

**MULTI-PARTNER AGRICULTURAL CONSERVATION PRACTICE TRACKING AND
PLANNING GEOSPATIAL DATABASE**

QUALITY ASSURANCE PROJECT PLAN

Prepared by the Vermont Agency of Agriculture, Food and Markets
for the Lake Champlain Total Daily Maximum Load

TABLE OF CONTENTS

SECTION 1. QAPP OVERVIEW	3
SECTION 2. PROJECT MEMBERS AND ROLES.....	3
SECTION 3. PROJECT BACKGROUND AND DESCRIPTION	6
SECTION 4. KNOWLEDGE, SKILLS AND ABILITIES OF PARTNER DATABASE USERS.....	8
SECTION 5. PROJECT DOCUMENTATION: ENTERING INFORMATION INTO THE PARTNER DATABASE ..	8
SECTION 6. PRACTICE VERIFICATION PROTOCOL AND OVERSIGHT	10
SECTION 7. USER TRAINING REQUIREMENTS	11
SECTION 8. FIELD VERIFICATION AND APPROPRIATE CIRCUMSTANCES FOR PRACTICE REPORTING .	11
SECTION 9. DATA QUALITY AND PROCEDURES TO AVOID DOUBLE COUNTING.....	12
SECTION 10. PRIORITY CONSERVATION PRACTICES FOR VERIFICATION	12
Appendix A. Partner Database Practices and Qualifying Conditions	14
Appendix B. Partner Database User Agreement.....	26
Appendix C. Farm Waiver Form for Practice Reporting	27
Appendix D. Distribution List.....	28
Appendix E. Partner Database User Manual.....	30

TABLES AND FIGURES

Table 1. Key partners and their organizational roles	3
Table 2. State Agencies and Their Organizational Roles	5
Table 3. Priority Conservation Practices for Verification, Methods for Tracking and Total Phosphorus Load Reductions	13
Table 4. Partner Database Practice List and Qualifying Conditions	14
Table 5. Names and contacts of those parties with access to the Partner Database.....	28

SECTION 1. QAPP OVERVIEW

The Quality Assurance Project Plan (QAPP) for the Multi-Partner Agricultural Conservation Practice Tracking and Planning Geospatial Database (Partner Database) details the following:

1. Major partner organizations involved in the impetus of this project and data entry;
2. Requirements for Partner Database users;
3. Methodology for conservation planning professionals in the State of Vermont to survey, verify and report conservation practices into the Partner Database;
4. Oversight of this data collection and reporting by the Vermont Agency of Agriculture, Food and Markets (VAAFMM);
5. Validation and submittal of this data to the Vermont Department of Environmental Conservation (DEC) for tracking non-point source nutrient load reductions for the agricultural sector in Vermont.

The goal of this QAPP is to ensure accurate data entry as well as usability of this data for tracking Total Daily Maximum Load (TMDL) reductions.

SECTION 2. PROJECT MEMBERS AND ROLES

Project members include organizations and institutions actively involved in agricultural conservation planning on farms in Vermont. Partner Database users are limited to staff who do not have a regulatory or enforcement role in their position. Partners, for purposes of this database launch, are defined as organizations or agricultural service providers who receive funding through the Agricultural Clean Water Initiative Program for technical assistance.

Table 1. Key partners and their organizational roles

Name	Organizational Role	Partner Database Role
United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)	NRCS provides technical and financial assistance to farmers and other private landowners to improve natural resources on their land. Assistance is provided using a voluntary approach and a variety of conservation programs.	Will use database to improve service delivery to farmers.
Vermont Association of Conservation Districts (VACD)	VACD is the membership association of Vermont's 14 Natural Resources Conservation Districts. VACD provides services to its members, facilitates state-wide dialogue among districts and technical partners, sponsors the Envirothon, and implements technical	Report practices implemented as a result of technical assistance provided and use database to improve service delivery to farmers.

