall have the notice posted as well as the packet of information available, but only one meeting will be held.

#### Step 3 – Reserve Public Meeting Location for Date and Time Approved by AAFM

The meeting location shall be accessible, and the meeting space should be able to hold approximately 35 people. The public meeting shall be scheduled during normal business hours.

#### Step 4 – Complete *Notification of Informational Meeting* form and send to AAFM to review

Farm completes and returns the *Notification of Informational Meeting* form to AAFM for review prior to posting.

**NOTE: STEPS 5 and 6(a & b) all need to happen 14 calendar days prior to the Public Informational Meeting**

#### Step 5 - Issue Notice through local, daily newspaper 14 calendar days prior to Public Informational Meeting

Using the *Notification of Informational Meeting* form outlined above the applicant shall coordinate public notification of the LFO project and the public informational meeting by issuing a notice through a local daily newspaper that has been approved by the Secretary.

The public notice shall:

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<sup>3</sup> Production Area means 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, fertilize 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. [RAP Section 2.30]

- Appear in the local daily newspaper once, at least 14 calendar days prior to the public informational meeting.
- Be at least two (2) columns wide by three (3) inches high.
- The newspaper notice should also indicate that information is available at multiple towns when appropriate.

Step 6(a) – Post *Notification of Informational Meeting* Form in Town Clerks office (s) 14 calendar days prior to Public Informational Meeting

Once approved by the Agency, the form shall be posted in the Town Clerks office(s) of all applicable town for 14 calendar days prior to the meeting. The farm is responsible for making sure they post the notice(s) as well as providing additional information at the Town office which is outlined below.

Step 6(b) – Packet of Additional information shall be made available 14 calendar days prior to the meeting at the Town Office

This packet needs to include:

1. The name of the owner and operator
2. LFO facility location and mailing address
3. List of facility locations managed by the large farm
4. Description of proposed large farm and/or changes to the operation
  - a. e.g. Construction of housing, construction of waste management system(s), increase in herd size
    - i. include what facilities proposed changes are occurring on
5. Animal Numbers and Waste Generation:
  - a. Total existing number and types of all livestock or domestic fowl, their weights and total waste generation across all large farm operation facilities.
  - b. The number of animals, their weights and total waste generation for each production area where livestock housing exists.
  - c. Any proposed increase in number of livestock, associated increase in waste generation and the LFO facility or facilities where the livestock increases will occur.
6. Maps:
  - a. Maps need to be prepared for each facility and production area managed by the farm.
  - b. Maps shall have a legend, show scale and include roads with road names, surface water, property boundaries and identify and describe any siting and setback considerations.
  - c. Required Maps:
    - i. Topographic Map of the geographic area in which the large farm is located showing the latitude and longitude of the entrance to production area or proposed production area.
    - ii. Production Area Maps: The existing structures (e.g. barns, pits, sheds, bunks, etc), and any proposed animal housing construction or expansions, or other structures or improvements. All structures shall be labelled.

Step 7 – Farmer will wait to hear if authorization has been granted and implementation of the proposed change cannot begin until authorization from the Agency has been granted.

After the public informational meeting has been held there is a 5-day public comment period. Comments are typically sent to the farm’s coordinator, at the Agency, who reviews application materials and prepares a farm’s permit. The Agency drafts a Responsiveness Summary based on comments received that are pertinent to the permit or permit amendment request and the summary is sent to the applicant as well as to those who have submitted comments. An example is that a Town Clerk submitted comments on behalf of a Select Board. The comments were reviewed, a responsiveness summary was prepared and was sent to the applicant as well as the Town Clerk who submitted the comments on behalf of the Select Board.

Public comments require the Agency to review internal policy as well as compile information that could be used in consideration to inform rule creation and revision. Attendees are advised to submit a formal comment. After the public

informational meeting, a 5-day public comment period opens, and all comments received are reviewed and discussed among the field staff and management. The Agency reviews and takes into consideration the history of compliance with the RAPs as well as the farm's LFO permit and the LFO Rules when reviewing permit requests.

In state fiscal year 2017, the Agency held 13 public information meetings for the Large Farm Operations Permitting program.

**c. How does the public receive notice of a decision?**

A responsiveness summary is drafted and sent to those who submitted formal comments as well as the farmer. It is important to note that the farmer must wait to implement any proposed changes until after authorization from the agency has been granted. Constructing changes that are subject to this process and prior to approval by the Agency is a violation of the LFO rules.

**d. What are the appeal rights of the public in this public process?**

The purpose of the public informational meeting is to provide an opportunity for the public to learn about the proposed project. The public may submit written comments to the Agency about a proposed LFO project for five (5) business days after a public informational meeting. There are no appeal rights of the public in this informational meeting process.

As outlined in 6 V.S.A. § 4855: A person seeking a permit who is aggrieved by a final decision of the Secretary may appeal de novo to the Environmental Division within 30 days of the final decision of the Secretary. The only parties to the appeal shall be the person seeking the permit and the Secretary.

Enclosures:

VAAFM Water Quality 1 Year Review and 5 Year Plan  
VAAFM 2017 Water Quality Enforcement Report  
VAAFM LFO Permit Application Packet

**AAFM RESPONSES  
TO QUESTIONS  
FROM THE SENATE COMMITTEES**



**VERMONT**

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**AGENCY OF AGRICULTURE, FOOD & MARKETS**

**Joint Senate Hearing  
Clean Water Projects: Planning and Implementation**  
Friday, January 19, 2018 from 9 AM to 11:30 AM in Room 10 at the State House.

Senate Committee on Agriculture  
Senate Committee on Natural Resources

Invitation

“The Committees request reports at that time from the Agencies of Agriculture, Transportation, and Natural Resources concerning water quality in Vermont. Included in information in the reports for the Committees should be:

- a brief summary of accomplishments of the past year and,
- in greater detail, long-term plans for the next 5 years.

The Committees are most interested in specific action plans, the process used to develop and update the plans, and projections of funds needed to accomplish water quality goals.”

Five Questions

1. “What is your agency’s five-year plan for clean water? (If not a five-year plan, please substitute whatever interval you employ.)
2. “How do you build your plan and replenish it to ensure you have ample planned, budgeted, and scheduled projects in your five-year plan?
3. “What is the basis for developing your plan? Do you begin, for example, with the state’s Tactical Basin Plans (e.g. watershed by watershed)?
4. “What is the budget associated with that five-year plan? And within that budget, please specify capital versus non-capital dollars.
5. “What agency has overarching clean water planning and implementation responsibility— that is, the responsibility to ensure that regardless of operating area (e.g. AAFM, ANR, AAFM, BGS, ACCD, etc.), the state’s clean water laws are being following and appropriate planning and programs are in place?

# **AAFM Report on the Planning and Implementation of Clean Water Projects**

## **A) A brief summary of accomplishments of the past year**

### Introduction

More than 1.2 million acres of Vermont land is devoted to farming, and agriculture is one of our most important industries. As a whole, agriculture preserves open land, provides healthy local foods, and is an essential part of Vermont's identity.

At the same time, Vermont's waters are critical to the state's economy and to residents' quality of life. The Water Quality Program within the Agency of Agriculture, Food and Markets (VAAFMM) utilizes education, research, regulations, monitoring, and compliance and enforcement while providing technical and financial assistance to farmers that simultaneously promote the long-term viability of farms and the health of our state waterways.

State Fiscal Year 2017 saw the continued expansion of the Water Quality Program's capacity and impact as funding resources allocated to the Agency of Ag from Act 64 of 2015 allowed newly onboarded staff to expand their effectiveness in priority program areas. Major milestones continue to be achieved each year by the program as the State of Vermont and agriculture as a sector work to meet reductions required by the 2016 EPA TMDL for Phosphorus for the Lake Champlain Basin in Vermont.

### Brief Summary

In SFY2017, the Water Quality Program revised the RAPs to improve water quality in the state and implement the small farm certification program. The Water Quality Program also performed all of the required inspections and enhanced the MFO and LFO inspection protocols to be equivalent, which includes 3 field checks for the main facilities and an additional field check for each additional facility the farm has under its permit. The Memorandum of Understanding between ANR/DEC/AAFMM for the agricultural nonpoint source program was also revised and DEC and AAFMM continued to coordinate inspection and enforcement actions per the 2007 MOU – revised 2017 – and has continued quarterly compliance meetings to increase coordination

Education, engagement and outreach remains a critical tool to ensure agricultural environmental regulations are understood and followed by farmers. In SFY2017, the Water Quality Program held 93 water quality education and outreach events provided 25% more hours of individual instruction to farmers – totaling over 5,000 of instruction in SFY2017.

Providing technical and financial assistance to farmers to support them to achieve compliance with water quality standards and improve water quality on their farms was marked by an expansion in both the engineering staffing levels to design and facilitate implementation of these practices, project applications from farmers wanting to participate in the program and total dollars obligated. In SFY2017 over \$1.3 million was awarded through 30 Best Management Practices (BMP) grants which installed 79 total practices including waste storage facilities, barnyards, and silage runoff collection systems.

Inspection and Enforcement are important tools within the water quality program to ensure compliance with state water quality rules. In SFY2017, program staff - Water Quality Specialists – responded to 122 complaints and conducted 106 compliance checks. Of these 228 alleged violations, 93 of them resulted in enforcement actions total 180 counts of which 12 of these enforcement actions are pending.

The water quality program promulgates new rules as deemed necessary by the Agency or required by law and revise and renew existing rules and permits based on new information, scientific research, and experience to date. The goal of this area of effort is to create meaningful and enforceable regulations with result in increasing compliance rates over time. The Required Agricultural Practices (RAPs) were amended by Rule, effective December 5, 2016. Further, the Water Quality Program submitted the Final Tile Drainage Report in conjunction with the Agency of Natural Resources as required by the Legislature in Act 64 of 2015. The Agency began revisions of the Medium Farm Operations (MFO) General Permit – a standard process which occurs every five years per the MFO Rule.



Ensuring accountability and accurate reporting of efforts undertaken by the water quality program as well as farmers is a major area of effort within the program. Accurate and thorough accountability will ensure public trust that Clean Water Funds are being allocated to the most effective programmatic and grant areas to improve water quality. To do this, the water quality program creates, measures, and reports on key metrics of success for the Program's work. In SFY2017 Results Based Accountability metrics were established for CWF Grant programs, further reporting templates were developed and shared with external partners grant programs to ensure consistency between grantee reporting.

Act 64 of 2015 allocated additional staffing resources to ensure agriculture in Vermont meets water quality standards laid out in the Act. Program leadership worked to increase both the capacity of existing staff and the appropriate number of staff needed to be successful in new and added legislated responsibilities. While some gaps remain, the goal of the program is to Increase staff to levels needed to fully support technical and engineering services, outreach and engagement, permitting & inspection programs, and enforcement. In service of this goal the Program hired five new water quality staff plus onboarded a new AmeriCorps member in 2017.

Technology remains a crucial tool to ensure the full extent of the agricultural landscape is understood by the Program and appropriate resources can be deployed to support farmers to achieve compliance with regulatory standards outlined by the Agency. To do this, the Program advances and deploys technologies to improve efficiency, consistency, and availability of data for staff, farmers, and partners. In support of this, the Water Quality Program developed a 'Partners Database' to provide for consistency in multi-partner and Agency conservation planning, implementation and tracking. The Program was presented with a national award from ESRI for the Special Achievement in GIS (SAG) Award for the development of the 'Partner Database'.

The Water Quality Program receives funding from the Clean Water Fund to provide additional state funds to help farmers implement actions that will reduce pollution washing into Vermont's rivers, streams, lakes, ponds and wetlands. One way the Water Quality Program delivers these funds is through the Agricultural Clean Water Initiative Program (Ag-CWIP) which supports partner organizations to deliver Innovative Phosphorus Reduction Strategies, technical assistance direct to farmers, as well as expand their organizational development. \$1,718,000 in state funding was obligated through Ag-CWIP grants in SFY2017. Some focus areas of partner grants include evaluating farm viability and finding alternative farm strategies when water quality costs needed for a current operator to meet water quality standards are excessive, a manure transfer and assessment program to better distribute manure across the landscape, also on farm Technical Assistance is being provided by farmers ahead of the Agency inspection process.

Tasks Completed

<u>Rules, Regulations, Permits, and Programs</u>	Revise AAPs to RAPs to improve water quality in the state and implement the small farm certification program.
<u>Engagement and Outreach</u>	Provide Agriview to all farmers and fill with seasonally appropriate educational content
<u>Engagement and Outreach</u>	Launch the VESP program and enroll farms
<u>Engagement and Outreach</u>	Revise and maintain the website and other publication materials
<u>Engagement and Outreach</u>	93 educational events focused on new RAPs
<u>Engagement and Outreach</u>	Lake Carmi significant coordination and data compilation
<u>Technical &amp; Financial Assistance</u>	\$1.9M in BMP, FAP and Grants to Partners
<u>Technical &amp; Financial Assistance</u>	Assess maple operations and begin BMP development process
<u>Technical &amp; Financial Assistance</u>	Support the continued development of the North Lake Contractors effort
<u>Technical &amp; Financial Assistance</u>	Train A&E firms and utilize these on 22 farms

<u>Technical &amp; Financial Assistance</u>	Engage with partners in alternatives to traditional WQ investments when costs are more than the farm is worth
<u>Technical &amp; Financial Assistance</u>	Create a BMP priority ranking tool and implement it
<u>Technical &amp; Financial Assistance</u>	Launch the Conservation Equipment Assistance Program (CEAP) program once again - \$4.5M in requests for \$1M of available funding
<u>Technical &amp; Financial Assistance</u>	Perform field checks on all FAP applications
<u>Inspection</u>	Significant ramp up the NMP review process for LFOs
<u>Inspection</u>	Revise nearly every LFO permit including public informational meetings
<u>Inspection</u>	Performed 392 inspection visits
<u>Inspection</u>	282 water samples taken
<u>Inspection</u>	Revise the entire inspection process
<u>Inspection</u>	Perform ALE plan reviews on all conserved farms prior to closing
<u>Inspection</u>	DEC and AAFM will continue to conduct on-farm multi-agency inspections to ensure consistency in the inspection process. Agencies conducted a minimum of 10 joint inspections
<u>Inspection</u>	Draft guidance documents for nuisance to be incorporated in LFO permitting
<u>Inspection</u>	Educate and implement the Revised Secretary's Decision
<u>Enforcement</u>	Revised MOU for enforcement with ANR
<u>Enforcement</u>	Created MOU with AGO for enforcement
<u>Enforcement</u>	145% increase in enforcement actions
<u>Enforcement</u>	Coordinate with AGO on 4 major cases
<u>Enforcement</u>	Refer dozens of cases to ANR
<u>Enforcement</u>	Review regulations with VT State Police and when they need to notify us or ANR
<u>Enforcement</u>	Develop and implement a regional enforcement training in VT
<u>Quality of Work and Outcomes; Metrics, and Evaluation</u>	Was audited by the State Auditor for the BMP program
<u>Quality of Work and Outcomes; Metrics, and Evaluation</u>	Further integrate results based accountability into the entire WQ program
<u>Quality of Work and Outcomes; Metrics, and Evaluation</u>	Develop a strategic plan for the WQ Division
<u>Rules, Regulations, Permits, and Programs</u>	RAPs Massive overhaul and some of the most stringent non-point source agricultural regulations in the nation.
<u>Rules, Regulations, Permits, and Programs</u>	As part of revisions to Required Agricultural Practices (RAP; formerly "Accepted agricultural practices or AAP), adopt by rule requirements for training classes or programs for farmers Establish a training program and schedule for all farmers to complete training
<u>Rules, Regulations, Permits, and Programs</u>	Develop TMDL implementation tracking system at ANR/DEC with AAFM to ensure ability to estimate phosphorus load reductions achieved by TMDL implementation activities
<u>Rules, Regulations, Permits, and Programs</u>	Certified over 250 farms as CSFO's (deadline 1/31) Adopt and implement small farm certification program as part of RAP revision

<u>Rules, Regulations, Permits, and Programs</u>	Certified 78 Custom Manure Applicators As part of RAP revisions, adopt by rule and implement custom applicator certification program for operating in VT (Act 64, Sec. 16)
<u>Rules, Regulations, Permits, and Programs</u>	Revised MFO GP
<u>Rules, Regulations, Permits, and Programs</u>	Draft Tile RAP regulatory changes
<u>Rules, Regulations, Permits, and Programs</u>	Created the RAP Development Committee
<u>Rules, Regulations, Permits, and Programs</u>	Responded to significant public records requests
<u>Rules, Regulations, Permits, and Programs</u>	Address variance process for frequently flooded soils
<u>Rules, Regulations, Permits, and Programs</u>	Draft an alternative NMP standard for vegetable operations
<u>Rules, Regulations, Permits, and Programs</u>	Revise BMP policy
<u>Rules, Regulations, Permits, and Programs</u>	Establish livestock exclusion standards to prevent erosion and water quality impacts and develop a program to support grazing and livestock exclusion (Act 64, Sec. 4)
<u>Rules, Regulations, Permits, and Programs</u>	Develop contracts for grassed waterways, livestock stream exclusion and tile drainage sampling
<u>Rules, Regulations, Permits, and Programs</u>	Draft a report on NMP confidentiality and mapping tile drainage
<u>Rules, Regulations, Permits, and Programs</u>	Work on pathways for nutrient trading
<u>Rules, Regulations, Permits, and Programs</u>	Develop a buffer tool to address uncertainty on “striches”
<u>Rules, Regulations, Permits, and Programs</u>	Submit the Tile Drain Final Report to the Legislature
<u>Rules, Regulations, Permits, and Programs</u>	Development with DEC of stormwater management efforts on farms through LFO permitting
<u>Rules, Regulations, Permits, and Programs</u>	Streamlining organic certification with CSFO certification
<u>Staffing</u>	Hired 5 new people plus an AmeriCorps member
<u>Technology</u>	resented with a national award from ESRI for the Special Achievement in GIS (SAG) Award for the development of the 'Partner Database'

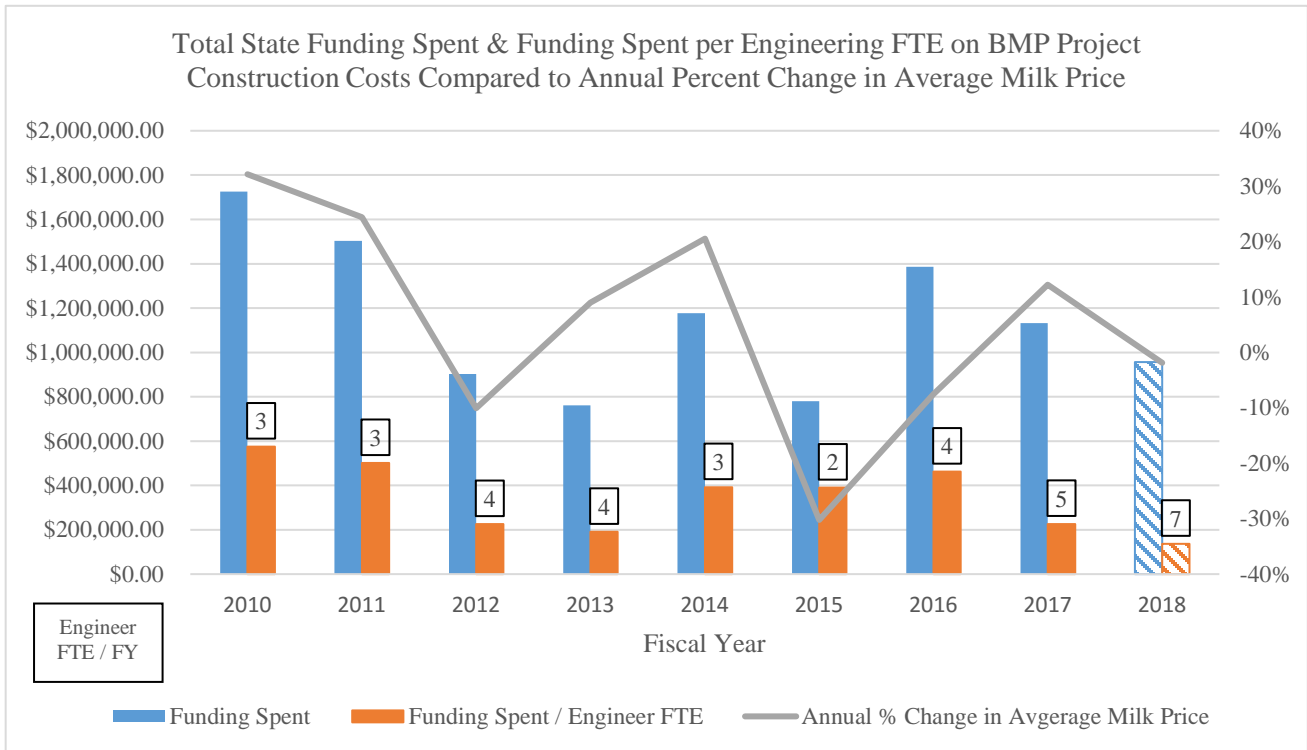
## Annual Reporting

<u>Technical &amp; Financial Assistance</u>	<b>Actions</b>	Provide technical assistance, early planning, and coordination to farmers and providers, and award of grants for action and innovation
	<b>Milestones</b>	FY2017 BMP Outlay: \$1.13M; FY2018 Obligation (To Date) \$2.06M

