

Agricultural Water Quality Project Planning, Design, and Construction Services for Vermont Agency of Agriculture Food & Markets



Services / Expertise

Agricultural Stewardship
Site Investigation and Preliminary Design
Manure Management and Storage
Silage Leachate Treatment
Milhouse Wastewater Treatment
Clean Water Diversion
Construction Services

Markets

State Government
Property Owners
Agricultural & Dairy Producers
Dairy Processing

Project Location

City, State

Date Completed

2015–present

Project Owner

Vermont Agency of Agriculture, Food & Markets

Project Manager

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Working under contract with AAFM, the Stone team designed an earthen manure pit with concrete push-off ramp to improve manure management at this Addison County farm.

IN 2015, the Vermont Agency of Agriculture, Food & Markets retained Stone’s engineers and scientists to provide planning, design and construction services to enhance available state technical resources to farmers and dairy processors to comply with the the Agency’s Best Management Practice (BMP) Program. Our general services contract with VAAFAM includes site investigation, design development, and construction oversight of manure handling systems, as well as management practices for waste streams associated with the milhouse and silage bunks that reduce the phosphorus and nitrogen loads delivered to water resources. All practices are being designed in accordance with the applicable U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) practice standards, as well as VAAFAM requirements. In this capacity Stone staff have met with Vermont farmers to review and understand farm-specific conservation needs; conducted site surveys and soil tests; characterized waste streams and completed other assessments needed to support design development; researched management alternatives and identified applicable regulatory requirements; prepared design documents and construction specifications; and provided construction management services including post-construction inspection and certification. This contract was recently extended through the end of 2019.

Over the course of this contract, Stone has supported several farmers in identifying, designing, and implementing BMPs on their farms. For example, working under contract with the VAAFAM, Stone provided technical support and engineering design services in order to improve manure handling at an Addison County farm. Stone completed a site survey, collected soil samples, and prepared a design consistent with NRCS’ standards. Stone’s project lead met with the farmer on several occasions as the project was being designed to ensure that the storage system would meet the farmer’s needs, and provided information necessary to support an EQIP funding application. Ultimately, a two-bay earthen manure basin was determined to be the best fit for this site. Stone led the design of storage facility, coordinating with our project partner, who led the design of the concrete push-off ramp needed to move manure from the barn into the earthen pit.