	and financial assistance programs aimed at improving water quality with financial support from state, federal and private partners.	Farm visit and implementation reporting for VAAFMM funded grants and contracts will occur in the Partner Database.
United States Fish and Wildlife Service (USFWS)	The USFWS provides technical and financial assistance to private landowners to restore and improve habitat for important fish and wildlife species. The USFWS provides technical support to other resource conservation agencies and organizations.	Will use database to improve service delivery to farmers.
USDA Farm Service Agency (FSA)	FSA provides financial assistance to support farmers and ranchers through a variety of commodity, conservation, and disaster assistance programs, as well as, loans to producers through direct assistance or guaranteed through other providers.	Will use database to improve service delivery to farmers.
University of Vermont Extension (UVM)	UVM Extension integrates higher education, research and outreach to help Vermonters put knowledge to work in their families and homes, farms and businesses, towns and the natural environment. Faculty and staff, located in offices around the state, help improve the quality of life of Vermonters through research-based educational programs and practical information.	Report practices implemented as a result of technical assistance provided and use database to improve service delivery to farmers. Farm visit and implementation reporting for VAAFMM funded grants and contracts will occur in the Partner Database.
The Lake Champlain Basin Program (LCBP)	LCBP works in partnership with government agencies from New York, Vermont, and Quebec, private organizations, local communities, and individuals to coordinate and fund efforts which benefit the Lake Champlain Basin's water quality, fisheries, wetlands, wildlife, recreation, and cultural resources.	Report practices implemented through funding programs and use database to improve service delivery to farmers.

Vermont Housing and Conservation Board (VHCB)	The VHCB supports and encourages the creation of affordable housing for Vermonters, in addition to conserving and protecting Vermont's agricultural lands, forestlands, historic properties, important natural areas, and recreational lands that are of primary importance to the economic vitality and quality of life of the State.	Report practices implemented through funding programs and use database to improve service delivery to farmers.
Vermont Land Trust (VLT)	The VLT conserves land with a legal tool called a conservation easement that permanently restricts development and protects natural features.	Will use database to improve service delivery to farmers.

Table 2. State Agencies and Their Organizational Roles

Name	Organizational Role	Partner Database Role
Vermont Agency of Agriculture, Food and Markets (VAAFM)	VAAFM's mission is to facilitate, support and encourage the growth and viability of agriculture while protecting the working landscape, human, animal and plant health, consumers and the environment. The Water Quality Division implements Vermont's agricultural water quality program, which enforces rules for non-point source pollution control program, the Required Agricultural Practices, and as well as medium and large farm operational permits. VAAFM also provides technical and financial assistance to agricultural operations to improve water quality on their lands.	VAAFM will train partners on use of the database, ensure the QAPP is met, and promote partner use of the database through grant agreement requirements. VAAFM will report practices implemented as a result of VAAFM grant programs including the Farm Agronomic Practices (FAP) Program, Best Management Practices (BMP) Program, Conservation Reserve Enhancement Program (CREP), and the Capital Equipment Assistance Program (CEAP).
VT Department of Environmental	The VANR-DEC Watershed Management Division's primary mission is to protect, maintain, enhance and restore the quality of Vermont's surface	Will calculate nutrient load reductions based on aggregated reports from the Partner Database and provide TMDL reports to the EPA using Vermont

Conservation (VT DEC)	water resources. Inherent in this effort is the support of both healthy ecosystems and public uses in and on more than: 808 lakes and ponds; 7,100 miles of rivers and streams; and 300,000 acres of wetlands that exist within the State of Vermont.	DEC's Lake Champlain BMP Accounting and Tracking Tool (LC BATT)
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SECTION 3. PROJECT BACKGROUND AND DESCRIPTION

The Multi-Partner Agricultural Conservation Practice Tracking and Planning Geospatial Database (Partner Database) will improve planning and tracking of agricultural best management practice (BMP) implementation across the State of Vermont. The Vermont Agency of Agriculture, Food and Markets (VAAFAM), along with partners both within and outside of state government will access the database. The Partner Database will be accessed by VAAFAM and authorized partners via an online interface. In addition to allowing for agricultural water quality partners to plan and track BMP implementation, the database will also allow for common BMP implementation reporting among the partners. These partners are listed above in Section 2.

The purpose of this quality assurance plan is to enable the State of Vermont and partners to monitor, plan, survey, and track field and farmstead conservation practices implemented for mitigation of nutrient pollution to waters of the State. Many farmers in Vermont have undertaken efforts to reduce agricultural pollutants, and it is essential that the State account for conservation practices geospatially in the Partner Database to best estimate reductions in nutrient loading from agricultural operations. Aggregated reports from the Partner Database will then be entered into the Vermont DEC's Lake Champlain BMP Accounting and Tracking Tool (LC BATT) for reporting nutrient reductions from agriculture for Total Daily Maximum Load (TMDL) requirements and progress reporting.