<a href="#"><u>Technical &amp; Financial Assistance</u></a>	<b>Metrics of Success</b>	TA Visits by Program	BMP: 243 FAP: 20 CREP: 84 CEAP: 1
		Ground Water Samples Taken	Total: 282
		BMP Financial Assistance (FA)	Total BMP FA Awarded: \$1,131,778.21 30 BMP Grants Awarded 79 Total Practices Installed
		FAP	Total FAP FA Awarded: \$76,575.39 24 Farmer Grant Recipients 3,212 Total Acres of Implementation
		Ag-CWIP	Total Ag-CWIP Grants Obligated: \$1,718,000 49 Projects Funded
<a href="#"><u>Engagement and Outreach</u></a>	<b>Actions</b>	Invest in and enhance outreach and engagement to build partnership, expand participation, increase compliance, and identify connections with local, state, and federal agencies	
	<b>Milestones</b>	Increased number of events and total hours of instruction by 5% and 25%	
	<b>Metrics of Success</b>	Education and Outreach Events	93 Water Quality Education and Outreach Events 3137 Farmer, Partner, and Public Attendees 5,011 Total Hours of Individual Instruction
<a href="#"><u>Rules, Regulations, Permits, and Programs</u></a>	<b>Actions</b>	Promulgate new rules as deemed necessary by the Agency or required by law and revise and renew existing rules and permits based on new information, scientific research, and experience to date	
	<b>Milestones</b>	Create meaningful and enforceable regulations with increasing compliance rates over time	
	<b>Metrics of Success</b>	Permits Revised	MFO GP Revision Initiated Before Deadline
		Required Reports	Submitted Final TD Report as Required by Legislature
		Rules Revised	Amended RAPs by Rule, effective December 5, 2016
<a href="#"><u>Inspection</u></a>	<b>Actions</b>	Conduct farm inspections using established procedures and practices in a clear, consistent, and meaningful way to advance compliance with our water quality rules and regulations	
	<b>Milestones</b>	Ensure all inspections are accomplished by statutory requirements	
	<b>Metrics of Success</b>	# Farm Inspections	164 Inspections
		# Farm Compliance Checks	106 Compliance Checks
		# Complaint Investigations and Enforcement Visits	122 Farm Complaint Investigations and Enforcement Visits
Total # Inspections		392 Total Inspection Visits	
<a href="#"><u>Enforcement</u></a>	<b>Actions</b>	Standardize enforcement procedures and practices and exercise enforcement authority in a clear, consistent, and meaningful way to advance compliance with our water quality rules and regulations	
	<b>Milestones</b>	Increased Compliance Actions by 145 % over 2016	
	<b>Metrics of Success</b>	# Farm Inspections Which Resulted in Enforcement Review	228 Reviews
		# Farm Compliance Checks Which Resulted in Enforcement Review	106 Reviews

		# of Complaint Investigations Which Resulted in Enforcement Review	122 Reviews
		# of Enforcement Actions Issued	93 Enforcement actions Issued (12 Pending)
<u>Quality of Work and Outcomes: Metrics, and Evaluation</u>	<b>Actions</b>	Create, measure, and report on key metrics of success for the Program's work	
	<b>Milestones</b>	Results Based Accountability metrics established for CWF Grant programs in June 2017	
	<b>Metrics of Success</b>	Reporting template developed and shared with external partners grant programs	
<u>Staffing</u>	<b>Actions</b>	Increase both the capacity of existing staff and the appropriate number of staff needed to be successful in new and added legislated responsibilities	
	<b>Milestones</b>	Increase staff to levels needed to fully support technical and engineering services, outreach and engagement, permitting & inspection programs, and enforcement	
	<b>Metrics of Success</b>	Hired five new water quality staff plus onboarded a new AmeriCorps member	
<u>Technology</u>	<b>Actions</b>	Advance technologies to improve efficiency, consistency, and availability of data for staff, farmers, and partners	
	<b>Milestones</b>	Launch and use a 'Partners Database' to provide for consistency in multi-partner and Agency conservation planning, implementation and tracking	
	<b>Metrics of Success</b>	ARMS-WQ was presented with a national award from ESRI for the Special Achievement in GIS (SAG) Award for the development of the 'Partner Database'	

*BMP Program Trends 2010 – 2018*



## BMP Project Examples

### CLEAN WATER DIVERSION

A small farm located in the Well's River watershed took the first step to improve the farm's impacts on water quality. Gutters were installed on the heifer barn in 2016 to capture the water that would otherwise fall on the barnyard. Sometimes solutions are as simple as keeping clean water clean.



From left to right, before and after photos of clean water diversion implementation.

### COVERED MANURE STACKING FACILITY

In 2016, a covered manure stacking facility was installed on a small 20-cow dairy farm in Royalton, VT. Prior to the covered stacking facility, which was installed through the BMP Program, manure had been stacked in a site that posed a risk to a nearby stream. The covered stacking facility enables the farm to manage manure as a solid, prevent runoff from becoming contaminated, and relieves the management burden of spreading the additional volume of rainfall water.



From left to right, before and after photos show solid manure stacking site implementation.

More details regarding the accomplishments achieved by the Agency of Agriculture, Food and Markets Water Quality Division can be found in the following annual reports:

#### Financial and Technical Assistance for Agricultural Water Quality Annual Report (6 V.S.A. § 4825)

<https://legislature.vermont.gov/assets/Legislative-Reports/VAAFMA-Annual-Report-On-Financial-and-Technical-Assistance-For-Agricultural-Water-Quality-FY2017.pdf>

#### Vermont Clean Water Initiative 2017 Investment Report

[http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/2017CleanWaterInitiativeInvestmentReport\\_5MB.pdf](http://dec.vermont.gov/sites/dec/files/wsm/erp/docs/2017CleanWaterInitiativeInvestmentReport_5MB.pdf)

#### Memorandum of Understanding Between Agency of Natural Resources and Agency of Agriculture, Food and Markets Performance Measures Legislative Report (6 V.S.A. § 4810 (d))

<https://legislature.vermont.gov/assets/Legislative-Reports/2018-01-15-Annual-Report-on-AAFM-ANR-MOU-revised.pdf>

#### VAAFMA Agricultural Water Quality Enforcement Program 2017 Annual Report

*Forthcoming*

**B) Provide in greater detail, long-term plans for the next 5 years.**

***1. What is your agency's five-year plan for clean water?  
(If not a five-year plan, please substitute whatever interval you employ.)***

**VERMONT PHASE 1 TMDL PLAN 20-YEAR SUMMARY OF NONPOINT SOURCE COMMITMENTS**

*\*\* The light blue-shaded tasks are milestones specified in the Lake Champlain TMDLs Accountability Framework – the guide for monitoring progress in the restoration of Lake Champlain.*

<b>A. AGRICULTURE</b>			
<i>Water Quality Permitting Programs – LFO, MFO, CAFO</i>			
<b>Task *</b>	<b>Description</b>	<b>Start Year</b>	<b>End Year</b>
Inspect potential CAFOs	VDEC and AAFM to inspect medium and large farms that could potentially be CAFOs under VT CAFO permit Inspect 75 potential CAFOs annually	2014 2019	2036 2036
Inspect MFOs and LFOs	AAFM to inspect MFOs a minimum of every 3 years and LFOs annually.	2014	2036
Update agricultural enforcement MOU	Update the MOU between DEC and AAFM regarding enforcement of agricultural regulations and program coordination	2016	2016
<i>Accepted Agricultural Practice Rule Update and Compliance</i>			
Amend the State Accepted Agricultural Practices	Amend the AAPs to become the Required Agricultural Practices (RAPs) through rulemaking. Rules changes will include: <ul style="list-style-type: none"> <li>• Develop small farm certification program</li> <li>• Increased buffer sizes on small farms to 25' (consistent with medium and large farm regulations)</li> <li>• Strengthen erosion risk tolerances on all farms to T (from 2T)</li> <li>• 10' buffer requirements for field ditches</li> <li>• Required stabilization of field gully erosion</li> <li>• Strengthening the livestock exclusion requirements.</li> <li>• Develop and require certification of custom manure applicators and ongoing training</li> <li>• Develop and require educational trainings for farmers</li> <li>• Establish standards for soil conservation practices such as cover crops</li> <li>• Require additional site-specific BMPs where necessary to meet water quality standards</li> <li>• Establish standards to increase nutrient management on farms with high soil test phosphorus</li> </ul>	2015	2016
Expand AAP and RAP education and outreach	Begin extensive education and outreach and enforcement of revised Required Agricultural Practices	2014	2036
Develop the Small Farm Inspection program	Establish a SFO inspection group (4 inspectors, 1 supervisor) on Missisquoi Bay and St. Albans Bay	2014	2036

Increase SFO dairy inspections	Complete assessment of all small dairy farms in Missisquoi Bay and St. Albans Bay watersheds;	2017	2022
	Require BMP installation where needed according to CLF Settlement Agreement;	2018	2026
	Complete assessment of all small dairies in South Lake e and Otter Creek basins;	2021	2036
	Require BMP installation where needed on significant t livestock operations in the South Lake Basin	2022	
Increase SFO inspections to other significant livestock operations	Expand small farm inspection program to any significant livestock operations in the Lake Champlain Basin and require BMP installation where needed	2025	2036
Require small farm certification	Require small farms to submit annual certification forms	2017	2036
<b><i>Nutrient Management Planning</i></b>			
Increase NMP efforts	Review NMP standards and revise as necessary	2016	2018
	Provide increased financial support for NMP development and management tools	2018	2036
	Expand small farm NMP development courses and workshops, trainings for farmers, manure applicators and technical service providers	2016	2036
Mandate manure applicator certification as part of RAP revision	Mandate certification of custom manure applicators	2016	2036
Expand implementation efforts	Provide education and outreach support grants Provide alternative phosphorus reduction grants. Provide organizational capacity building grants. Increase participation and re-enrollment in CREP program	2016	2036
Revise RAPs to address tile drains	Revise RAPs to include requirements to reduce nutrients from tile drains	2018	2018
<b><i>Additional Efforts in Critical Watersheds</i></b>			
Increase inspections in critical watersheds	Target CAFO and SFO inspections	2014	2036
	Conduct North Lake Farm Survey in Missisquoi Bay and St. Albans Bay watersheds	2015	2016
	Expand this comprehensive evaluation to other critical watersheds	2018	2020
	Deploy the strategy outlined in the CLF Settlement Agreement in critical watersheds	2016	2036
Increase implementation in critical watersheds	Prioritize personnel in these areas for water quality improvement projects. Use \$16M RCPP grant funding to implement high priority practices primarily in these watersheds	2014	2036
		2015	2020
Increase technical assistance in critical watersheds	Hire three contractors on retainer to immediately work with farmers following site-specific farm assessment. Target education and support for farmer groups	2016	2018



Develop and pilot VESP	Develop and pilot the Environmental Stewardship Program to incentivize additional practice adoption	2016	2020
Create grassed waterways program	Target funding to critical source areas in coordination with partners	2017	2036
Tile drain research	NRCS grant funding testing of two treatment media for tile drain outflows on farms in Franklin county. Lake Champlain Basin Program funded literature review of tile drain research and expanded tile drain monitoring and assessment in Jewett Brook watershed Encouraging farmers to utilize NRCS <i>Edge of Field Monitoring</i> practice to test additional tile treatment options	2015 2016	2017 2018
Capital Equipment Assistance Program	Reactivate this program to provide funding for the purchase of equipment such as precision record keeping equipment	2017	2036

## H. MISSISQUOI BAY – ENHANCED IMPLEMENTATION

AAFM North Lake Survey	Visits to all livestock operations to assess water quality	2015	2015
Address RAP violations; install BMPS	Farms to install site specific BMPs as required and address RAP violations	2015	ongoing
Regional Conservation Partnership Program	Target agricultural and forest landowners to accelerate implementation of NRCS cost-share practices to improve water quality (including land conservation easements and wetland restoration and easements)	2015	2020
Lake Carmi Watershed Land use Survey	Survey historic and current land uses in the watershed to document conservation practices already applied on agricultural fields in the watershed and opportunities for additional implementation.	2017	2018

## **5 Year NPS Agriculture Program Goals**

### **Farmsteads**

1. Continue to implement the BMP program
  - a. Recent expansion to 7 engineers will increase rate of implementation
  - b. Recent policy changes will allow for more projects to be implemented in a shorter time frame
  - c. Created a priority ranking process to gear efforts to highest priority projects for water quality
  - d. Continue work with partners to create alternatives when the BMP costs are greater than the grand list of the farm.
  - e. Educate the private engineering sector to perform on farm design and construction oversight
  - f. Through permitting, inspection and enforcement ensure that all farms have sufficient storage to meet regulatory requirements and prevent overtopping due to capacity.
  - g. Develop new BMP standards for silage leachate under-drain management and assess alternatives such as supporting ag-bags versus complex silage leachate management systems on smaller farms.

### **Cropland Management**

1. Expand the ability for farms to implement alternative practices such as no-till, manure injection, and successful cover cropping through cost-share opportunities (CEAP and FAP) along with technical assistance grants to partners.
  - a. Cover crops on all frequently flooded farm fields under NMP
  - b. All farms regardless of size and type meeting a sustainable erosion standard by implementing practices that fit their farm to control the erosion
  - c. Increase the amount of funding provided to CEAP (\$1M in FY2018 round)
  - d. Continue to successfully implement the Custom Manure Applicator certification program through continued educational opportunities for applicators to receive educational credits, random compliance checks and normal on farm inspections. 78 Custom Manure Applicators were certified through the program in CY 2017 - 2018
  - e. Provide grant opportunities to partners to provide on farm workshops and demonstration sites to educate farmers about how to change to alternative practices on their own farm.
2. Minimize surface runoff losses of phosphorus from cropland through nutrient management strategies and continue to increase the inspection and enforcement to ensure better implementation throughout VT.
  - a. Expanded manure spreading ban on sensitive fields along rivers starting in October and ending in April.
  - b. Continue focus on record keeping and reconciliation in the NMP process through inspection, permitting and enforcement processes
  - c. Work with the technical partners to integrate whole farm nutrient management into the standard for NMP (Cornell Mass Balance)
  - d. Ensure the recent changes to the UVM crop recommendations that reduced phosphorus crop requirements for corn by 20% is implemented in NMPs through annual reviews of the LFO annual reports.
  - e. Review NMPs to make sure the new P-Index is being used and hold farms accountable to use the tool correctly.
  - f. Develop a strategy internally that would allow the Agency of Agriculture, Food & Markets to create a certification program for technical service providers who write NMPs such that the liability of the planning is through a professional license as opposed to the client (farmer).
  - g. Develop BMPs for tiles to remove phosphorus losses and identify metrics to prioritize where these BMPs would be most effective.

### **Pasture Management**

1. Increase support for grazing to improve water quality through CWF grants to partners
2. Implement a declining cost-share program for fencing livestock out of surface water through CWF grants to partners

## Overarching Strategies

1. Continue to support through CWF grants the private sector to assist us in developing nutrient accountability metrics and to research how that can be integrated into nutrient trading policies that aim at reducing phosphorus from agriculture.
2. Through the private sector, continue to refine the accountability tools in a way that helps farms understand their individual phosphorus reduction targets and make those targets based on loading from a watershed assessment perspective and the practices farms are doing to address phosphorus. Allow this tool to help a farm plan for future practices as well by making phosphorus reduction estimates as a factor in decision making.
3. Learn from the ongoing feasibility study on the potential for a “treatment train” – in-stream phosphorus remediation strategy – in the Jewett Brook watershed and if successful, move into the next phase of project development.
4. Implement the Revised Secretary’s Decision in Missisquoi and St. Albans Bay watershed and make a decision on whether to implement in the South Lake and Otter Creek watersheds. This effort includes utilizing more tools to identify critical sources areas in the landscape and making sure farmsteads are managed in compliance with water quality regulations.
5. Monitor groundwater for phosphorus and identify whether there are key areas in the state where phosphorus in groundwater is more elevated than other areas and whether there are consistent factors from agriculture driving those elevated levels such as legacy loading concerns.
6. Continue to make sure all farms seeking to sell their development rights are given an inspection and are in compliance with all water quality regulations with a goal of getting compliance prior to closing. In the interim, ensure each farm with compliance issues are on a compliance schedule followed through enforcement by the Agency to be addressed as quickly as possible after closing.
7. Gather NMP data in order to increase the accountability for practices by watershed and be able to identify watershed specific risk factors that require focused implementation efforts that may vary from other watersheds. Create a web interface that allows for aggregated NMP information to be shared with the public as part of the annual accountability for agricultural non-point source pollution reduction efforts and strategies.
8. Building the data set for tile drain monitoring such that the data can be utilized to tease out whether specific conservation practice efforts are beneficial or degrading to water quality phosphorus losses and then promote the appropriate practices potentially through regulatory efforts if sufficient data is available.

*2. How do you build your plan and replenish it to ensure you have ample planned, budgeted, and scheduled projects in your five-year plan?*

VAAFM  
Water Quality  
Division

# Strategic Plan

2017 to 2022



AGENCY OF AGRICULTURE, FOOD & MARKETS



# VAAFM Water Quality Program Strategic Plan: **Summary**

More than 1.2 million acres of Vermont land is devoted to farming, and agriculture is one of our most important industries. As a whole, agriculture preserves open land, provides healthy local foods, and is an essential part of Vermont’s identity.

At the same time, Vermont’s waters are critical to the state’s economy and to residents’ quality of life. The Water Quality Program within the Agency of Agriculture, Food and Markets (VAAFM) utilizes farmer assistance, education, research, regulations, monitoring, and compliance and enforcement that simultaneously promote the long-term viability of farms and the health of our state waterways. To advance its work, the Water Quality Program has developed a strategic plan to guide its efforts from 2017 to 2020. This Summary captures the key elements of the strategic plan.

<b>Vision</b>	Viable and thriving farms across Vermont, large and small, are protecting and enhancing water quality to maintain healthy streams, rivers, lakes, and drinking water.
<b>Mission</b>	The VAAFM Water Quality Program works with farmers to improve water quality on and from Vermont farmlands to improve and protect Vermont’s water resources.
<b>Values</b>	<p><b>Efficient</b> in implementation and practice through well trained staff, practical application of rules, regulations, and procedures, and harnessing technology</p> <p><b>Engaging</b>, where staff reach out and engage farmers, residents, and stakeholders in an on-going, clear, and sustained manner</p> <p><b>Rigor</b> in applying standards, conducting inspections, undertaking enforcement as required, and ensuring compliance</p> <p><b>Fair</b> in treating farms of different scales and kinds consistently</p> <p><b>Responsive</b> to the unique circumstances of geography, topography, soil type, kind of farming, and relation to water resources</p> <p><b>Evidence-based</b>, seeking actions, projects, and programs that are based in science and data</p>

To realize this vision, and to accomplish the mission with the values asserted, the following are goals laid out for 2017-2020 under key areas of work.

<b>Technical Assistance (TA)</b>	Increase technical assistance, early planning, coordination among provisions and providers, and award of grants for action and innovation
<b>Engagement and Outreach</b>	Invest in and enhance outreach and engagement to build partnership, expand participation, increase compliance, and identify connections with local, state, and federal agencies
<b>Rules, Regulations, and Permit</b>	Promulgate new rules as required by law and revise and renew existing rules and permits based on learning, scientific research, and experience to date
<b>Inspection</b>	Standardize inspection procedures and practices in a clear, consistent, and meaningful way to advance compliance with our water quality rules and regulations
<b>Enforcement</b>	Standardize enforcement procedures and practices and exercise enforcement authority in a clear, consistent, and meaningful way to advance compliance with our water quality rules and regulations
<b>Quality of Work and Outcomes, Metrics, and Evaluation</b>	Create, measure, and report on key metrics of success for the Program's work
<b>Staffing</b>	Increase both the capacity of existing staff and the number of staff needed to be successful in new and added legislated responsibilities
<b>Technology</b>	Advance technologies to improve efficiency, consistency, and availability of data for staff, farmers, and partners

## Strategic Plan:

# Detailed Goals and Actions

To realize this vision, and to accomplish the mission with the values asserted, the following are goals and objectives laid out for 2017-2020 under key areas of work. Per each area, further detail as to actions, description, milestones, and key metrics are included in detailed matrices in a separate document. Key tasks under these areas and actions are also detailed in a work plan as a separate document.