While VAAF, the USDA NRCS, and VHCB offer programs and cost sharing opportunities for farmers to make improvements to help mitigate nutrient loading, many farmers implement water quality improvement practices without State or Federal financial assistance. This Partner Database will ensure that all conservation practices are reported geospatially, in the same manner and with the same merit regardless of state or federal financial assistance for the improvements. The goals for the Partner Database are:

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1. To improve coordination between conservation planning partners;
 2. To reach the most comprehensive representation of nutrient load reductions to waters of the state from agriculture for TMDL tracking and reporting;
 3. To track practices implemented on farms that will contribute to reductions in nutrient loading from the agricultural sector regardless of funding source;
 4. To reduce duplication of work in identifying potential or actual risks to water quality by providing a mechanism for partners to view VAAF inspection results.
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SECTION 4. KNOWLEDGE, SKILLS AND ABILITIES OF PARTNER DATABASE USERS

All Partner Database users must obtain the following knowledge, skills and abilities for use of this database:

- A. Must be knowledgeable of conservation practices and best management practices implemented on Vermont farms.
- B. Must understand the Quality Assurance Project Plan for data reported in the Partner Database.
- C. Ability to read and interpret practice standards including NRCS practice standards as well as the Minimum Standards for Practice Reporting (Appendix A).
- D. Ability to verify conservation practice implementation in the field or farmstead.
- E. Ability to establish and maintain effective working relationships and clear communications with landowners and farm operators about the use of this data to track agricultural pollutant reductions statewide.
- F. Ability to recognize when a landowner or operator is concerned about conservation practices reported into the Partner Database, and act accordingly to ease their concerns or to respect their wishes.
- G. Ability to search for operations, enter practices, generate reports, and use the necessary functions of the Partner Database.
- H. Ability to use farm visit notes to coordinate with other conservation planners and improve conservation service delivery to farmers.

SECTION 5. PROJECT DOCUMENTATION: ENTERING INFORMATION INTO THE PARTNER DATABASE

While the Partner Database User Manual (Appendix B) is a comprehensive guide for use of the Partner Database, the following project documentation details the *intended use* for each of the attributes associated with a practice. The goal is to ensure a clear understanding by users of practice information.

- A. Practice Implementation Information Process: All users shall follow the Partner Database User Manual (Appendix B) for entering practices into the Partner Database.
- B. Partner Database Users will report practice implementation information into the Partner Database identifying the specific practice and characterizing practice descriptions below:
 - I. **Practice:** This is the name of the conservation practice implemented and will be selected via a dropdown menu list. If the specific practice you are looking to enter is not available on the list, you can contact the database administrator. The practice could be added, or it may not be appropriate to track as a “practice” and alternatively could be tracked under the notes section of a farm visit.

- II. **Status:** This dropdown list lets you select the status of the practice, from first having the farmer’s interest, to incorporating it into a plan, to implementation and finally expiration. Select from “interested”, “planned”, “installed”, or “expired.”
- i. **The practice’s status will need to be updated as it changes.**
 - ii. If you enter a practice as planned, you are responsible to update that status once the practice has been installed, as another conservation planner will not likely change that practice status without prior knowledge of the planning and implementation phase for that specific project/practice.
- III. **Field Verified:** This is a checkbox to specify whether the practice reported was field verified (defined in section seven below) or reported as a result of other documentation.
- IV. **Meets NRCS Standards:** This is a checkbox that specifies if the practice implemented meets the NRCS standard for the practice. If “no”, it is usually a good idea to explain why in the “notes” attribute.
- V. **Required Ag Practice:** If the practice being planned or installed is necessary for the farmer to meet the Required Agricultural Practices, choose “yes”, if not, choose “no”.
For example, planting cover crops in a frequently flooded field would a Required Ag Practice. If a farmer chooses to cover crop another field (and it is not related to meeting the tolerable soil loss for the field), the user should not check the Required Ag Practice box).
- VI. **Notes:** This is where you can add any notes relevant to the practice being planned or implemented (optional).If there are multiple components of a grant agreement, you can use the notes sections to detail which component you are entering, as each practice entered is entered individually despite potentially being funded under the same agreement.
- VII. **Funding Program:** Select the appropriate funding program from the dropdown list provided.
- i. If the practice was not funded by any organization, solely at the farmers expense, please choose “Farmer”.
 - ii. If the specific funding program you are looking to enter is not available on the list, you can select “Other” and provide more details in the Notes section or you contact the database administrator (see Appendix E. for contact information) to request that Program be added to the Program list.
 - iii. This field should **never** be left blank if a practice is documented as installed. If an installed practice is listed without a funding program, then that data will not be eligible for nutrient reduction efficiencies.
- VIII. **Application Date:** Enter the date that an application was submitted for the funding program specified. Leave “null” until application is submitted.
- i. If you are unsure of the application date, you can leave this field “null”.
- IX. **Approval Date:** Enter the date that the grant was approved by the specified funding program. Leave “null” until the application is approved.