- a. **Rules, Regulations, and Permit:** Promulgate new rules as required by law and revise and renew existing rules and permits based on learning, scientific research, and experience to date.
  - i. Educate and promote Required Agricultural Practices (RAP) across the state to farms and farmers and associated stakeholders
    - 1. Under the RAPs, create and maintain a Customer Manure Applicator certification program
  - ii. Design and implement the Certified Small Farm Operation (CSFO) Program
  - iii. Design, draft, or renew key rules and permits
    - 1. Revise Medium Farm Operation General Permit (MFO GP)
    - 2. Large Farming Operation (LFO) rules
    - 3. Best Management Practice (BMP) rules
  - iv. Develop procedures and practices for interagency communication for VAAFAM permitting
- b. **Inspection:** Standardize inspection procedures and practices in a clear, consistent, and meaningful way to advance compliance with our water quality rules and regulations
  - i. Establish and adhere to a schedule for regular inspections across farm sizes, programs, and priority watersheds
  - ii. Implement, track, and follow the Conservation Law Foundation (CLF) agreement
  - iii. Standardize inspection processes through written procedures, creating visualizations and process flow diagrams, and increased staff training for consistency and predictability
  - iv. Uphold the Memorandum of Understanding between VAAFAM and Department of Environmental Conservation (DEC) for the Implementation and Enforcement of Agricultural Water Quality Programs
  - v. Increase efficiency in inspections to provide more capacity and time for engaging and supporting the inspected community

- c. **Enforcement:** Standardize enforcement procedures and practices and exercise enforcement authority in a clear, consistent, and meaningful way to advance compliance with our water quality rules and regulations
  - i. Implement, track, and follow the CLF agreement
  - ii. Implement and track routine enforcement matters
  - iii. Standardize enforcement process discussion meetings
  - iv. Standardize enforcement processes through written procedures and other tools
  - v. Standardize reporting to Attorney General's Office
  - vi. Training of staff on enforcement matters
  - vii. Uphold the Memorandum of Understanding for the Implementation and Enforcement of Agricultural Water Quality Programs
- d. **Technical Assistance (TA):** Increase technical assistance, early planning, coordination among provisions and providers, and award of grants for action and innovation.
  - i. Enhance TA contractor consistency and effectiveness through training, written guidance, and certification
  - ii. Develop clear, consistent, predictable, and responsive processes for our customers to request and receive technical assistance
  - iii. Develop policies for technical assistance to ensure effective record-keeping, appropriate expansions, and appropriate connections to regulatory programs and requirements
  - iv. Coordinate and connect various state and federal technical assistance programs to ensure efficiency and maximum benefit to farms.
    - 1. EQIP/BMP
    - 2. RCPP
    - 3. VESP
    - 4. FAP/NMP Program
    - 5. North Lake Contractors
    - 6. Clean Water Fund (CWF)
    - 7. DEC Permits
    - 8. Tactical Basin Planning
    - 9. CREP
  - v. Ensure early planning under Nutrient Management Plans (NMPs) and other activities to ensure proposed projects better fit the overall needs of the farm, water quality, and the capacity of the farm to implement



- vi. Develop, advance and improve key programs
  1. Develop the Critical Area Seeding and Filter Strip Program
  2. Develop the BMP Challenge Program to advance learning and innovation
  3. Develop and implement the Vermont Environmental Stewardship Program pilot
  4. Advance and improve (NMPs)
- e. **Engagement and Outreach:** Invest in and enhance outreach and engagement to build partnership, expand participation, increase compliance, and identify connections with local, state, and federal agencies.
  - i. Engage stakeholders intensively to advise, build, educate about, implement, and improve programs
  - ii. Provide consistent communications in the field that promote change within the regulated community and provides for the Division to be the place that the regulated community feels comfortable contacting to resolve problems, ask questions or seek compliance assistance.
  - iii. Develop and maintain a single Required Agricultural Practices (RAP) Guidance document
  - iv. Develop and maintain a single LFO Permit Management Guidance document that is shared with TSPs and farmers as a place where all information is maintained.
  - v. Collaborate, implement and facilitate appropriate outreach and communication activities for activities such as technical assistance, small farm certification program, on-going CLF process, and watershed-specific activities.
- f. **Staffing:** Increase both the capacity of existing staff and the number of staff needed to be successful in new and added legislated responsibilities
  - i. Build a team well versed in rules, programs, services, and accountability metrics across the division
  - ii. Increase staff capacity and consistency in inspections, programs, permitting, outreach and engagement through training, education, and learning across areas of work
  - iii. Increase staff to support technical and engineering services, outreach and engagement, permitting and inspection programs, and enforcement
- g. **Technology:** Advance technologies to improve efficiency, consistency, and availability of data for staff, farmers, and partners
  - i. Complete the Food Safety Database as the tool for increasing consistency and coordination for inspection and enforcement
  - ii. Establish a method to more easily track grants and contracts.
  - iii. Launch and use a Partners database

- iv. Launch and use FarmEditor that is linked with the Food Safety Database
  - v. Identify and implement best approaches to efficient use of spatial (GIS) technology
  - vi. Utilize technology to share data, programmatic information and applications, and accountability metrics to best inform and support our customers
  - vii. Explore field-based technologies to support staff and customers
- h. **Quality of Work and Outcomes, Metrics and Evaluation:** Create, measure, and report on key metrics of success for the Division's work
- i. Establish and adhere to a Division work plan for numerous tasks and activities
  - ii. Ensure clear value for farmers regarding service provided in a timely, regular, and consistent manner
  - iii. Develop Results Based Accountability metrics that all water quality initiatives are tracked
  - iv. Identify and track metrics for social and behavioral change related to outreach and engagement
  - v. Utilize state-wide tools such as LEAN and PIVOT



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/water-quality](http://www.agriculture.vermont.gov/water-quality)



List of BMP Applicants from FY 2017 to Date

This table tabulates the size of farm, county, practices applied for and date of application. This represents the pool of outstanding applicants which the Agency is stretched past current capacity to service on an annual implementation basis.

	A	B	C	D
31	MFO		Manure/waste storage/Waster transfer/Access road/Barnyard heavy use/Clean water diversion	2/23/2017
32	SF	Grand Isle	Manure/waste storage/waste/wash water/barnyard or heavy use/laneway	2/27/2017
33	Non-RAP	Grand Isle	Barnyard or heavy use runoff/laneway devepment/exclusion	2/27/2017
34	MFO		Heavy use runoff/manure pit pipe	2/27/2017
35	SFO		Manure/waste storage/Access rd/ Barnyard heavy use/Exclusion	2/28/2017
36	SFO		Manure/waste storage/barnyard or heavy use runoff	2/28/2017
37	LFO	Addison	Asst W/ EQIP Project	2/28/2017
38	SFO	Orleans	Barnyard or heavy use runoff/Clean water diversion	3/1/2017
39	SFO	Addison	Manure/waste storage/Access road/Barnyard or heavy use/Clean water diversion/Exclusion	3/1/2017
40	SFO	Addison	Access Rd	3/2/2017
41	MFO	Bennington	Manure/waste storage/waster transfer/access road	3/3/2017
42	MFO		MHW collection	3/3/2017
43	SFO	Addison	Barnyard expansion/laneway development	3/3/2017
44	MFO	Franklin	Waste transfer system	3/13/2017
45	SFO	Bennington	Manure/waste storage/barnyard or heavy use runoff/Clean water diversion/Exclusion fencing	3/14/2017
46	LFO	Orleans	Barnyard or heavy use runoff/Clean water diversion	3/14/2017
47	SFO	Franklin	Manure/waste storage/Clean water diversion	3/17/2017
48	LFO	Addison	Manure/waste storage/waste transter/waste/wash water storage/branyard or heavy use/clean water diversion	3/17/2017
49	CSFO		Manure/waste storage/New barn/Barnyard or heavy use/Exclusion	3/21/2017
50	LFO		Barnyard / HUA runoff control	3/21/2017
51	SFO	Addison	Waste transfer system/Waster/wash water storage/Irrigation equipment	3/21/2017
52	CSFO	Addison	Barnyard or heavy use runoff	3/21/2017
53	MFO	Addison	Waster transfer/Silage or leachate treatment	3/21/2017
54	CSFO		Manure/waster storage/Waster transfer/Waste/wash water storage/Access Rd	3/21/2017
55	MFO		Manure/waste storage/Waster transfer	3/23/2017
56	CSFO		Barnyard or heavy use/Silage or feed leachate	3/24/2017
57	CSFO		Silage or feed leachate/Barnyard or heavy use	3/24/2017
58	CSFO	Franklin	Reel irrigation for leachate pond	3/24/2017
59	CSFO		Manure/waster storage/Clean water diversion	3/29/2017
60	MFO	Rutland	WSF, waste xfer, +	3/29/2017
61	CSFO	Addison	Manure/waste storage/Waste transfer/Silage/Barnyard	3/30/2017
62	CSFO	Rutland	Manure/waste storage/Barnyard/clean water diversion	3/31/2017
63	MFO	Franklin	Manure/waste storage/Access road/Animal mortality/fuel tanks	3/31/2017
64	MFO	Addison	Manure/waste storage/Waste Transfer/Clean water diversion	4/4/2017
65	SFO		Manure/waste storage/Silage or feed leachate/Access rd/Waste food	4/5/2017
66	CSFO		Laneway /Exclusion	4/6/2017

	A	B	C	D
67	CSFO	Franklin	Barnyard or heavy use/Clean water diversion	4/6/2017
68	MFO		Maure/waste storage/Silage or feed leachate/barnyard/heavy use/clean water diversion	4/7/2017
69	SFO	Franklin	Barnyard or heavy use	4/7/2017
70		Franklin	Manure Pit/Heavy use/barnyard	4/7/2017
71	CSFO	Franklin	Water Transfer/Waste wash water storage/Barnyard for heavy use	4/12/2017
72	MFO	Orleans	Manure/waste storage/Waste wash water treatment	4/12/2017
73	CSFO	Addison	Barnyard or heavy use	4/12/2017
74	LFO	Orange	Manure/waste storage/waste transfer/waste/wash water storage	4/12/2017
75	CSFO	?	Manure/waste storage/transter/wash water/Leachate	4/17/2017
76	CSFO	Rutland	Manure/waste storage/transfer/wash water storage/access rd/heavy use area/clean water diversion etc.	4/19/2017
77	SFO	Franklin	Manure/waste storage/access rd/heavy use area/clean water diversion	4/19/2017
78	SFO	Grand Isle	Composting Facility	4/20/2017
79	SFO	Orange	Manure/waste storatge/barnyard or heavy use runoff/clean water diversion	5/15/2017
80	MFO	Addison	HUA runoff, bunker runoff pump station	5/15/2017
81	SFO	Rutland	Barnyard or heavy use runoff/laneway development/stream crossing	5/15/2017
82	MFO	Orleans	Manure/waste storage/barnyard or heavy use/clean water diversion	5/15/2017
83	MFO	Franklin	Construct pad for leachate flow to storage area	5/15/2017
84	CSFO	Chittenden	Manure/waste storage/Waste transfer/Waste wash water storage/treatment/Silage leachate/	5/15/2017
85	CSFO		waste transfer system	5/17/2017
86	CSFO	Addison	Silage leachate	5/24/2017
87	CSFO	Orleans	EQIP assist, Waste Storage	6/2/2017
88	SFO	Orange	Manure/waste storage/acccess rd/runoff control/clean water diversion/laneway/streem crossing	6/19/2017
89	CSFO	Addison	Barnyard or heavy use area runoff	6/19/2017
90	MFO	Windham	Silage or feed leachate/Barnyard or heavy use/clean water diversion	6/19/2017
91	CSFO	Orleans	Manure/waste storage/access rd/runoff contral/clean water diverson/laneway/stream crossing	6/19/2017
92	CSFO	Orleans	leachate treatment/runoff control/clean water diversion/laneway stream crossing/exclusion	6/22/2017
93	CSFO	Orange	Waster/wash water storage	6/29/2017
94	CSFO	Franklin	Barnyard or heavy use runogg	6/29/2017
95	CSFO	Washington	Clean water diversion	7/7/2017
96	MFO	Franklin	Manure/waste storage/waste strasfer system/silage leachate/access road for stacking/barnyard HOA runoff	7/13/2017
97	LFO	Orange	barnyard runoff control/clean water diversion	7/18/2017
98	SFO	Orleans	waste storage/wash water storage/barnyard runoff/clean water diversion	7/19/2017
99	CSFO	Orleans	barnyard runoff/laneway development	7/20/2017

	A	B	C	D
100	CSFO	Franklin	Manure/waste storage/Waste/wash water treatment/Barnyard or heavy use runoff/laneway development	8/7/2017
101	Non-RAP/SFO	Windsor	Barnyard or heavy use runoff/Access road/Laneway Development	8/7/2017
102	CSFO	Addison	Manure/waste storage/waste transfer/waste/wash water/leachate treatment,access rd/clean water diversion	8/8/2017
103	LFO	Franklin	Silage or feed leachate treatment/curtain drain around bunk	8/28/2017
104	CSFO	Grand Isle	Manure/waste storage/waste/wash water/clean water diversion	9/1/2017
105	MFO	Bennington	Manure/waste storage/Covered barnyard	9/7/2017
106	CSFO	Addison	Silage or feed leachate treatment	9/7/2017
107	CSFO	Addison	clean water diversion	9/7/2017
108	SFO	Addison	Barnyard or heavy use runoff/Heifer barn	9/18/2017
109	SFO	Rutland	Manure/waste storage/Barnyard or heavy use	9/18/2017
110	SFO	Addison	Manure/waste storage/barnyard or heavy use/clean water diversion/laneway development/exclusion	9/18/2017
111	CSFO	Washington	Manure/waste storage/Waste/wash water treatment/	9/18/2017
112	SFO	Orleans	Waste/wash water storage	9/18/2017
113	CSFO	Orleans	Manure/waste storage/Waste/waste water treatment/Access road/Barnyard or heavy use/Clean water diversion/Exclusion	9/18/2017
114	CSFO	Orleans	Waste/wash water treatment/Barnyard or heavy use/Laneway development	9/18/2017
115	MFO	Essex	Manure/waste storage/barnyard or heavy use/clean water diversion	9/21/2017
116	MFO	Addison	Farm access rd & culvert or bridge	10/12/2017
117	CSFO	Caledonia	Clean Water diversion/Exclusion fencing	10/20/2017
118	SFO	Windsor	Manure/waste storage	10/23/2017
119	LFO	Addison	Silage or feed leachate	10/30/2017
120	MFO	Addison	Manure/waste storage	10/30/2017
121	CSFO	Franklin	Clean water diversion	11/1/2017
122	MFO	Franklin	Manure/waste storage/waste transfer system	11/13/2017
123	LFO	Orleans	Manure/waste storage/Clean water diversion	11/13/2017
124	MFO	Addison	Waste/wash water storage & treatment	11/22/2017
125	MFO	Addison	Manure/waste storage/Access road/Barnyard or heavy use	11/22/2017
126	MFO	Windsor	Manure/waste storage/Barnyard or heavy use/Clean water diversion	11/28/2017
127	CSFO	Orange	Manure/waste storage/Access road/Barnyard or heavy use	12/4/2017
128	SFO	Windsor	Unsure	12/6/2017
129	CSFO	Franklin	Laneway development/stream crossing	12/7/2017
130	SFO	Windsor	Waste Water Treatment	12/7/2017

	A	B	C	D
131	CSFO	Franklin	Manure/waste storage/Waster transfer system/Access road/Barnyard or heavy use/Clean water diversion/Laneway development	12/11/2017
132	CSFO	Addison	Waste transfer/Waste/wash water treatment/Silage or feed leachate treatment	12/12/2017
133	CSFO	Franklin	Manure/waste storage/Waste/wash water treatment/Access road/Barnyard or heavy use/Clean water diversion/Laneway development	12/14/2017
134	SFO	Washington	Manure/waste storage/Waste/wash water treatment	12/19/2017
135	CSFO	Rutland	Laneway development/stream crossing	12/21/2017
136	CSFO	Addison	Waste transfer system/Access road/Clean water diversion	12/21/2017
137	CSFO	Orleans	Laneway development	12/28/2017
138	CSFO	Essex	Slab to stack solid manure/Access rd/Barnyard or heavy use runoff/Clean water diversion/Laneway development	1/2/2018
139	CSFO	Orleans	Manure/waste storage/Access rd/Barnyard or heavy use/Clean water diversion/Laneway development/Exclusion	1/2/2018

### ***3. What is the basis for developing your plan? Do you begin, for example, with the state's Tactical Basin Plans (e.g. watershed by watershed)?***

#### **1. Statutory Requirements**

The Vermont Agency of Agriculture, Food and Markets Water Quality Division first looks to the statutory requirements set out for the Agency by the Vermont Legislature. The need to satisfy basic statutory requirements dictate much of the Agency's inspection, enforcement, rule and program development and implementation. Chapter 215 of Title 6 is instructive as to the Agency's mission to provide education outreach, technical and financial assistance, and where necessary to achieve compliance enforcement – to protect and enhance water quality.

*§ 4801. Purpose; State policy*

*It is the purpose of this chapter to ensure that agricultural animal wastes do not enter the waters of this State. Therefore, it is State policy that:*

*(1) All farms meet certain standards in the handling and disposal of animal wastes, as provided by this chapter, and the cost of meeting these standards shall not be borne by farmers only, but rather by all members of society, who are in fact the beneficiaries. Accordingly, State and federal funds shall be made available to farms, regardless of size, to defray the major cost of complying with the requirements of this chapter. State and federal conservation programs to assist farmers should be directed to those farms that need to improve their infrastructure to prohibit direct discharges or bring existing water pollution control structures into compliance with U.S. Department of Agriculture (U.S.D.A.) Natural Resources Conservation Service standards. Additional resources should be directed to education and technical assistance for farmers to improve the management of agricultural wastes and protect water quality.*

*(2) Officials who administer the provisions of this chapter:*

*(A) shall educate farmers and other affected citizens on requirements of this chapter through an outreach collaboration with farm associations and other community groups;*

*(B) shall, in the process of rendering official decisions, afford farmers and other affected citizens an opportunity to be heard and give consideration to all interests expressed; and*

*(C) may provide grants from a program established under this chapter to eligible Vermont municipalities, local or regional governmental agencies, nonprofit organizations, and citizen groups in order to provide direct financial assistance to farms in implementing conservation practices. (Added 2003, No. 149 (Adj. Sess.), § 2, eff. June 3, 2004; amended 2013, No. 83, § 10, eff. June 10, 2013.)*

6 V.S.A. Chapter 215 goes out to enumerate numerous statewide requirements on varying timelines which VAAFMM must meet to ensure agricultural operations are complying with state water quality requirements. Chapter 215 provides, but is not limited to, the following requirements of VAAFMM

1. AAFMM will inspect all LFOs and MFOs throughout
  - a. All LFOs annually
  - b. All MFOs every three years
  - c. All CSFOs every seven years
  - d. Respond and inspect all agricultural nonpoint source pollution complaints.

Act 64 of 2015 further provided additional requirements for VAAFMM the Act amended or enacted multiple statutes related to water quality in the State. The act amends several provisions regarding agricultural water quality. The “accepted agricultural practices” were renamed the “required agricultural practices (RAPs).” The Agency of Agriculture, Food and Markets (AAFMM) revised the RAPs by rule by December 6, 2016. The revised RAPs included requirements for: small farm certification, nutrient storage, soil health, buffer zones, livestock exclusion, nutrient management, and tile drainage.



Beginning on July 1, 2017, small farms shall certify compliance with the RAPs. Small farms are a parcel of land on which 10 or more acres are used for farming and that: (1) houses no more than the maximum number of animals for a small farm; and (2) houses at least the number of animals set by rule; or produces crops for sale. AAFM may specify in rule those small farms that are not required to submit a certification, but to which RAPs still apply. AAFM may inspect small farms, and shall adopt in rule the frequency of small farm inspection. AAFM shall inspect large farms at least once a year and medium farms at least once every three years.

The act further provided that if a farm meets RAPs, but there is potential for pollutants to enter waters, AAFM shall require a site-specific conservation practice on the farm. The requirement that financial assistance be available before AAFM requires a BMP is deleted. AAFM and the Agency of Natural Resources (ANR) shall revise a memorandum of understanding (MOU) for agricultural nonpoint pollutants, and the MOU shall address how to apply the antidegradation implementation policy to new sources of nonpoint pollutants.

The act required AAFM to adopt, as part of the RAP revisions, requirements for training owners or operators of small, medium, and large farms regarding: prevention of discharges to waters; mitigation of stormwater runoff; land application of manure or nutrients; and nutrient management planning. AAFM shall require training as a condition of a large farm permit, medium farm permit, or small farm certification. AAFM may phase in training requirements based on farm size, permit type, or available staffing and may authorize third parties to conduct the training. AAFM shall not charge the owner or operator of a farm for the required training but shall pay for the training from funds available for water quality initiatives.

AAFM was instructed adopt by rule requirements for certification of custom applicators. A custom applicator is a person engaged in the business of land-applying manure or nutrients for compensation. Custom applicators shall complete eight hours of training over each five-year period. The training shall address methods to minimize runoff and identify weather or soil conditions that increase runoff.

## **2. Revised Secretary's Decision**

While the RAPs are an essential component of protecting and improving water quality statewide, the Revised Secretary's Decision makes a threshold determination that BMPs are necessary in the Missisquoi Bay Basin to achieve compliance with Vermont's water quality goals. The Revised Decision provides a framework for outreach, education and assessment of farms in the watershed and a process for farm-specific development and implementation of a Farm Plan to address identified water quality resource concerns, where needed. Farm assessments may conclude that practices required by the RAPs are sufficient to protect water quality and that BMPs may not be required due to a farm's specific characteristics or management.

The Revised Decision lays out a timetable by which VAAFMM will provide outreach and conduct Assessments of farms in the Watershed pursuant to the terms of this Revised Secretary's Decision and will assure the implementation of BMPs on specific farms in accordance with the framework and timeframes outlined in the Decision. Farmers will need to develop plans which are reviewed and approved by VAAFMM and they will then implement them to ensure water quality standards are met by their operation. This process can extend for up to 20 years in the Missisquoi Bay Basin Watershed, and the Agency must conduct assessments in St. Albans, Otter Creek, and South Lake Watersheds to ascertain whether or not additional BMPs are needed in those watersheds. This agreement sets out a significant body of work for plan and practice development and implementation.

## **3. Strategic Watersheds**

The Strategic Watershed Planning Approach was created to accelerate improved water quality in critical areas by collaborating with partners to provide outreach, education, technical, and financial assistance to agricultural producers. This effort was led by USDA NRCS and will help farmers in meeting the agricultural phosphorus reductions identified in the Lake Champlain Total Maximum Daily Load (TMDL) and requirements laid out by Act 64 of 2015.

State, federal and local partners developed a multi-factor ranking process to identify the most critical subwatersheds for accelerated agricultural conservation practice implementation. Factors included, but were not limited to, the amount of

agricultural phosphorus runoff to the lake, areas with the most significant water quality problems, and watersheds with significant public interest.

Beginning in 2016, four watersheds were selected for accelerated and targeted agricultural practice implementation over the next 5 years. The four watersheds selected were the:

- Rock River
- Pike River
- St. Albans Bay
- McKenzie Brook Watershed

NRCS developed watershed plans for each of the selected watersheds in collaboration. These plans include: a resource assessment for the watershed, development of watershed phosphorus reduction goals that are tied to the new TMDL requirements, and detailed action plans to implement the plan. The development of the plans was guided by local watershed groups, comprised of state and federal partners, local watershed groups, concerned citizens, and local farmers.

The watershed plans will be used by NRCS and partners to:

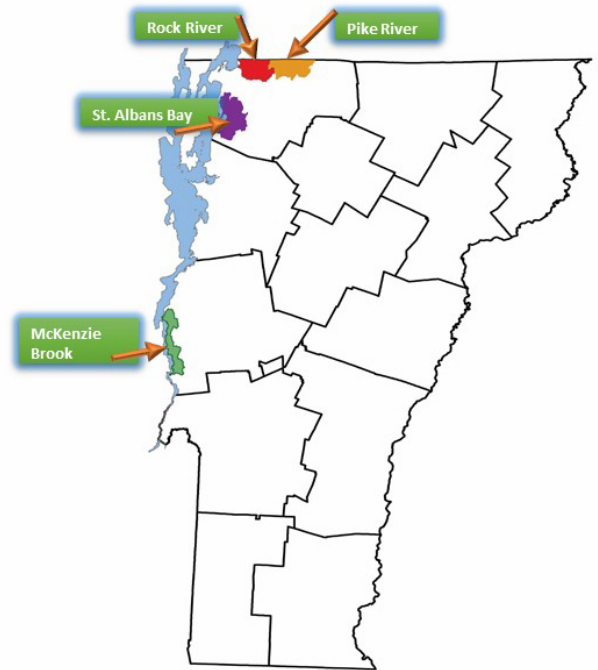
- Identify potential critical areas on farms for conservation practice implementation
- Set phosphorus reduction and practice implementation goals for each watershed
- Estimate funding required to implement needed conservation practices
- Identify actions required to meet goals in each watershed
- Track progress in reaching goals over time

NRCS partners in this project include: Vermont Agency of Natural Resources-Department of Environmental Conservation; Vermont Agency of Ag, Food, and Markets; USDA Farm Service Agency; Vermont Association of Conservation Districts; Lake Champlain Basin Program; University of Vermont Cooperative Extension; the US Fish and Wildlife Service; the Friends of Northern Lake Champlain; the Champlain Valley Farmers Association; St. Albans Area Watershed Association; Franklin Watershed Association; and the Lake Carmi Watershed Association.

This approach prioritizes education, outreach, inspection, technical and financial assistance in areas where strategic implementation of practices will have the largest positive effect on water quality. This approach is based, in part, on the Critical Source Area approach to watershed planning. Critical source areas are areas of the landscape that contribute disproportionately high levels of nonpoint source (NPS) pollution relative to other areas. When it comes to reducing NPS pollution, identifying and targeting CSAs can give you the biggest “bang for your buck”. VAAFM has collaborated with the Lake Champlain Basin Program and other partners to model phosphorus CSAs in the Missisquoi Bay watershed for use as a natural resource planning tool, and with the United States Department of Agriculture Natural Resources Conservation Service (NRCS) to implement conservation practices on confirmed phosphorus CSAs.

#### 4. Tactical Basin Plans

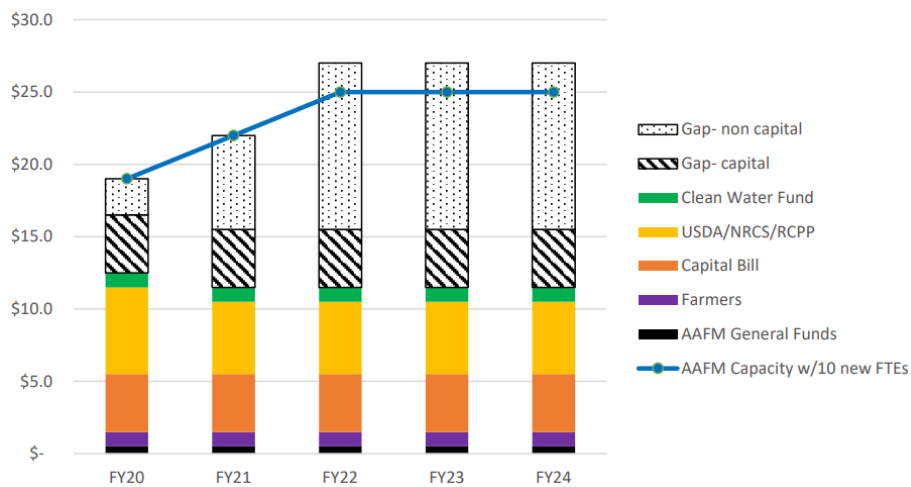
Tactical basin plans focus on the projects or actions needed to protect or restore specific waters and identify appropriate funding sources to complete the work, based on monitoring and assessment data. Since these tactical plans will guide all watershed work supported by the Watershed Management Division, the issues identified in these plans are the ones that will be prioritized for management attention, including funding. Tactical Basin Plans integrate priority items from complementary plans, including River Corridor Plans, Stormwater Master Plans, Backroads Inventories, and Agricultural Environmental Assessments.



*The Four Strategic Watersheds*

Through continued water quality monitoring, data and analytics, reviewing Tactical Basin Plans in addition to collaboration with local partners and basin planners, the Agency of Agriculture has established the following priority areas for Small Farm Inspections. Farming operations that are located within impaired or threatened watersheds or watersheds that have an established Total Maximum Daily Load (TMDL) will be the first CSFOs visited by their regional Small Farm Coordinators. A TMDL is essentially a nutrient budget for a water body. In areas where too many nutrients are going into water bodies, the TMDL provides a diet plan – a way to reduce nutrient inputs. The goal of this program is to support farmers to ensure their clear understanding of new statewide agricultural management rules – the RAPs, while providing assistance to assess, plan and implement any necessary conservation and management practices that might be necessary to meet water quality goals. Regardless of a farm’s certification status, initial farm visits will occur based on farm location within impaired watersheds and will entail an initial ‘meet and greet’ visit to better get to know the farm and the farm operator, and to allow for Inspectors to answer questions and explain the new rules in detail.

**4. “What is the budget associated with that five-year plan? And within that budget, please specify capital versus non-capital dollars.**



The Treasurer’s Report (1/15/2017) estimated that the agricultural sector’s Tier 1 cost of complying with the TMDLs and the Vermont Clean Water Act of 2015 averaged \$27million a year over 20 years. Of this, \$8 million are capital costs and \$19 million are noncapital costs. Capital costs include implementation of best management practices (BMPs) for production areas and livestock exclusion infrastructure. Non-capital costs include development of nutrient management plans, deployment of agronomic practices and field-based conservation measures such as cover cropping, technical assistance and training. The graph above shows a gap for both capital and non-capital costs in the agricultural sector.

The Agency of Agriculture, Food and Markets (AAFM) is currently delivering approximately \$6 million in technical and financial assistance programming to farmers each year. USDA’s Natural Resource Conservation Service (NRCS) delivers another \$5 million in technical and financial assistance. Farmers are expected to contribute \$1 million each year in cost share. The delivery mechanism for AAFM’s technical assistance is nearly completely outsourced through grants or contracts to organizations in Vermont who work directly with farmers to develop projects and oversee the implementation. The financial assistance is mostly through direct grant agreements between AAFM and farms.

The capacity needed to meet agricultural clean water goals does not currently exist within the agriculture sector – AAFM, NRCS and farm partners – to deliver \$27 million in technical and financial assistance programming. AAFM is working on plans to increase the agency’s capacity to deliver services to farmers. Specifically, AAFM continues to implement the new Certified Small Farm Operation (CSFO) inspection program, which results in roughly 100 farm inspections annually, along with increased numbers of inspections on the medium and large farms due to changes in statutory requirements. These inspections will increase the demand for capital improvement projects on farms over time as farmers work to resolve the concerns identified during these inspections. AAFM envisions that the demand to address non-point

source pollution challenges identified through inspection will ramp up and exceed the current resource allocations of state and federal agencies by SFY 2022, as at that point there will be 300 completed CSFO inspections in addition to the medium and large farm inspections. To meet the projected need, AAFM envisions that additional staffing and financial assistance will be required beginning in SFY 2022.

The Agency of Agriculture's current process of implementing the new certified small farm inspection program, along with increased numbers of inspections on the medium and large farms due to changes in statutory requirements, has and will continue to increase the demand for capital improvement projects on farms. The Agency is also moving towards expanding the focus of our conservation efforts to increased implementation of field management practices through nutrient management plans and associated conservation practices necessary to achieve these plans. Field practices and nutrient management planning are not capital eligible projects and tend to have higher overall costs simply due to the volume of acres that fall into this category. Production area projects, while expensive, tend to be more limited in scope and therefore the overall costs on an annual basis can be less than field practices.

Capital Funding	\$	3,862,500
Non-Capital Funding	\$	1,537,500
<b>Total</b>	<b>\$</b>	<b>5,400,000</b>

**5. *“What agency has overarching clean water planning and implementation responsibility— that is, the responsibility to ensure that regardless of operating area (e.g. VTRANS, ANR, AAFM, BGS, ACCD, etc.), the state’s clean water laws are being following and appropriate planning and programs are in place?”***

While agriculture in Vermont is currently responsible for 41% of the total loading of phosphorus to Lake Champlain, it represents at least 60% of the total phosphorus reduction which will be made over the 20-year implementation of the EPA TMDL for P for the Lake Champlain Basin in Vermont. When taking into account the fact that farmers further manage forestland as well as much of the streamside cropland which further compounds the opportunity which exists to achieve reductions through the very engaged group of citizens in Vermont who continue to step up to the plate, engage, and make changes on their farm operations – agriculture will be responsible and will produce the lion’s share of the reduction of Phosphorus and contribute to clean water throughout Vermont.

The figure below (VT LCB P Loads, 2001-2010 Comparison) is instrumental for understanding just how essential Vermont farmers are to achieving reductions on a reasonable timeline and with the most cost-effective results for public investment. Over 75 owners, operators and employees of custom manure applicator outfits throughout the state came out in the first year of the program, engaged, and became certified – a true testament to their engagement. Real consideration and thought was demonstrated by these applicators of essential nutrients on the Vermont landscape throughout the first year of implementation of the program and it speaks to the positive impact implementation of Act 64 of 2015 is having on agriculture already in Vermont.

Over 250 small farms have submitted their Small Farm Certification forms and have already complied with the new program requirements of the RAPs ahead of the deadline. Farmers engaged with our new CEAP program and requested over \$4.5 million in financial assistance for \$1 million in available funding to support them in implementing innovate

equipment which will achieve significant and persistent reductions in non-point source loss from their farming operations. Over 20 farms reached out to the Agency to share information about their floodplain fields and request alternative management accommodations for their cropland in just the first year of implementation of the rule, demonstrating significant compliance by farms and effective outreach by the Agency to ensure farmers are aware of the rule and able to engage in field-specific planning.

Just as VAAFMM has laid out our significant success, achievement and milestones in the second year of implementing Act 64 of 2015, farmers must be recognized for not only the contributions they will make in achieving the TMDL for Lake Champlain but also for the many ways they already have, and will continue to, engage with the Agency and partners, plan new practices and implement management changes to achieve water quality on their farms.

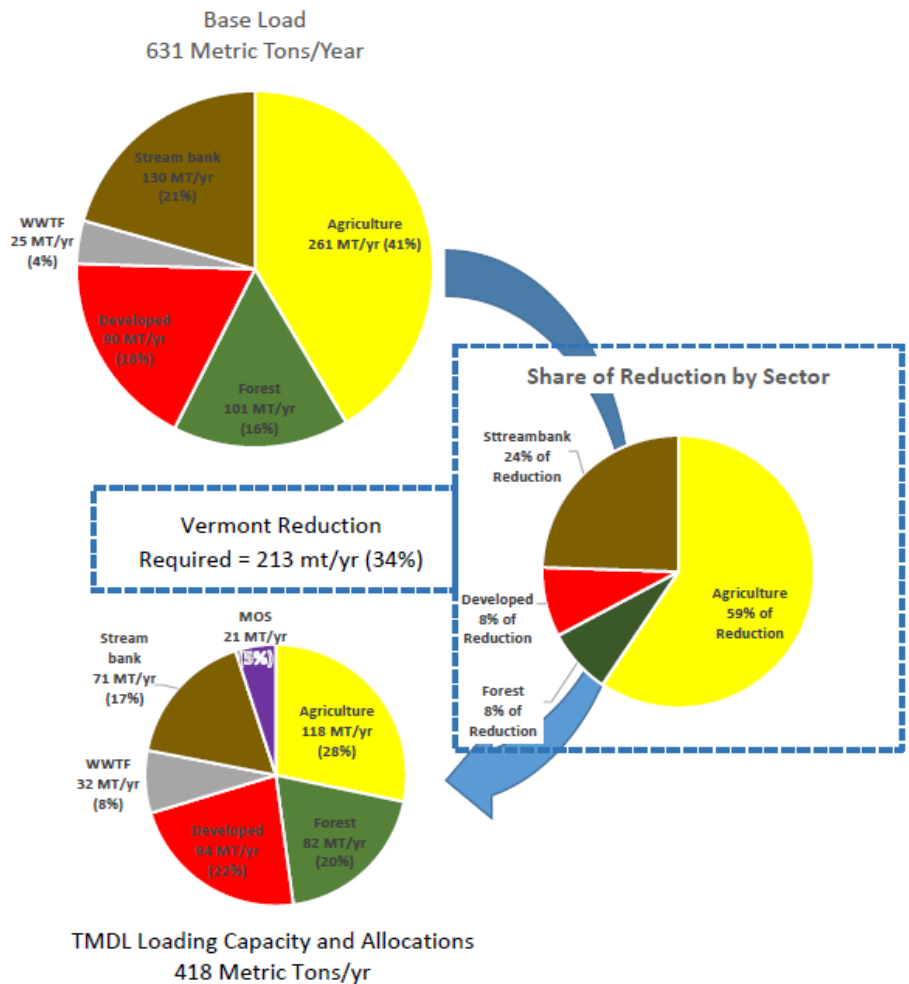
However, despite all of the accelerated programming and resources, we as an Agency have to do more. From continued implementation of BMPs that are farm size and type appropriate to thinking outside the box to create new approaches to reduce phosphorus. Moving on policies that create new markets to export phosphorus and setting up incentives for farms to achieve increasingly better whole farm phosphorus balances are examples of the direction the next generation of water quality investments is taking.

Agriculture in Vermont has a prime opportunity, with significant resources - both financial and staff capacity - prepared and engaged to work with partners and farmers to identify new prospects for change. Examples include making wise investments in farm relocation or transformation when the costs of water quality is greater than a farm's grand list value, or looking at whole farm nutrient balances through the nutrient management standard.

Farmers are stepping up because they, too, are passionate about the land, water, animals and communities. They are passionate about the jobs that they provide, and committed to making the best, award winning products from Vermont. Passion extends to many others as well - The Agency of Agriculture is working closely with partners such as DEC, University of Vermont Extension, U.S. Department of Agriculture, Lake Champlain Basin Program and many more. Certainly, there is much more work to do. But by working together with investment, education, enforcement and assistance, Vermont is on an upward trajectory, aiming high for quality in land, water, and agriculture. We are all committed to a greener Green Mountain State, and unified, we will get there.

### Vermont Lake Champlain Base Phosphorus Loads, 2001-2010, compared to Vermont Lake Champlain TMDL loading capacity and allocations, by sector, in MT/yr

Sources: Data for base loads are from TetraTech, 2015





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*Agency of Agriculture Food & Markets*

Julie Moore, Secretary  
Vermont Agency of Natural Resources  
1 National Life Drive  
Davis 2  
Montpelier, Vermont 05620-3901

February 15, 2018

Dear Secretary Moore,

Enclosed please find the 2017 Annual Report for the Agricultural Water Quality Enforcement Program. Please note that this is a comprehensive enforcement report that includes inspections conducted to determine compliance with the Required Agricultural Practices (RAP) Regulations and Medium and Large Farm Operations permits. The report summarizes the efforts of the Agency's five Water Quality Specialists assigned to the Medium and Large Farm Operations Programs, five Water Quality Specialists assigned to the Small Farm Operations Program, an Agricultural Water Quality Section Chief, a Chief Policy Enforcement Officer, an Enforcement Coordinator, a Program Technician, a state-wide Conservation Reserve Enhancement Program (CREP) Coordinator, and six Agricultural Engineers.

The Annual Report's Appendix presents our compliance and enforcement efforts in graphic form. We may use this Appendix as a stand-alone document that will provide a more easily "digestible" representation of our efforts over the past year.

If you have any questions or concerns regarding this report, please feel free to contact Laura DiPietro, Water Quality Division Director, (802) 595-1990, or David Huber, Chief Policy Enforcement Officer, (802) 461-7160, of the Agricultural Resource Management Division.

Sincerely,

A handwritten signature in blue ink, appearing to read "Anson B. Tebbetts".

Anson B. Tebbetts, Secretary  
Vermont Agency of Agriculture, Food and Markets



cc: Emily Boedecker, Commissioner  
Department of Environmental Conservation

Peter LaFlamme, Director  
VT DEC Watershed Management Division

Representative Carolyn Partridge, Chair  
House Committee on Agriculture and Forestry

Representative David Deen, Chair  
House Committee on Natural Resources, Fish, and Wildlife

Senator Robert Starr, Chair  
Senate Committee on Agriculture

Senator Christopher Bray, Chair  
Senate Committee on Natural Resources and Energy

## Vermont Agency of Agriculture, Food and Markets Agricultural Water Quality Enforcement Program 2017 Annual Report

Required Agricultural Practices Regulations Enforcement  
Medium Farm Operation General Permit Enforcement  
Large Farm Operation Individual Permit Enforcement  
Engineering and Technical Assistance

Dear Reader,

February 14, 2018

The Water Quality Division of the Vermont Agency of Agriculture, Food and Markets (VAAFM) implements a comprehensive approach to the regulation of farms in the State in order to best protect water resources. The development of a three-tiered approach to the regulation of Vermont farms allows for a logical progression in regulatory oversight as a farm grows in size from a Small Farm Operation (SFO) subject to regulation under the Required Agricultural Practices (RAPs) Regulations, to a Medium Farm Operation (MFO) regulated under the state's MFO General Permit, to a Large Farm Operation (LFO) regulated under an individual LFO permit.

In 2016, the Water Quality Section of the ARM Division was heavily focused on revising the RAPs and hiring new staff members to carry out the additional work mandated by Act 64. In 2017, we utilized our increased staff capacity to focus on:

- evaluating farms of all sizes for compliance with the newly revised RAPs;
- conducting inspections of Certified Small Farm Operations (CSFOs) and introducing them to the revised RAP requirements;
- implementing an accelerated schedule of MFO inspections (from once every five years to once every three years as mandated by Act 64);
- working with the newly formed RAP Development Committee, composed of farmers, who help inform the Agency on process and procedure as the Agency implements the multifaceted RAP Rule;
- enhancing communication efforts to the farming and non-farming community regarding the Agency's agricultural water quality protection regulations;
- conducting staff training on nutrient management planning, RAP implementation, investigative principles, and report writing skills;
- conducting compliance checks to ensure that farmers receiving funds under the Farm Agronomic Practices (FAP) grant program are complying with the terms of their agreements;
- conducting compliance checks on farms as requested by land conservancy and lender groups;
- revising the MFO General Permit as required by law for another five-year period;
- amending the RAPs to include requirements for reducing nutrient contributions to waters of the State from subsurface tile drainage, as required by Act 64; and,
- redrafting the Memorandum of Understanding (MOU) between the Vermont Agency of Natural Resources (ANR) and VAAFM to guide our cooperative enforcement efforts.