- i. For VAAFMM funded grant programs, VAAFMM staff will be responsible for entering approval date once funding is *officially* offered for a project/practice.
 - ii. If you are unsure of the approval date, you should leave this field “null”.
- X. **Install Date:** Input the date that the practice was installed. Only enter this once the practice has been fully and completely installed. If the practice is still in the planning phase, this field must be left blank.
- XI. **Grant Status:** This is to specify the status of the farmer’s grant application.
 - i. For practices that are planned and seeking a funding source, put the status of the grant process here.
 - ii. You may select “applied” once the grant application has been submitted, and “pending” once you’ve gotten confirmation that the application has been received. You may also choose to fill this out after the grant has been approved.
 - iii. Update this after the grant funding is approved.
 - iv. For practices implemented that are funded through a partner organization’s private implementation funds, or funded by a farmer themselves, and there is no additional state or federal funding program to pay for implementation, leave this field “null”.
- XII. **Grant ID:** Enter the grant ID associated with the funding program specified. This can be obtained from VAAFMM once a grant is created for a practice or suite of practices. Leave “null” or blank until assigned.
 - i. VAAFMM funded programs will contain a seven- or eight-digit Grant ID number. For many programs this will be the funding year, as well as three identification numbers for the grant (For instance Grant 02200-ARM-FAP-2018-023 would be labeled 2018023). For other programs, the numbers will be the last seven or eight unique digits.
- XIII. Field or farmstead location will be selected and/or developed with polygon, line, or point features geospatially locating the practice implemented.
- C. **Automatic Practice Lifespan Generation:** Users do not need to input the practice lifespan as the Partner Database will automatically generate the practice lifespan based on USDA NRCS practice standards and determined lifespan detailed in Appendix A. Partner Database Practices and Qualifying Conditions.

SECTION 6. PRACTICE VERIFICATION PROTOCOL AND OVERSIGHT

Field assessment and verification of conservation practices are required to ensure that practices reported into the Partner Database with the status of “installed” were in fact implemented on the fields selected and to the extent reported in the Partner Database.

- A. All conservation practices reported into the Partner Database must meet qualifying practice conditions (see Appendix A) or meet NRCS Practice Standards;

- B. All Partner Database Users must directly field verify practices entered into the Partner Database in order for reductions to be calculated from that practice implementation. If a practice was not directly field verified, there is an attribute option for this in the Partner Database, but practices that are not field verified **will not** be aggregated for reporting nutrient reductions. Partners can use this as a tool to track which fields still need to be field verified for a practice.
- C. Oversight of practice verification will be managed by VAAFAM staff on an annual basis, due to the limited resources across the State and the few organizations involved in this project. VAAFAM staff will complete site visits in coordination with partners to gather insight on potential field assessment and practice verification issues, training and educational needs, revisions to qualifying practice standards and more.
 - I. Participating organizations responsible for practice verification and reporting will schedule a farm site visit at least once annually to be accompanied by VAAFAM staff for oversight of practice verification and reporting.
 - II. If there are any deficiencies identified in the site visit, the user may be required to satisfy additional site visits, trainings or other corrective actions.

SECTION 7. USER TRAINING REQUIREMENTS

- A. All users must receive a Partner Database training prior to receiving login access and the ability to report practices.
- B. Partnering organizations are listed above (Table 2), as well as any and all users (Appendix E).
- C. Partner Database training will include the following topic areas:
 - I. Quality Assurance Project Plan;
 - II. Searching and navigating database to find a farm operation or region of the state;
 - III. Assigning fields to a specific farm operation;
 - IV. Reporting conservation practice implementation;
 - V. Adding a farm visit as well as viewing previous visits and interactions; and
 - VI. Generating reports from the Partner Database.
- D. Additional trainings may be required by the database administrator for all users to attend depending on continual improvements to the Partner Database, or major revisions to this QAPP.