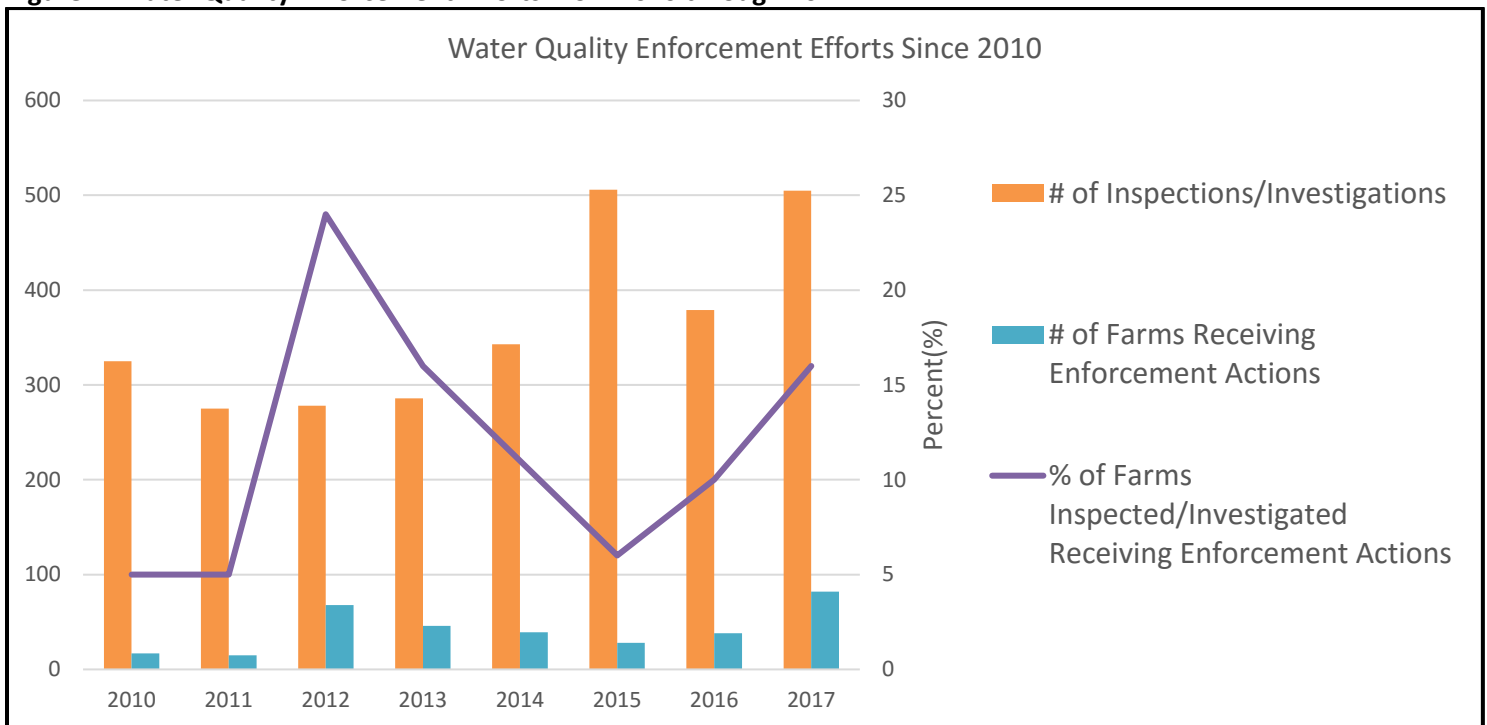


## TREND ANALYSIS OF ENFORCEMENT EFFORTS

Figure 1 provides a trend analysis of the Agency's Agricultural Water Quality enforcement efforts since 2010. Inspection/investigation numbers have increased steadily starting in 2015 as the Agency has added additional staff to work in the Water Quality Division. Of all complaints received by the Agency in 2017, 20% resulted in the farm operation receiving an enforcement action. Overall, there was a 115% increase from 2016 to 2017 in farms receiving enforcement actions. There was an increase of 48% in 2017 in the number of farm inspections compared to the prior seven-year average and enforcement actions also increased in 2017 compared to the prior seven-year average by 127%. **The overall compliance rate for farm operations in 2017 was 84%.**

- Please note that the number of enforcement actions issued to farms spiked in 2012 and 2013 as a result of the Agency taking enforcement action against MFOs that either failed to submit their Notice of Intent to Comply (NOIC) with the renewed MFO General Permit or failed to send in their MFO Annual Report.
- Please note that the total number of visits to farms each year far exceeds the number of inspections/investigations reported in this graphic. The additional visits not included in this graphic include technical and engineering assistance visits, which are quantified within this report.

**Figure 1. Water Quality Enforcement Efforts From 2010 through 2017.**



**Table 1. The Numbers of Enforcement Efforts Spanning the Years from 2010-2017.**

Numbers of Enforcement Efforts from 2010-2017								
Year	2010	2011	2012	2013	2014	2015	2016	2017
# of Inspections/Investigations	325	275	278	286	343	506	379	505
# of Farms Receiving Enforcement Actions	17	15	68	46	39	28	38	82
% of Farms Inspected/Investigated Receiving Enforcement Actions	5	5	24	16	11	6	10	16

Information about the RAPs, the MFO general permit program, and the LFO individual permit program can be found at the following links:

- RAPs  
<http://agriculture.vermont.gov/RAP>
- MFO General Permit Program  
<http://agriculture.vermont.gov/water-quality/regulations/mfo>
- LFO Permitting Program  
<http://agriculture.vermont.gov/water-quality/regulations/lfo>

The following report summarizes the Agency’s inspection, enforcement, and engineering/technical assistance efforts over the 2017 calendar year. The report summarizes the efforts of five Water Quality Specialists assigned to the Medium and Large Farm Operations Programs, five Water Quality Specialists assigned to the Small Farm Operations Program, an Agricultural Water Quality Section Chief, a Chief Policy Enforcement Officer, an Enforcement Coordinator, a Program Technician, a state-wide Conservation Reserve Enhancement Program (CREP) Coordinator, and six Agricultural Engineers.

In 2017, the Agency performed a total of 978 inspections/visits to farms to determine compliance with the RAPs, the MFO General Permit and Rule, the LFO Individual Permits and Rule, and to offer technical and engineering assistance to help farms comply with regulatory requirements. “Inspections” represent a formal inspection done on a farm to assess compliance with a rule and/or permit, and include “Programmatic Follow-up Inspections” performed to resolve issues identified during inspections that did not go to enforcement, and to discuss regulatory programs and permitting issues with farms, and “Enforcement Action Follow-up Inspections” conducted to specifically evaluate a farm’s progress in correcting issues cited in enforcement actions. “Visits” are representative of technical and engineering assistance on the ground.

71 farms received a total of 80 formal enforcement actions, and 11 enforcement actions are pending. 18 farms were referred to the Vermont Department of Environmental Conservation (DEC) for suspected direct discharges of wastes to surface water, and two farms were referred to the Attorney General’s Office for further enforcement.

### SFO COMPLIANCE REPORT

**RAP Compliance and Assistance:** In 2017, a total of 523 inspections/visits were made to SFOs. Of these, 194 inspections were conducted to assess compliance with the RAPs. 329 visits were conducted to offer technical and engineering assistance.

**Table 2. Small Farm Operation Inspections/Visits**

<b>Total Number of SFO Inspections/Visits</b>	<b>523</b>
<b>SFO Inspections</b>	<b>194</b>
Complaints from the public	74
▪ <i>Complaints resulting in enforcement</i>	<i>11 issued / 4 pending</i>
Compliance checks	48 facilities (representing 45 SFOs)
▪ <i>Compliance checks resulting in enforcement</i>	<i>5 issued</i>
SFO Programmatic Follow-up Inspections	66
SFO Enforcement Action Follow-up Inspections	6
<b>SFO Technical Assistance / Engineering Visits</b>	<b>329</b>

The 45 SFOs assessed for compliance represent a total of 48 individual facilities inspected. One SFO can consist of more than one facility managed as part of the SFO. Each facility is subjected to a comprehensive compliance assessment. As a result of compliance efforts conducted in 2017, 16 SFOs received formal enforcement actions for violations of the RAPs and four actions are pending. 11 SFOs were referred to DEC for suspected direct discharges of waste to surface water.

**Table 2a – Small Farm Operation Enforcement Actions**

Enforcement Actions	Number of Cases
Corrective Action Letter (CAL)	<b>12</b>
Cease and Desist Order (CDO)	<b>4</b>
Notice of Violation with Administrative Penalty (NOV)	-
▪ Assurance of Discontinuance (AOD)	-
▪ Final Order	-
Actions Pending	<b>4</b>
<b>SFO In-Field Corrections (verbal warnings)</b>	<b>3</b>
<b>SFO Referrals</b>	-
Department of Environmental Conservation (DEC) <sup>1</sup>	<b>11</b>
Attorney General's Office (AGO)	-
<b>SFO Cases in Continuance</b>	<b>17</b>

### MFO GENERAL PERMIT COMPLIANCE REPORT

**MFO General Permit Compliance:** In 2017, a total of 254 inspections/visits were made to MFOs. Of these, 155 inspections were conducted to assess compliance with the State's MFO General Permit, MFO Rule, and the RAPs. 99 visits were conducted to offer technical and engineering assistance.

**Table 3 – Medium Farm Operation Inspections/Visits**

<b>Total Number of MFO Inspections/Visits</b>	<b>254</b>
<b>MFO Inspections</b>	<b>155</b>
Complaints from the public	20
▪ <i>Complaints resulting in enforcement</i>	<i>2 issued / 2 pending</i>
Compliance checks <sup>2</sup>	101 facilities (representing 53 MFOs)
▪ <i>Compliance checks resulting in enforcement</i>	<i>22 issued / 4 pending</i>
MFO Programmatic Follow-up Inspections	22
MFO Enforcement Action Follow-up Inspections	12
<b>MFO Technical Assistance / Engineering Visits</b>	<b>99</b>

The 53 MFOs assessed for compliance represent a total of 101 individual facilities inspected. One MFO can consist of more than one facility managed as part of the MFO. Each facility is subjected to a comprehensive compliance assessment. Act 64 now requires that MFOs be inspected every three years, as opposed to the previous five-year inspection cycle. 99 visits to MFOs involved providing technical/engineering assistance to farmers.

In 2017, 42 MFOs received a total of 49 formal enforcement actions, and six enforcement actions are pending. Specifically, as a result of compliance visits conducted in 2017 (Table 2), 22 MFOs received a total of 24 formal enforcement actions for violations of the MFO General Permit and/or the RAPs that directly relate to water quality and

<sup>1</sup> Under a MOU with ANR, cases involving suspected direct discharges of waste to water are referred to DEC for investigation.

<sup>2</sup> The total number of compliance checks includes 5 visits conducted in cooperation with DEC and/or USEPA to evaluate a farm operation for compliance with the Federal Concentrated Animal Feeding Operation (CAFO) permit requirements.

an additional six enforcement actions are pending for similar violations. 20 farms received a total of 25 enforcement actions for either failing to pay the Annual MFO Operating Fee or failing to submit their Annual MFO Compliance Report. The Agency does not consider these actions to be water quality-related, so they are not represented in Table 2, but they are included in Table 2a below. Five MFOs were referred to DEC for suspected direct discharges of waste to surface water.

**Table 3a – Medium Farm Operation Enforcement Actions**

Enforcement Actions	Number of Cases
6 V.S.A. Section §4991(7) Consultation Letter	-
Corrective Action Letter (CAL)	<b>33</b>
Cease and Desist Order (CDO)	<b>4</b>
Notice of Violation with Administrative Penalty (NOV)	<b>10</b>
▪ Assurance of Discontinuance (AOD)	-
▪ Final Order (FO)	<b>2</b>
Actions pending	<b>7</b>
<b>MFO In-Field Corrections (verbal warnings)</b>	<b>4</b>
<b>MFO Referrals</b>	-
Department of Environmental Conservation (DEC) <sup>3</sup>	<b>5</b>
Attorney General's Office (AGO)	-
<b>MFO Cases in Continuance</b>	<b>4</b>

### LFO INDIVIDUAL PERMIT COMPLIANCE REPORT

**LFO Individual Permit Compliance:** In 2017, a total of 201 inspections/visits were made to LFOs. Of these, 156 inspections were conducted to assess a farm's compliance with their LFO Individual Permit, the LFO Rules, and the RAPs. 45 visits were conducted to offer technical and engineering assistance.

**Table 4 – Large Farm Operation Inspections/Visits**

<b>Total Number of LFO Inspections/Visits</b>	<b>201</b>
<b>LFO Inspections</b>	<b>156</b>
Complaints from the public	27
▪ <i>Complaints resulting in enforcement</i>	<i>4 issued / 1 pending</i>
Compliance checks <sup>4</sup>	95 facilities (representing 33 LFOs)
▪ <i>Compliance checks resulting in enforcement</i>	<i>7 issued</i>
LFO Programmatic Follow-up Inspections	27
▪ <i>Programmatic Follow-up Inspections resulting in enforcement</i>	<i>1 issued</i>
LFO Enforcement Action Follow-up Inspections	7
<b>LFO Technical Assistance / Engineering Visits</b>	<b>45</b>

The 33 LFOs assessed for compliance represent a total of 95 individual facilities inspected. One LFO can consist of more than one facility managed as part of the LFO. Each facility is subjected to a comprehensive compliance assessment.

In 2017, 13 LFOs received a total of 15 formal enforcement actions, and one enforcement action is pending. Specifically, 11 LFOs received a total of 12 enforcement actions for violations of the LFO Rule and/or the RAPs that directly relate to

<sup>3</sup>Under a MOU with ANR, cases involving suspected direct discharges of waste to water are referred to DEC for investigation.

<sup>4</sup>The total number of compliance checks includes 6 visits conducted in cooperation with DEC and/or USEPA to also evaluate a farm operation for compliance with the Federal Concentrated Animal Feeding Operation (CAFO) permit requirements.

water quality, and an additional action is pending for similar violations. An additional two LFOs received a total of three enforcement actions for failing to pay the 2017 LFO Operating Fee. The Agency does not consider these actions to be water quality-related, so they are not represented in Table 3, but they are included in Table 3a below. Two LFOs were referred to DEC for suspected direct discharges of waste to surface water and two LFOs were referred to the Attorney General's Office for further enforcement.

**Table 4a – Large Farm Operation Enforcement Actions**

<b>Enforcement Actions</b>	<b>Number of Cases</b>
6 V.S.A. Section §4991(7) Letter	<b>3</b>
Corrective Action Letter (CAL)	<b>6</b>
Cease and Desist Order (CDO)	<b>1</b>
Emergency Administrative Order (EAO)	<b>1</b>
Notice of Violation with Administrative Penalty (NOV)	<b>3</b>
▪ Assurance of Discontinuance (AOD)	<b>1</b>
▪ Final Order (FO)	-
Actions Pending	<b>1</b>
<b>LFO In-Field Corrections (verbal warnings)</b>	<b>1</b>
<b>LFO Referrals</b>	-
Department of Environmental Conservation (DEC) <sup>5</sup>	<b>2</b>
Attorney General's Office (AGO)	<b>2</b>
<b>LFO Cases in Continuance</b>	<b>4</b>

<sup>5</sup> Under a MOU with ANR, cases involving suspected direct discharges of waste to water are referred to DEC for investigation.

**SUMMARY OF ENFORCMENT ACTIONS, INSPECTIONS, AND REFERRALS BY BASIN****Key for Table 5****AOD** = Assurance of Discontinuance**EAO** = Emergency Administrative Order**CAL** = Corrective Action Letter**CDO** = Cease and Desist Order**CON** = Case Continuing**FO** = Final Order**NOV** = Notice of Violation**PA** = Case Permanently Abeyed/Closed**Table 5. Inspections, Enforcement Actions, and Referrals Summarized BY Basin**

Basin	Number of Enforcement Actions	Referrals
Battenkill-Walloomsac-Hoosic	3 (1 pending)	
Southern Lake Champlain	18 (2 pending)	DEC - 4
Otter Creek-Little Otter Creek-Lewis Creek	8	DEC - 1      AGO - 1
Northern Lake Champlain	19 (3 pending)	DEC - 5
Missisquoi	13 (1 pending)	DEC - 4
Lamoille	3	DEC -1
Winooski	3	Conservation District - 1
White	2 (1 pending)	
Otteuquechee-Black-CT Direct		
West-Williams-Saxtons-CT Direct	1 pending	
Deerfield-CT Direct		
Stevens-Wells-Waits-Ompompanoosuc-CT Direct	1	DEC -1
Passumpsic	1	
Upper Connecticut	5	
Lake Memphremagog	14 (2 pending)	DEC -2      AGO - 1

## SUMMARY OF ENFORCMENT ACTIONS ISSUED DUE TO RAP VIOLATIONS, MFO GENERAL PERMIT OR LFO INDIVIDUAL PERMIT VIOLATIONS

### Key for Table 6

**AOD** = Assurance of Discontinuance  
**EAO** = Emergency Administrative Order  
**CAL** = Corrective Action Letter

**CDO** = Cease and Desist Order  
**CON** = Case Continuing  
**FO** = Final Order

**NOV** = Notice of Violation  
**PA** = Case Permanently Abeyed/Closed

**Table 6. Enforcement Actions Issued by General Nature of Violation of RAP Regulations, MFO General Permit, and LFO Individual Permit and Actual Number of Individual Counts.** An enforcement action may include more than one count/violation of the RAPs or MFO / LFO permit requirements, so numbers of counts/violations may exceed the total number of enforcement actions issued. The numbers below do not include pending actions.

General Nature of Violation	Actual Number of Individual Counts/Violations	Enforcement Actions Issued
<b>SFO Compliance</b>		
Field Practices	6	CAL (2)
Productions Area	32	CAL (11); CDO (4)
<b>MFO Permit Compliance</b>		
Annual Fee Payment	21	CAL (10); NOV (9); FO (2)
Annual Report Submission	4	CAL (4)
Field Practices	13	CAL (9)
Production Area	54	CAL (17); CDO (4); NOV (1)
Recordkeeping/Reporting	4	CAL (3)
<b>LFO Permit Compliance</b>		
Annual Fee Payment	3	CAL (1); NOV (2)
Field Practices	11	CAL (3); NOV (1); AOD (1); 6 V.S.A. §4991 letter (1)
Permitting	4	CAL (3); 6 V.S.A. §4991 letter (1)
Production Area	11	CAL (2); CDO (1); EAO (1); NOV (1); 6 V.S.A. §4991 letter (1)
Recordkeeping / Reporting	0	N/A
<b>TOTAL</b>	<b>163</b>	<b>95</b>

Questions regarding the Vermont Agricultural Water Quality Enforcement Program or this report in general can be directed to VAAFM Agricultural Resource Management Division:

(802) 828-2431 or [agr.waterquality@vermont.gov](mailto:agr.waterquality@vermont.gov)

## Vermont Agency of Agriculture, Food and Markets Agricultural Water Quality Enforcement Program 2017 Annual Report – Appendix

Required Agricultural Practices Regulations Enforcement

Medium Farm Operation General Permit Enforcement

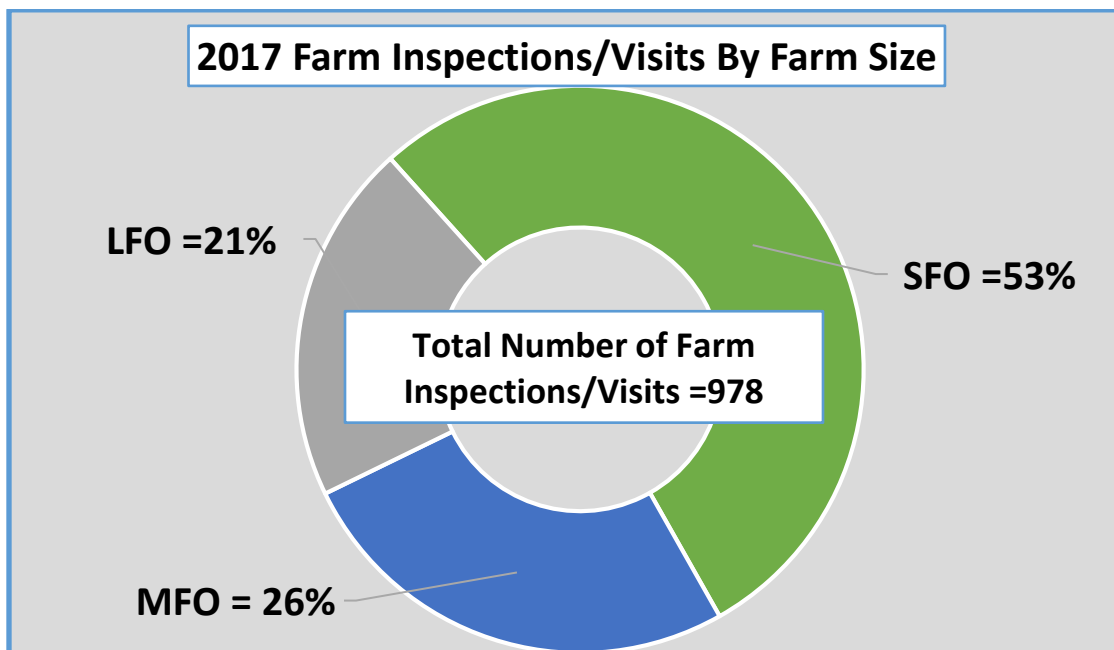
Large Farm Operation Individual Permit Enforcement

Engineering and Technical Assistance

This Appendix is a companion piece to the 2017 Agricultural Water Quality Enforcement Program Report and is intended to provide a graphic representation of the enforcement and compliance assistance efforts undertaken by the Agency during the past year. If you are interested in reviewing the actual data on which these graphics are based, please consult the 2017 Annual Enforcement Report.

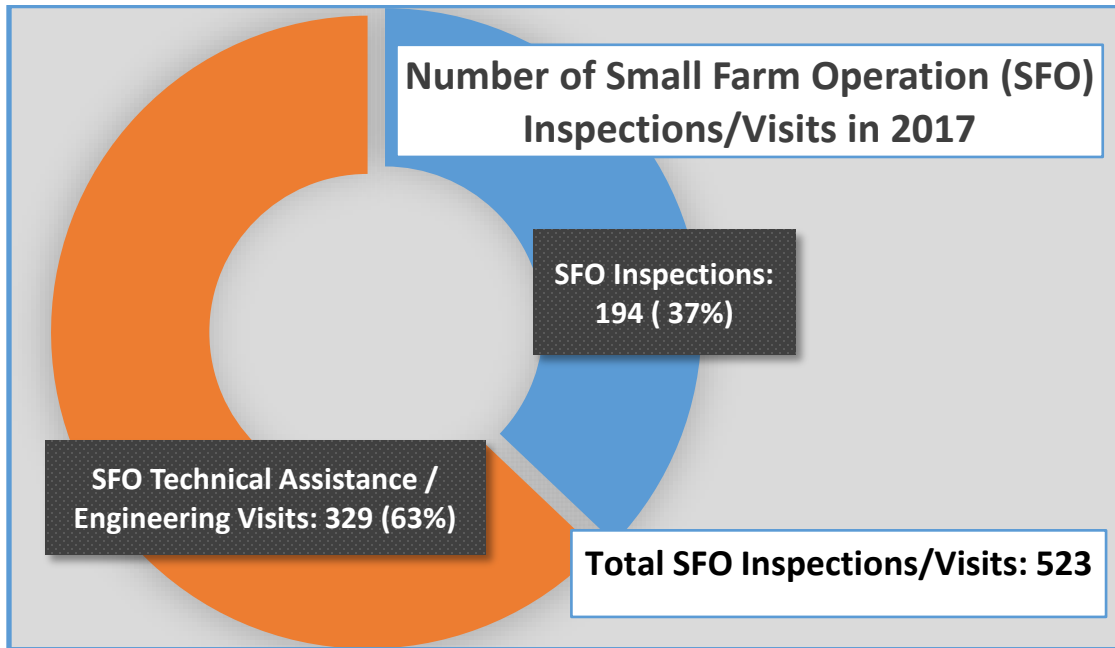
You can obtain a copy of the report by contacting the Agency at (802) 828-2431, or by visiting the Agency's website at: <http://agriculture.vermont.gov/water-quality/enforcement-compliance/enforcement-tracking>.

**Figure 1.** In 2017, the Agency performed a total of 978 inspections/visits to farms to determine compliance with the Required Agricultural Practices (RAPs) Regulations, the Medium Farm Operation (MFO) general permit, and the Large Farm Operation (LFO) Rule and individual permits, and to offer technical and engineering assistance. Overall regulatory compliance rates for water quality-related issues are high for farms of all sizes and **exceed 82%**.

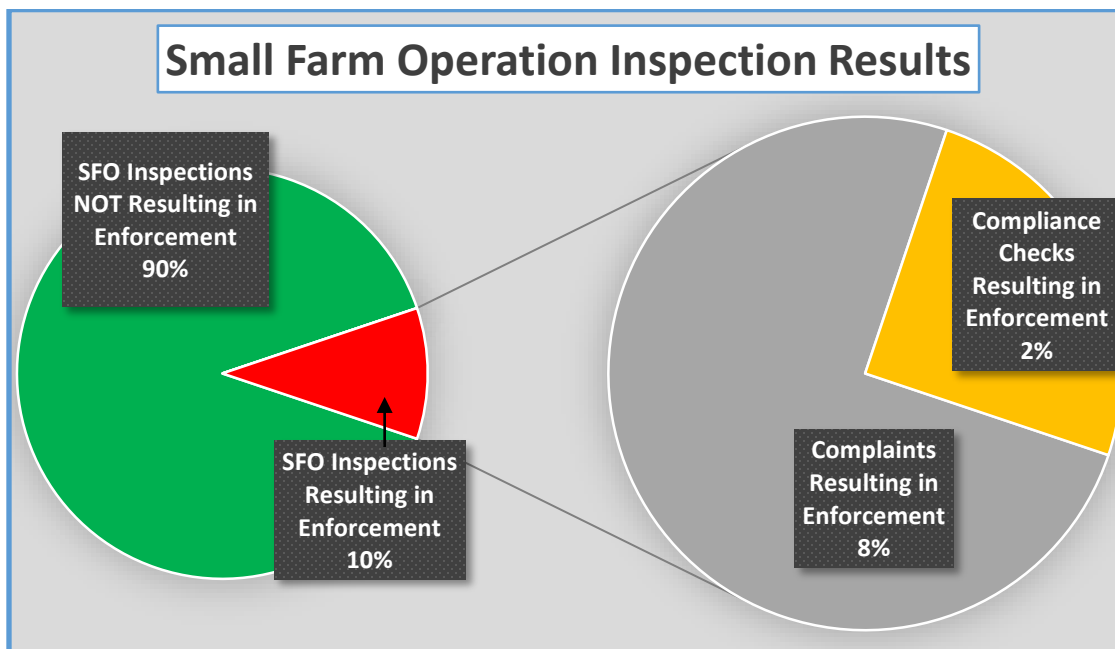




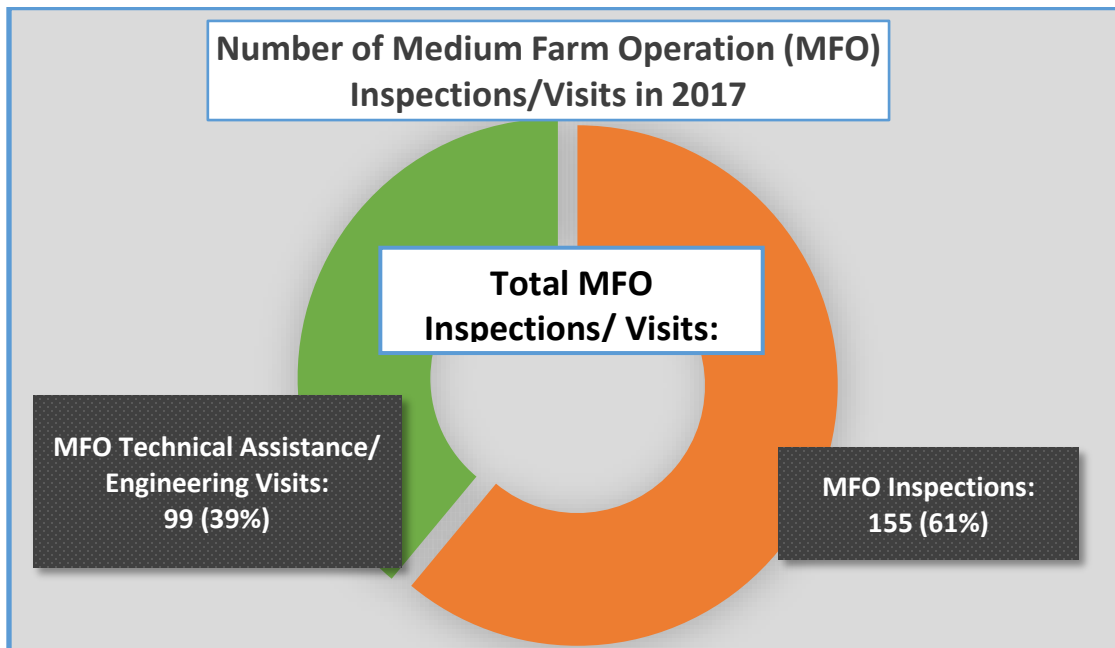
**Figure 2. RAP Compliance and Assistance:** In 2017, a total of 523 inspections/visits were made to small farms (SFO). Of these, 194 inspections were conducted to determine compliance with the RAPs, and 329 visits were conducted to offer technical and engineering assistance.



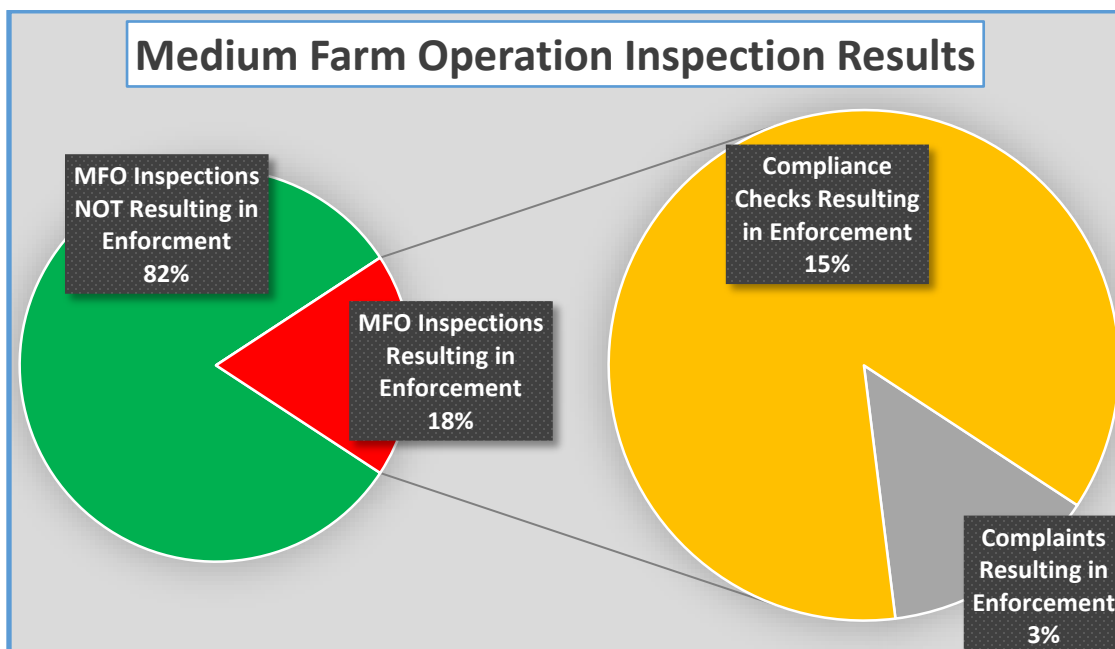
**Figure 3.** As a result of SFO inspections conducted in 2017, 20 small farms received formal enforcement actions (includes 4 pending actions) resulting in a regulatory compliance rate of 90%.



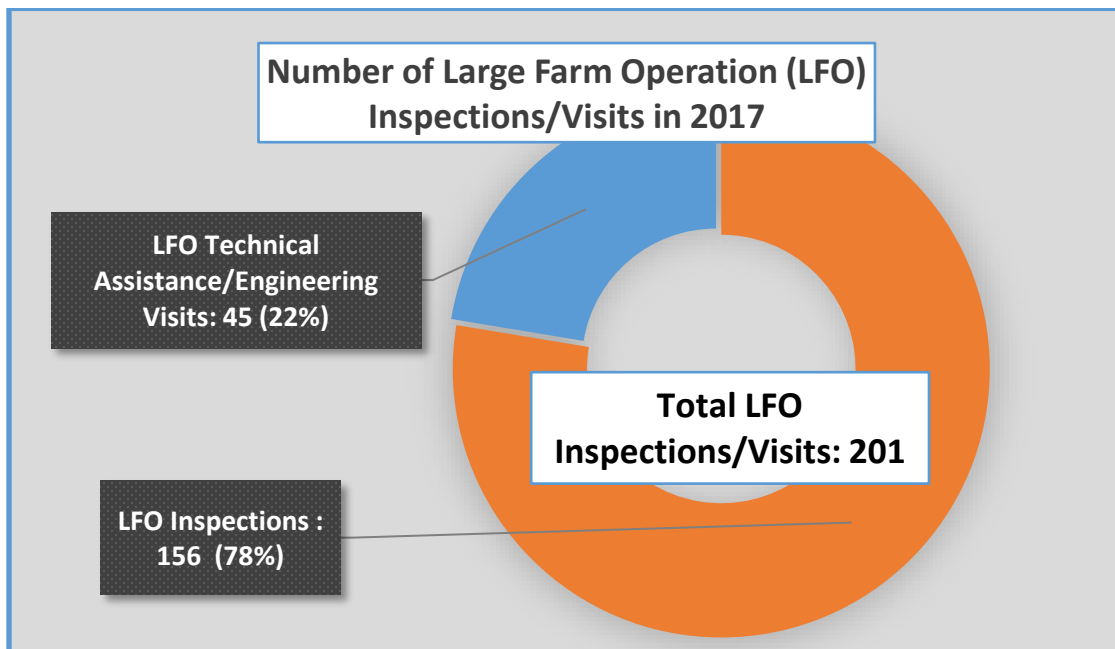
**Figure 4. MFO General Permit Compliance:** In 2017, a total of 254 inspections/visits were made to Medium Farm Operations. Of these, 155 inspections were conducted on medium farms to evaluate compliance with the State’s MFO general permit conditions.



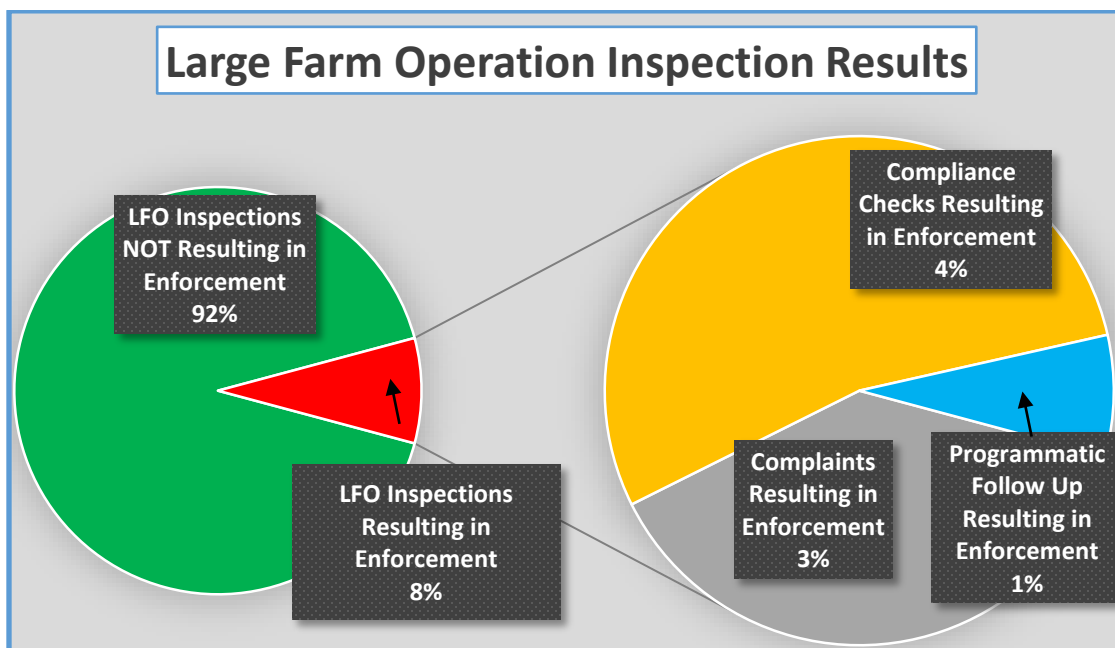
**Figure 5.** As a result of compliance efforts conducted in 2017, 28 MFOs received enforcement actions for violations of the MFO General Permit and/or the RAPs that directly relate to water quality (includes six pending actions) resulting in a regulatory compliance rate of 82%. An additional 20 farms received enforcement actions for either failing to pay the Annual MFO Operating Fee or failing to submit their Annual MFO Compliance Report. These actions are not reflected in the chart below as they did not result from an inspection to evaluate a farm’s potential impact on water quality.



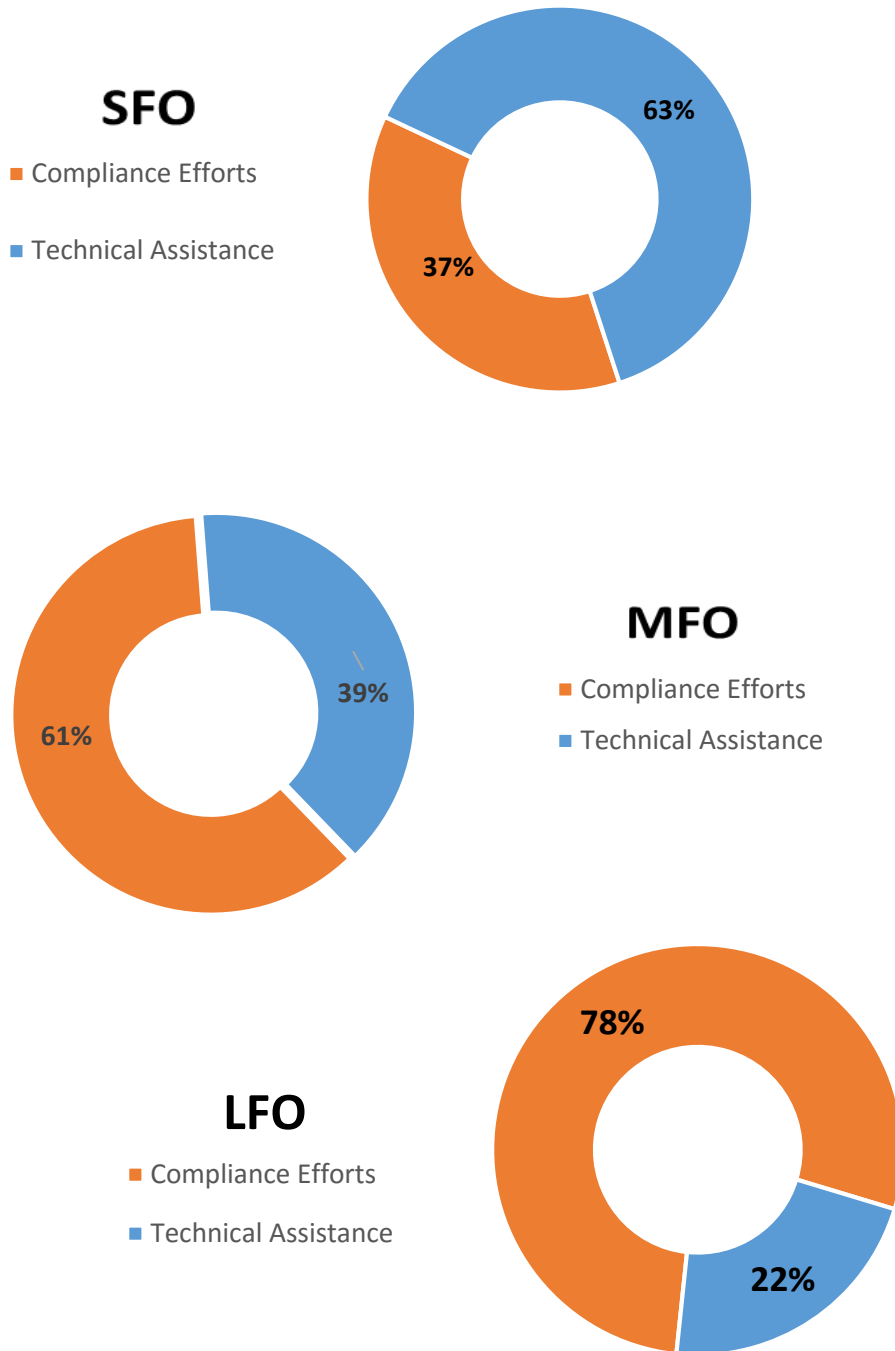
**Figure 6. LFO Individual Permit Compliance:** In 2017, a total of 201 inspections/visits were made to Large Farm Operations. Of these, 156 inspections were conducted to evaluate a farm’s compliance with the LFO Rules, their individual LFO permit and/or the RAPs.



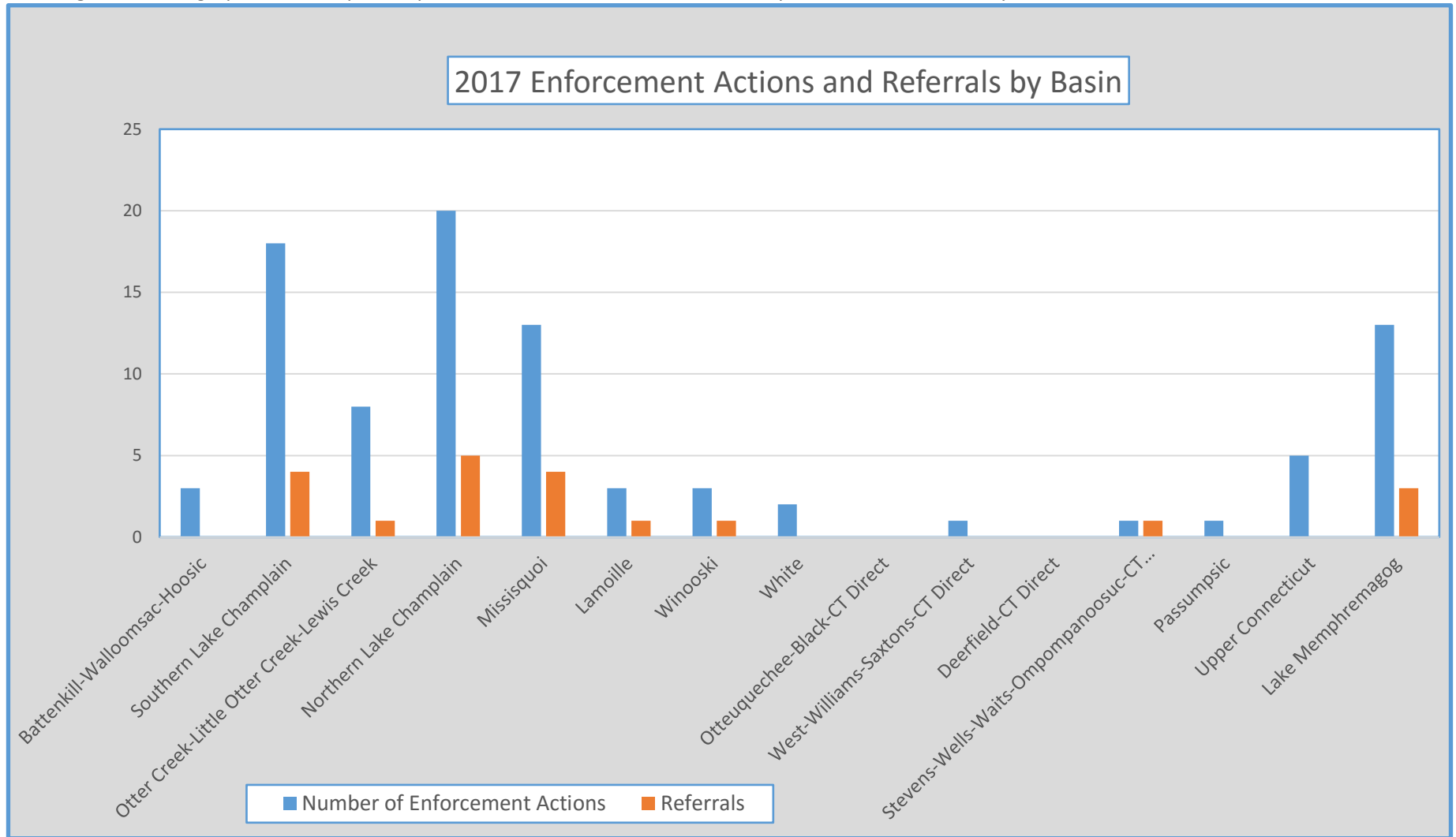
**Figure 7.** As a result of compliance efforts conducted in 2017, 11 LFOs received a total of 12 enforcement actions for violations of the LFO Rule and/or the RAPs that directly relate to water quality (includes an additional pending action) resulting in a regulatory compliance rate of 93%. An additional two LFOs received a total of three enforcement actions for failing to pay the 2017 LFO Operating Fee. These actions are not reflected in the chart below as they did not result from an inspection to evaluate a farm’s potential impact on water quality.