SECTION 8. FIELD VERIFICATION AND APPROPRIATE CIRCUMSTANCES FOR PRACTICE REPORTING

- A. All conservation practices reported into the Partner Database must meet qualifying practice conditions (see Appendix A) or meet NRCS Practice Standards;
- B. In order for a specific practice to be reported as field verified the following situations are acceptable:
 - I. Practices implemented through VAAFAM cost-share program; OR

- II. In field visual documentation of the practice implemented during visits such as a farm or field assessment, field consultation, technical assistance consultation, field research; OR
 - III. Conservation Equipment Rental Programs where field verification of practice implementation occurs; OR
 - IV. Other conservation practice funding programs where field verification of practice implementation occurs.
- C. In order for a practice that has occurred more than 3 months in the past to be reported into the Partner Database, the practice must meet the following criteria;
- I. The conservation practice was field verified by the user; or
 - II. Conservation practice implementation was tracked by partner organizations as part of other programs and initiatives prior to launch of the Partner Database on May 1, 2019, no earlier than January 1, 2017.
 - III. Historical data compiled by state or federal cost share programs since 2016 can be reported into the Partner Database as long as these programs maintained procedures for field verification of these practices at the time of data generation.

SECTION 9. DATA QUALITY AND PROCEDURES TO AVOID DOUBLE COUNTING

The State's efforts to reduce non-point source agricultural nutrient loading requires quality of the data that will be used to inform reduction progress, targets, and goals. In order to prevent the double counting of any conservation practices, the database administrator will coordinate with NRCS to complete a geospatial join which will overlay the aggregated GIS data from the Partner Database within NRCS's system for practice tracking. This will identify any potential overlap, which can then be flagged and removed to prevent double counting of practice implementation. Additionally, if a partner verifies a practice that is funded by NRCS, they should indicate as such so that it can be automatically removed from the dataset provided to the VT DEC in order to prevent any double counting.

SECTION 10. PRIORITY CONSERVATION PRACTICES FOR VERIFICATION

While the intent is to verify the implementation of all conservation practices in Vermont, resources constraints require that priorities focus on practices for which the DEC Agricultural Expert Panel has agreed upon nutrient reduction efficiencies to be applied in the LC BATT, or for practices where the reduction efficiency coefficient remains to be developed by the Expert Panel. These practices are detailed below in Table 3 as well as the general process and method for tracking.

In addition, it is important to note that agricultural production area practices are not attributed nutrient reduction efficiencies in the same manner as other practices. The TMDL developed a baseline loading to production areas, and VAAFMM will inspect these agricultural production areas in order to determine if all structures and systems are properly managed and do not pose potential risk to water quality. Upon this determination, an 80% reduction can be attributed to that agricultural production area despite conservation practices implemented or funded within that production area.

Table 3. Priority Conservation Practices for Verification, Methods for Tracking and Total Phosphorus Load Reductions

Practice Type	Total Phosphorus Load Reduction Efficiency (%)	Methods for Tracking
Barnyard/Agricultural Production Area Management	80%	VAAFAM Inspection Staff inspect production areas of all farms in Vermont every year for LFOs, every three years for MFOs, every seven years for CSFOs, and on a complaint basis for SFOs. Reduction efficiencies will be attributed as applicable, depending on results of the production area inspection.
Livestock Exclusion	55%	State cost share programs (e.g. CREP, PSWF, FAP, BMP, GWFS) verified and reported by funding program administrator Farmer implementation verified and reported by partners providing TA or surveying practices
Forested Riparian Buffer	40% plus reduction from converting cropland to forest	
Filter Strip Riparian Buffer	40% plus reduction from converting cropland to grass/hay	
Forested Ditch Buffer	24% plus reduction from converting cropland to forest	
Filter Strip Ditch Buffer	24% plus reduction from converting cropland to grass/hay	
Conservation Crop Rotation, Change in Crop Rotation, Strip Cropping	Average 25% (depends on land use, soil, and slope)	
Conservation Tillage, Reduced Till, No Till	Average 27.5% (depends on land use, soil, and slope)	
Cover Crop, Nurse Crop	Average 28% (depends on land use, soil, and slope)	
Forage and Biomass Planting	Reduction from converting cropland to hay	
Crop to Hay	Reduction from converting cropland to hay	
Grassed Waterways	Need to define acres treated. To be reviewed.	
Hay Field Riparian Buffer	To be reviewed	
Nutrient Management Plan Implementation	To be reviewed	
Manure Injection	To be reviewed	
Manure Spreading Setback	To be reviewed	