**Figure 8.** The Agency provides both regulatory services in the form of compliance efforts, and non-regulatory services in the form of technical assistance. Technical assistance is provided by Agency Engineers, a Conservation Reserve Enhancement Program Coordinator, and also by the regulatory field staff. Agency staff will perform multiple technical assistance visits to ensure a farm moves steadily towards achieving compliance. Compliance efforts include formal inspections done on a farm to determine compliance with the RAPs, the MFO General Permit and Rule, the LFO Individual Permits and Rule, “Programmatic Follow-up Inspections” performed to resolve issues identified during inspections that did not go to enforcement, and to discuss regulatory programs and permitting issues with farms, and “Enforcement Action Follow-up Inspections” conducted to specifically evaluate a farm’s progress in correcting issues cited in enforcement actions.

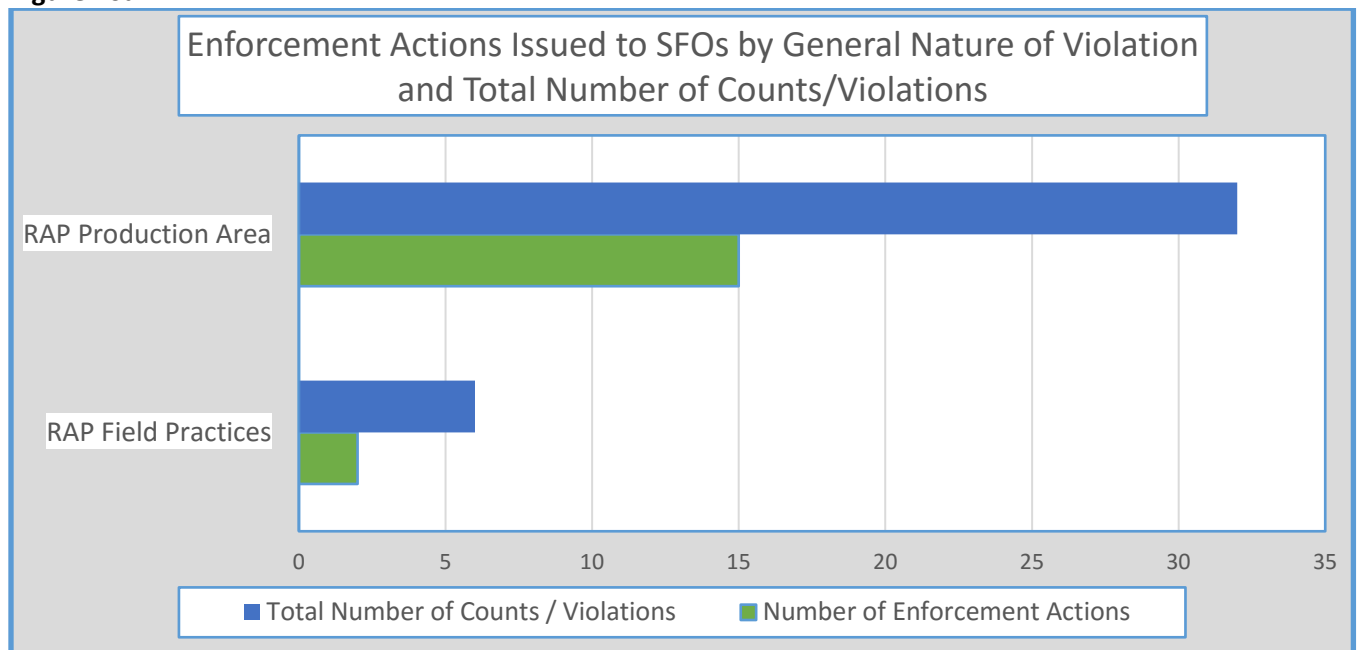


**Figure 9.** This graphic is a companion piece to Table 4 in the 2017 Annual Report and summarizes, by Basin, all enforcement actions and referrals.

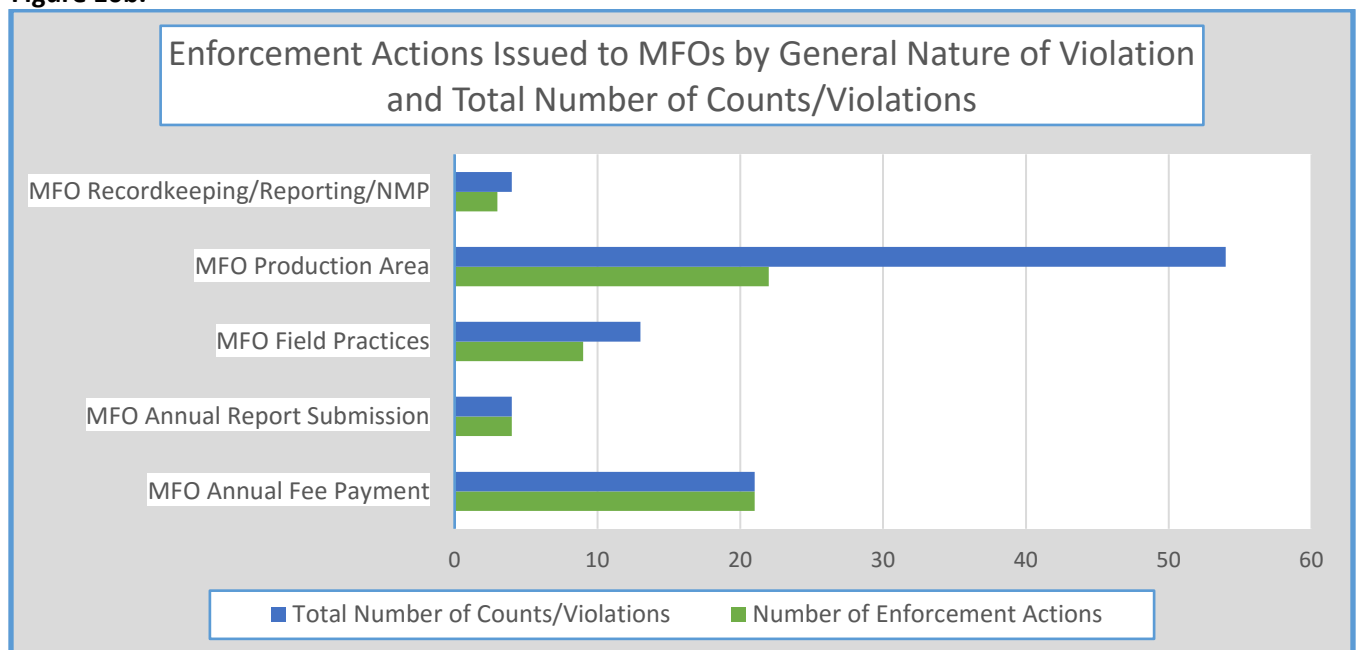


**Figures 10a, 10b, and 10c.** This graphic is a companion piece to Table 5 in the 2017 Annual Report and summarizes enforcement actions issued by general nature of violation of RAP Regulations, MFO General Permit, and LFO Individual Permit and actual number of individual counts.<sup>1</sup>

**Figure 10a.**



**Figure 10b.**



<sup>1</sup> Pending actions are not included in these numbers.

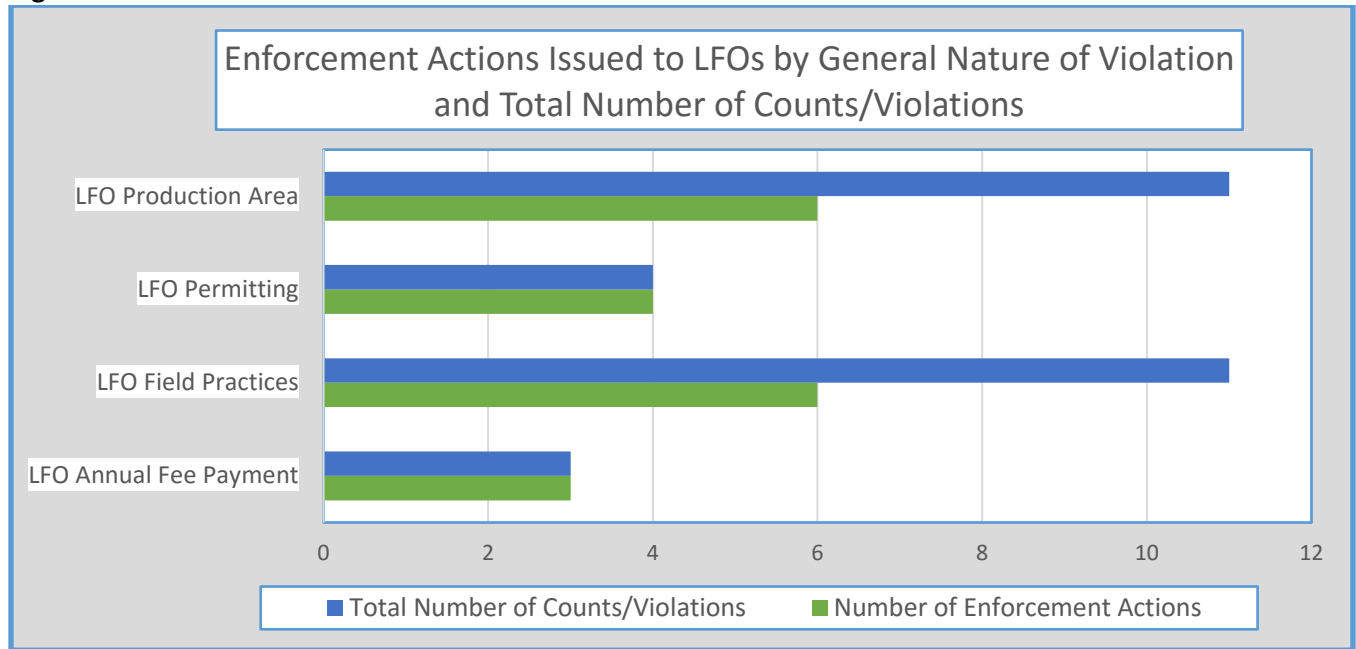
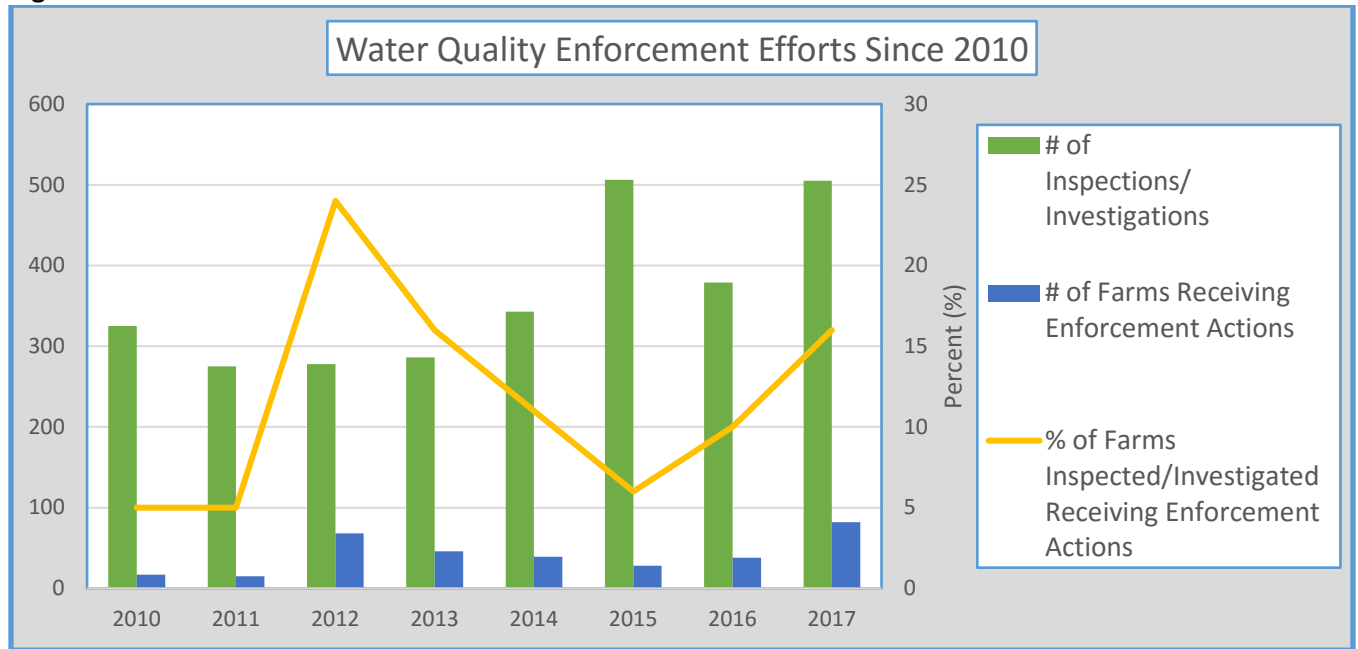
**Figure 10c.****Figure 11/Table 1.**

Figure 11 and Table 1 provide a trend analysis of the Agency's Agricultural Water Quality enforcement efforts since 2010. Inspection/investigation numbers have increased steadily starting in 2015 as the Agency has added additional staff to work in the Water Quality Division. Of all complaints received by the Agency in 2017, 20% resulted in the farm operation receiving an enforcement action. Overall, there was a 115% increase from 2016 to 2017 in farms receiving enforcement actions. There was an increase of 48% in 2017 in the number of farm inspections compared to the prior seven-year average and enforcement actions also increased in 2017 compared to the prior seven-year average by 127%. **The overall compliance rate for farm operations in 2017 was 84%.**

- Please note that the number of enforcement actions issued to farms spiked in 2012 and 2013 as a result of the Agency taking enforcement action against MFOs that either failed to submit their Notice of Intent to Comply (NOIC) with the renewed MFO General Permit or failed to send in their MFO Annual Report.
- Please note that the total number of visits to farms each year far exceeds the number of inspections/investigations reported in this graphic. The additional visits not included in this graphic include technical and engineering assistance visits, which are quantified within this report.

**Figure 11.**



**Table 1. The Numbers of Enforcement Efforts Spanning the Years from 2010-2017.**

Numbers of Enforcement Efforts from 2010-2017								
Year	2010	2011	2012	2013	2014	2015	2016	2017
# of Inspections/Investigations	325	275	278	286	343	506	379	505
# of Farms Receiving Enforcement Actions	17	15	68	46	39	28	38	82
% of Farms Inspected/Investigated Receiving Enforcement Actions	5	5	24	16	11	6	10	16



## LFO Permit Application Checklist

- [ ] [Appendix A:](#) Application for Large Farm Operation Permit
- [ ] [Appendix A-1:](#) Facility Information Form for every facility (current and proposed)
- [ ] [Appendix A-2:](#) Waste Storage Facility (WSF) Form for every waste storage facility (current and proposed)
- [ ] [Appendix A-3:](#) Proposed Construction Form (only needs to be submitted if a farm wants to construct)
- [ ] [Appendix A-5:](#) Food Processing Waste (Substrate)/Ag Waste Import Form (only needs to be submitted if the farm is importing or would like to import any substrates, manure or other agricultural wastes)
- [ ] [Agriculture Waste Export Agreement Form\(s\)](#) (only needs to be submitted if the farm exports manure)
- [ ] **Nutrient Management Plan (NMP)** that reflects the current and proposed agricultural wastes from the Appendices above and that meets NRCS 590 standard
- [ ] **Site Maps** for each Appendix A-1 and A-2 location that include the following:
  - Building Identification
  - Waste Storage Identification
  - Feed Storage Identification
  - Proposed Location of new Waste Storage Facility or A-3 Construction
  - Property Boundary(ies)
  - Road Name(s)
  - Closest Surface Water(s)
  - Well Locations
  - Scale Bar
  - North Arrow
- [ ] **Field Shapefiles** – Updated shapefiles of all lands operated or will be operated by the permittee (both owned and rented)

## LARGE FARM OPERATION PERMIT APPLICATION (6 V.S.A. SECTION 215)

## Appendix A: Application for Large Farm Operation (LFO) Permit

**I. Applicant Information**

Executive Officer \_\_\_\_\_ Farm Phone ( \_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_

Business Name \_\_\_\_\_ Cell Phone ( \_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_

Main Facility E911 Location: \_\_\_\_\_

Mailing Address \_\_\_\_\_

Email \_\_\_\_\_

**II. Contact Information (if different from Applicant Information)**

Name \_\_\_\_\_ Home Phone ( \_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_

Title \_\_\_\_\_ Cell Phone ( \_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_

Mailing Address \_\_\_\_\_

Email \_\_\_\_\_

**III. Application Type** (see Section IV below to make sure all required Appendices are submitted with the application) Operating Permit for a new LFO Operating Permit for a new LFO where no farm exists (e.g. building a new 700 cow barn where one does not exist) Permit Amendment: Expansion (e.g. adding additional animals above permitted numbers) Permit Amendment: Expansion (e.g. building barns, additions or structures; adding an additional facility housing animals) Permit Amendment: Importing wastes (e.g. digester substrates, cheese whey, or manure from another farm) Transfer of an Existing LFO permit to a new owner**IV. Additional Appendices are required to be submitted with application where applicable***Appendix A-1: Facilities Information Form:* complete for all facilities associated with the LFO*Appendix A-2: Waste Storage Facility Form:* completed for each waste storage facility associated with the LFO*Appendix A-3: Proposed Construction Form:* completed prior to any proposed construction*Appendix A-5: Substrate/Waste Import Form:* completed for all wastes imported or proposed to be imported to LFO*Appendix A-6: Transfer of Ownership Form:* completed when transferring an existing LFO Permit to a new owner**V. Production Area and Field Maps**

Maps must be created for each production area and field under the control of the LFO. An orthophoto map or copy of an orthophoto map should be used to outline the fields and identify the barns, pits, and field stacking areas. **Also, the following features are required to be indicated on each map: north vs south; acreage; surface waters; farm waters supplies; road names; other relevant landmarks such as schools.**

**VI. General Description** (description of the facility and proposed activities)

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**VII. Facilities Information** (List all facilities associated and managed as part of the LFO)

Also fill out the **Appendix A-1: Facility Information Form** for each facility listed.

Facility Name	E911 Location

**VIII. Animal Information** (List all animal numbers for each type listed for **all facilities** associated with this application)

Type	Current Number	Proposed Increase	Total (Current + Proposed)
Mature Dairy Cows (Milkers / Dry Cows)			
Youngstock or Heifers			
Cattle and Cow/Calf pairs			
Swine (55 lb. or more)			
Swine (under 55 lb.)			
Horses			
Sheep or Lambs			
Turkeys			
Chickens (w/liquid system)			
Chickens (w/out liquid system)			
Ducks (w/liquid system)			
Ducks (w/out liquid system)			

**IX. Additional Information**

Has the farm's submitted NMP been updated to include the increase in nutrients from the proposed animal increase?

\_\_\_ Yes \_\_\_ No

Has waste storage capacity been verified to be certain the LFO can maintain 180 days of storage with the proposed animal increase? \_\_\_ Yes \_\_\_ No

Will the animal increase require the construction of or additions to barns? \_\_\_ Yes \_\_\_ No

*(If yes, fill out **Appendix A-3: Proposed Construction Form** and note: construction CANNOT begin prior to Agency approval)*

**X. Waste Storage and Waste Generation Information** (estimated waste storage and generation for all facilities under the LFO)

Number of Waste Storage Facilities (Pits, Lagoons, Bunkers and other Storage Areas) \_\_\_\_\_  
 (For each one, fill out the **Appendix A-2: Waste Storage Facility Form**)

		Current	Proposed
Total amount of wastes generated annually:	Liquid (gallons):		
	Solid (tons / ft <sup>3</sup> ):		
Total amount of wastes imported annually:	Liquid (gallons):		
	Solid (tons / ft <sup>3</sup> ):		
Total amount of wastes exported/transferred annually:	Liquid (gallons):		
	Solid (tons / ft <sup>3</sup> ):		

	Current	Proposed
Total liquid storage available (gallons):		
Liquid waste generated in 180 days (gallons):	(-)	(-)
Balance:		
Total semi-solid storage available (tons / ft <sup>3</sup> ):		
Semi-solid waste generated in 180 days (tons / ft <sup>3</sup> ):	(-)	(-)
Balance:		

## XI. Nutrient Generation & Management

1) A Nutrient Management Plan (NMP) is required as part of the application process. Please submit a NMP that meets the requirements of LFO Rule (see **Appendix B: Guidance Document: Components of a Model Nutrient Management Plan**). All crop land and facilities managed as part of the LFO must be included in the NMP.

2) On farm nutrient generation, importation and balance (including proposed animal increase and proposed imported wastes)

	Total Nitrogen (lbs.)	Total Phosphorus (lbs.)	Total Potassium (lbs.)
Planned total nutrient generation:			
Planned total nutrient importation:	(+)	(+)	(+)
Planned total nutrient exportation:	(-)	(-)	(-)
Planned NMP total crop nutrient recommendations:	(-)	(-)	(-)
<b>Balance of remaining nutrients on farm:</b>	<b>(=)</b>	<b>(=)</b>	<b>(=)</b>

3) Land Base and NMP Crop Nutrient Recommendation / Removal

	Owned Acreage	Rented Acreage	Total Nitrogen Recommended (lbs.)	Total Nitrogen Applied (lbs.)	Total Phosphorus Recommended (lbs.)	Total Phosphorus Applied (lbs.)
Perennial Cropland						
Annual Cropland						
<b>Total:</b>						
<b>Total Acreage:</b>						

4) Land Base Management

	Total Nitrogen (lbs.)	Total Phosphorus (lbs.)	Total Potassium (lbs.)
Planned NMP total crop nutrient recommendations:			
Planned NMP total nutrient application from wastes:	(-)	(-)	(-)
Planned NMP total nutrient application from fertilizer	(-)	(-)	(-)
<b>Total amount of remaining nutrients:</b>	<b>(=)</b>	<b>(=)</b>	<b>(=)</b>

## XII. Traffic, Odor, Noise, and Pests Requirements

### Traffic

Will this farming operation generate more traffic than a well managed similar sized farm of the same animal type?

Yes  No

### Odors

Will this farming operation generate more odor than a well managed similar sized farm of the same animal type?

Yes  No

**Noise**

Will this farming operation generate more noise than a well managed similar sized farm of the same animal type?

Yes       No

**Flies, Insects, or other Pests**

Will this farming operation generate (breed) more flies, insects, or other pests above a level where adult flies, insects, or other pests move off the farm premises whereby they become a public health risk or an economic hardship for neighboring landowners, compared to a well managed similar sized farm of the same animal type?

Yes       No

Has the farm developed and submitted or included a plan to manage operations for: traffic, odor, noise, insects, flies and other pests?

Yes       No

**XIII. Signature of Applicant**

I, \_\_\_\_\_, hereby submit this application to the Vermont Agency of Agriculture, Food, and Markets for processing for a Large Farm Operation Permit. I understand that construction of a barn or other infrastructure shall not begin until I have received a Large Farm Permit as required by 6 V.S.A. Section 4851. I believe, to the best of my ability, that the information provided herein is full and accurately represents the proposed project.

I understand that my farming practices must conform with Vermont's Required Agricultural Practices and SUBCHAPTER 3, § 4851, regardless of the farm's qualifications as a Large Farm Operations manager. However, as part of the LFO permit process, I must affirmatively state that my farming practices are in conformance with the RAPs. As an applicant for an LFO permit, my farming operation must also conform with the statutory requirements regarding traffic, odors, noise, flies, insects, and other pests. I have read the statements herein, and my signature creates the affirmative finding necessary to complete these parts of the LFO application.

\_\_\_\_\_  
SIGNATURE OF FARM OWNER/APPLICANT FOR LFO PERMIT

\_\_\_\_\_  
DATE OF SIGNATURE

The Appendix A-4: Proposed Animal Increase Form has been integrated into the Appendix A and A-1. It is no longer required.

**A complete and accurate LFO Application (along with required appendices and documents) should be sent to:**

**Vermont Agency of Agriculture, Food and Markets  
Large Farm Operation Program  
94 Harvest Lane  
Williston, VT 05495**

**LARGE FARM OPERATION PERMIT APPLICATION**
*Appendix A-1: Facility Information Form*

(This form must be filled out for each facility managed under the LFO)

**I. Applicant Information**

Business Name \_\_\_\_\_

Facility Name \_\_\_\_\_

Facility E911 Location \_\_\_\_\_

**II. Animal Information** (List all applicable animal numbers for each type listed at this facility only)

Type	Current Number	Proposed Number	Weight (lbs.)	Bedding Type	Manure Type (Liquid /Solid)	Milk Production (lbs/animal/year)
Mature Dairy Cows (Milkers / Dry Cows)						
Youngstock or Heifers						
Cattle and Cow/Calf pairs						
Swine (55 lb. or more)						
Swine (under 55 lb.)						
Horses						
Sheep or Lambs						
Turkeys						
Chickens (w/ liquid system)						
Chickens (w/o liquid system)						
Ducks (w/ liquid system)						
Ducks (w/o liquid system)						

**III. Waste Generation Information** (at this facility only)

		Current Amounts	Proposed Amounts
Total amount of waste generation annually:	Liquid (gallons):		
	Solid (tons / ft <sup>3</sup> ):		
Total amount of wastes imported annually:	Liquid (gallons):		
	Solid (tons / ft <sup>3</sup> ):		
Total amount of wastes exported/ transferred annually:	Liquid (gallons):		
	Solid (tons / ft <sup>3</sup> ):		

**IV. Waste Storage Facility Information *(at this facility only)***

Number of Waste Storage Facilities (Pits, Lagoons, Bunkers and other Storage Areas): \_\_\_\_\_  
 (For each one, fill out the **Waste Storage Facility Form**)

Name of waste storage facilities: \_\_\_\_\_  
 \_\_\_\_\_

**V. Waste Collection and Management Systems *(at this facility only)***

1) Do you have systems to collect all "dirty water" (barnyard or silage runoff, roof top water which moves across unpaved or uncropped land, manure runoff, bedding by product, milkhouse waste, mortality composting) that is created on this facility so that it is not allowed to runoff into waters of the state?

\_\_\_\_ Yes      \_\_\_\_ No

If "No", does the application contain a plan for developing a system to collect all dirty water?      \_\_\_\_ Yes \_\_\_\_ No

2) Are the following structures designed by: NRCS, VAAFM, or a third party registered to practice in Vermont?

Check the appropriate box	Designed By:				
	Yes	No	NRCS	VAAFM	Third Party
*Barnyard Runoff Control:					
*Silage Runoff Control:					
Rooftop Water:					
Milkhouse Waste:					
*Animal Mortalities					

\* include an aerial photo/map with location of waste management structures.

3) Are mortalities managed in accordance with Required Agricultural Practices (RAPs), the LFO Rules, and applicable NRCS standards?      \_\_\_\_ Yes      \_\_\_\_ No

**VI. Nutrient Management**

Is this facility included in your LFO's Nutrient Management Plan?      \_\_\_\_ Yes      \_\_\_\_ No

**VII. Nutrient and Pesticide Storage**

Do you store manure, pesticide, or fertilizer at this facility?      \_\_\_\_ Yes      \_\_\_\_ No

Is the storage area located within a floodway or within a 100 year floodplain?      \_\_\_\_ Yes      \_\_\_\_ No

**VIII. Agricultural Waste Management**

Do you store, handle, or dispose chemicals, petroleum products, containers at this facility?      \_\_\_\_ Yes      \_\_\_\_ No

If yes, describe where the storage of each occurs, and whether each storage area is under cover (roofed, tarped, etc.), on a pad, or in some other way protected. Locate each storage area on a farm map (the orthophoto maps required for field identification are sufficient to use for the purpose).

\_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 SIGNATURE OF FARM OWNER/APPLICANT FOR LFO PERMIT

\_\_\_\_\_  
 DATE OF SIGNATURE



**LARGE FARM OPERATION PERMIT APPLICATION**
*Appendix A-2: Waste Storage Facility (WSF) Form*

 (This form is to be filled out for **each Waste Storage Facility** associated with the LFO)

**I. Applicant and Location Information**

Business Name \_\_\_\_\_ Name of this Storage Structure \_\_\_\_\_

\*Facility Name / Address of Structure \_\_\_\_\_

\* include an aerial photo/map with location of waste management structures.

**II. Waste Storage Design and Capacity Information**

 Capacity Information (see Figure 1 on back) Gallons Cubic Feet

Design Storage Volume of WSF \_\_\_\_\_

Usable Volume for Waste Storage \_\_\_\_\_

Dimensions (LxWxH, side slopes, shape) \_\_\_\_\_

Total Surface Area of water that is collected and added to this Waste Storage Facility

Surface Area of WSF \_\_\_\_\_ Sq. Feet

Barnyard Area(s) \_\_\_\_\_ Sq. Feet

Silage Bunk Area(s) \_\_\_\_\_ Sq. Feet    Is high-flow silage runoff directed to WSF?    \_\_\_\_ Yes \_\_\_\_ No

Roof Runoff \_\_\_\_\_ Sq. Feet

**III. Facility Certification**

Is this facility certified by NRCS, VAAFM or a third party registered to practice in Vermont to meet NRCS standards and specifications contained in the Vermont NRCS Field Office Technical Guide Section IV, as amended, or meet an equivalent standard?

\_\_\_\_ Yes    \_\_\_\_ No

**If yes**, this structure is certified by    \_\_\_\_ NRCS    \_\_\_\_ VAAFM    \_\_\_\_ Third Party

\*If certified include the following:

Name of Company: \_\_\_\_\_

Name of Engineer: \_\_\_\_\_

Contact Information: \_\_\_\_\_

Date of certification: \_\_\_\_\_

**If no**, is there a plan in place to certify this structure?    \_\_\_\_ Yes    \_\_\_\_ No

**If yes**, list the name of the organization or individual certifying this structure: \_\_\_\_\_

Date when certification is scheduled to be complete \_\_\_\_\_

\* Certification documents for each structure is required from NRCS, VAAFM or a Professional Engineer registered to practice in Vermont. Include certification documentation for each structure with your application.

**V. Additional Required Information**

Date of construction \_\_\_\_\_ Materials of construction \_\_\_\_\_

Describe the adequacy of the structure linings to prevent exfiltration of manure/waste contaminants to groundwater \_\_\_\_\_

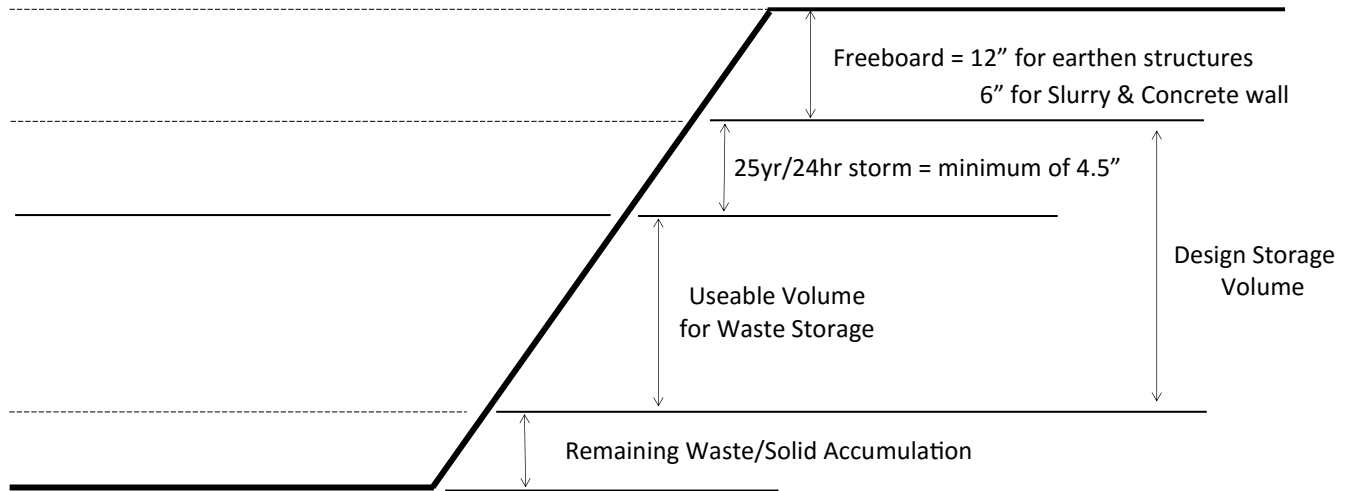
Proximity of bedrock and water table to the floor of the structure \_\_\_\_\_

The adequacy of the system(s) to control manure runoff generated by a 25-year, 24-hour storm event for the location. \_\_\_\_\_

Full description of system components \_\_\_\_\_

Provide documentation about existing storage structure's ability to meet the criteria and specifications outlined in Vermont NRCS Field Office Technical Guide, Section IV, Practice Code 313, Waste Storage Facility, as amended Practice Code 313, Waste Storage Pond, or other appropriate waste storage facility(s) contained in Vermont NRCS Field Office Technical Guide Section IV, as amended.

**If as built drawings are available for this structure, please include them with this form.**



**Figure 1. Diagram of waste storage facility (WSF) to assist in volume documentation. Drawing not to scale.**

Notes:

- 25yr/24hr storm volume means 4.5" (or 0.375') of rainfall on any surface area that drains into a WSF.  
Ex: (Barnyard sqft + Silage sqft + Roof Runoff sqft + WSF sqft) x 0.375' = 25yr/24hr storm volume required at all times
- Useable Volume for Waste Storage includes: manure, bedding, milkhouse waste and other wastes added to the WSF, yearly precipitation on any surface area that drains into a waste storage structure, and precipitation minus evaporation on the surface area of the waste storage structure.

**LARGE FARM OPERATION PERMIT APPLICATION**
*Appendix A-3: Proposed Construction Form*

(This form is to be filled out for any proposed LFO construction)

**Proposed construction CANNOT occur until approved by the Agency.**
**I. Applicant and Location Information**  
 Business Name \_\_\_\_\_ Facility where construction is proposed \_\_\_\_\_  
 Facility Location (address) \_\_\_\_\_

**Proposed Construction Setback Requirements**  
 Has the town or municipality been notified of the proposed construction?\*  Yes  No  
 \* Include a copy of the letter and sketch you sent to the local zoning administrator or town clerk for the proposed construction.  
 Have the local (town or municipal) setbacks been maintained?  Yes  No  
 If no, have you received an exemption from the Secretary of Agriculture?  Yes  No  
 Is proposed construction at least 100 feet from centerline of a public road?  Yes  No  
 Is proposed construction at least 100 feet from any abutting property line?  Yes  No  
 Have you maintained a minimum of 50' between the proposed new structure (does not apply to an addition) and the top of a bank of an adjoining water?  Yes  No  
 Does the siting of proposed construction comply with all applicable RAPs and LFO Rules?  Yes  No  
 Will the proposed construction allow for compliance with the standards established in LFO Rules for: odor, noise, traffic, insects, flies and other pests?  Yes  No

**Animal Information Related to Proposed Construction**  
 Will proposed construction increase animal numbers above currently permitted numbers?  Yes  No

**Land Ownership Information**  
 Deed(s) grantee's name recorded as: \_\_\_\_\_  
 Recorded book(s) \_\_\_\_\_ pages \_\_\_\_\_  
 Town \_\_\_\_\_ County \_\_\_\_\_

**Additional Information Required for Proposed Construction**  
 What is the adjoining neighbors land use in the vicinity of proposed construction? \_\_\_\_\_  
 Will the proposed construction disturb more than one acre of land?  Yes  No  
 If "Yes," have you applied for and received a Stormwater Construction General Permit from the Agency of Natural Resources?  Yes  No  
**Include a sketch or aerial photo showing the following: location of proposed construction, abutting property lines, parcels and identification of surface waters and ditches in the vicinity of proposed construction.**

**LARGE FARM OPERATION PERMIT APPLICATION**
*Appendix A-4: Proposed Animal Increase Form*

(This form is to be filled out for proposed increase in animals of LFO above permitted amount)

**I. Applicant and Location Information**

Name \_\_\_\_\_

Facility/Location of where increase in animals is proposed \_\_\_\_\_

**Information about Proposed Animal Numbers (fill in the table with the animals you are proposing to increase)**

Type	Total Permitted Number	Total Current Number	Proposed Increase
Milking Dairy Cows			
Dry Dairy Cows			
Youngstock			
Heifers			
Veal Calves			
Cattle and Cow/Calf pairs			
Swine (55 lb. or more)			
Swine (under 55 lb.)			
Horses			
Sheep or Lambs			
Turkeys			
Chickens (w/liquid system)			
Chickens (w/out liquid system)			
Ducks (w/liquid system)			
Ducks (w/out liquid system)			

**Additional Information**

 Has the farm's NMP been updated to include the increase in nutrients from the proposed animal increase?  Yes  No

 Has waste storage capacity been verified to be certain the LFO can maintain 180 days of storage with the proposed animal increase?  Yes  No

 Will the animal increase require the construction of or additions to barns?  Yes  No

 (If yes, fill out *Appendix A-3: Proposed Construction Form* and note: construction CANNOT begin prior to Agency approval)

**LARGE FARM OPERATION PERMIT APPLICATION**
**Appendix A-5: Food Processing Waste (Substrate)/Ag Waste Import Form**

 (This form must be filled out for **each Substrate and/or Waste Imported** and must be included with a Permit Application)

**I. Applicant and Location Information**  
 Business Name \_\_\_\_\_ Facility/Structure Receiving Import: \_\_\_\_\_  
 Facility/Structure Location (address): \_\_\_\_\_

**II. Substrate/Ag Waste Generator Information**  
 Substrate/Ag Waste Description \_\_\_\_\_ Generator Name \_\_\_\_\_  
 Name of Contact at the Point of Generation \_\_\_\_\_  
 Phone Number of Contact ( \_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_ Email of Contact \_\_\_\_\_

**III. Description of Substrate/Ag Waste Management**  
 Is the Substrate/Ag Waste liquid or solid? \_\_\_\_ Liquid \_\_\_\_ Solid  
 Proposed Delivery Frequency \_\_\_\_\_ Volume to be Delivered \_\_\_\_\_ Yearly Amount \_\_\_\_\_  
 Is Substrate/Ag Waste added to a reception pit in a barn? \_\_\_\_ Yes \_\_\_\_ No  
 Is Substrate/Ag Waste added directly to a Digester? \_\_\_\_ Yes \_\_\_\_ No  
 Is Substrate/Ag Waste stored in a tank? \_\_\_\_ Yes \_\_\_\_ No Describe tank \_\_\_\_\_  
 If no to questions above, describe where the Substrate/Ag Waste will be stored \_\_\_\_\_

<b>IV. Substrate/Ag Waste Analysis</b>	Analysis Date _____	Total Solids % _____
	mg/l (ppm)	lbs/1000 gals
Total Nitrogen	_____	pH _____
Ammonium Nitrogen	_____	COD _____ mg/l (ppm)
Organic Nitrogen	_____	
Total Phosphorous (P <sub>2</sub> O <sub>5</sub> )	_____	
Total Potassium (K <sub>2</sub> O)	_____	
Chloride	_____	
Sodium	_____	

**V. Additional Questions**  
 Is this Substrate/Ag Waste approved by the Public Service Board to be imported onto the farm? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ n/a  
 Approved Amount \_\_\_\_\_  
 Has the farm been allowed to import this waste through ANRs Indirect Discharge Permit? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ n/a  
 Approved Amount \_\_\_\_\_  
 Has the farm's NMP been updated to include the nutrients from this Substrate/Ag Waste? \_\_\_\_ Yes \_\_\_\_ No  
 Has storage capacity been verified to be certain the farm can maintain 180 days of storage? \_\_\_\_ Yes \_\_\_\_ No

*Agricultural Waste Export Agreement Form*

Per Large Farm Operation (LFO) Rules, Subchapter 7C and Appendix B Section 3(l)(vi), all LFO facilities are required to have documentation of all agricultural wastes being exported or transferred. This form can be used by a LFO operator who exports any agricultural waste to document the transfer of that waste and meet compliance. One form needs to be filled out **for every importing recipient and must be submitted with your LFO Annual Report.**

**I. Farm Permittee and Facility Information Exporting Agricultural Waste**

Business Name \_\_\_\_\_ Permit Holder Name \_\_\_\_\_

Facility Exported From \_\_\_\_\_ Phone Number of Operator (\_\_\_\_) \_\_\_\_ - \_\_\_\_

Are the exported agricultural wastes reported accurately in farm's Nutrient Management Plan (NMP)? \_\_\_\_ Yes \_\_\_\_ No

Has the farm been allowed to export this waste through ANR's Indirect Discharge Permit? \_\_\_\_ N/A \_\_\_\_ Yes \_\_\_\_ No

**II. Recipient and Location Information Responsible for the Importing of Agricultural Waste**

Name of Recipient \_\_\_\_\_ Phone Number of Receipt (\_\_\_\_) \_\_\_\_ - \_\_\_\_

Mailing Address of Recipient \_\_\_\_\_

 Where are the imported agricultural wastes being stored/utilized? ***(Please circle all that apply):***

Manure Pit     
  Permanent Stack     
  Temporary Stack     
  Direct Field Application     
  Digester

If being received at a manure pit, permanent stack or digester, indicate facility name and physical location (include street and town) \_\_\_\_\_

If being received at a temporary field stack or applied directly to fields, indicate field(s) FSA farm/tract/field #: \_\_\_\_\_

Have the imported agricultural wastes been reported and captured in the importing recipient's NMP (if applicable)?

\_\_\_\_ Yes \_\_\_\_ No

Has the importing recipient's waste storage capacity been verified and determined sufficient to maintain 180 days of storage?

\_\_\_\_ Yes \_\_\_\_ No

**III. Date, Amount and Verification of Waste Exportation - All exports per crop year must be included**

Date (MM/DD/YY)	Type of Waste (Solid/semi-solid, liquid, compost)	Amount of Waste (tons, gal, cubic yard)	Initials of Exporting Operator	Initials of Importing Recipient

Please use the back of this form for additional space. **The total amount of exported wastes must be included in your LFO Annual Report.**

**IV. Agricultural Waste Analysis**

Has the exporting operator sampled and analyzed the agricultural waste being exported in the last year? \_\_\_\_ Yes \_\_\_\_ No

Has the exporting operator provided the importing recipient with a copy of the current waste analysis? \_\_\_\_ Yes \_\_\_\_ No

**A copy of the most current waste analysis must be submitted along with this form.**
**V. Signature Verification**
**I certify that to the best of my knowledge and belief the information above is true, accurate, and complete.**

 \_\_\_\_\_  
**Signature of Waste Exporting Operator**

 \_\_\_\_\_  
**Signature of Waste Importing Recipient**