Appendix A. Partner Database Practices and Qualifying Conditions

Table 4. Partner Database Practice List and Qualifying Conditions

NRCS Practice Code	Database Practice Name	Practice Lifespan	Alternative Practice Name (DEC/VAAFM)	Baseline Conditions	Definition and Minimum Qualifying Conditions to Quantify Pollutant Reductions
560	Access Road	10		NRCS	Implementation of an established route for equipment and vehicles.
902VTAg	Aeration	1	Aeration Tillage	Qualifying Conditions	"A type of minimum tillage that is to be used in conjunction with conventional liquid manure application on perennial croplands. Aeration followed by tanker spread liquid manure on annual cropland is not eligible for this practice. Soil aeration is only applicable to perennial forage crops and does not include chisel, moldboard, disk, subsoil or other forms of conventional tillage."
333	Amending Soil Properties with Gypsum Products	10		NRCS	Practice involving use of gypsum derived products to change the physical and/or chemical properties of soil to improve soil health and water quality.
366	Anaerobic Digester	?		NRCS	Practice involving a waste management system in which biological treatment breaks down animal manure and other organic materials in the absence of oxygen.
316	Animal Mortality Facility	15		Qualifying Conditions	Practice applied for the treatment or disposal of animal carcasses due to routine mortality to reduce pollution impacts to surface water and groundwater resources. The mortality facility plan should be included in the waste management system plan for the operation and meet NRCS CPS Code 316.
575	Animal Trails and Walkways	10		NRCS	A trail or walkway with a constructed path with a vegetated or earthen surface. A trail/walkway is used to facilitate the movement of animals, people, or off-road vehicles.

396	Aquatic Organism Passage	5		NRCS	Practice involving modification or removal of barriers that restrict or impede movement of aquatic organisms.
314	Brush Management	10		NRCS	"Management or removal of woody plants that are invasive and noxious, typically to reduce the amount of woody species in pastures to improve forage of livestock and provide vegetative cover to protect soils, control erosion, reduce sediment, and improve water quality. "
317	Composting Facility	15		NRCS	Practice involving containment and facilitation of aerobic microbial ecosystems for the decomposition of manure and/or other organic material to reduce water pollution potential and improve handling of material.
327	Conservation Cover	1	Corn/Crop to Hay Conversion	Qualifying Conditions	Establishment and management of permanent vegetative cover with the intention to reduce soil erosion and improve long-term soil health. Follow recommendations for planting rates, methods and dates by UVM Extension or agency field trials such as ""Cornell Guide for integrated Field Crop Management"" or VT Forages Home Page. See NRCS practice code 327 for detailed definition and practice standard. (Forage and Biomass planting standard 512)
328	Conservation Crop Rotation	1	Change in Crop Rotation*	Qualifying Conditions	Land that is managed to change crop types cyclically over time with the intention of reducing soil erosion and/or improving long-term soil health and quality, typically between an annual crop (e.g., corn, soybeans) and a perennial crop (e.g., hay). May involve change from continuous cropland to crop rotation or extending duration of perennial crop in existing crop rotation. Crops and tillage system will reduce sheet, rill, and wind erosion to within the soil loss tolerance (T).
656	Constructed Wetland	15		NRCS	An artificial wetland ecosystem with hydrophytic vegetation designed for biological treatment of high flow runoff

					from feed storage areas meeting NRCS CPS Code 656.
332	Contour Buffer Strips	5		NRCS	Establishment of narrow strips of permanent, herbaceous vegetative cover around the hill slope, and alternated down the slope with wider cropped strips that are farmed on the contour to reduce sheet and rill erosion and reduce water quality degradation from the transport of sediment and nutrients downslope. Buffer strips are not part of a normal crop rotation (however, they may be harvested or grazed) and remain in place until they need to be renovated or re-established
340	Cover Crop	1	Cover Crop*	Qualifying Conditions	Establishing (spring?) a seasonal cover on annual cropland for soil erosion reduction and conservation purposes. Seasonal cover consists of a crop of winter rye or other herbaceous plants seeded at recommended rate per acre to provide effective soil coverage.
342	Critical Area Planting	10	Corn/Crop to Hay Conversion // Forage and Biomass (talk to BMP Tracking Group about potential to add this as applicable cross walk to forage and biomass)	NRCS	Establishing permanent vegetation on sites that have, or are expected to have, high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.
362	Diversion	10	Agricultural Production Area Management	NRCS	Implementation of a channel generally constructed across the slope with a supporting ridge on the lower side. This practice applies to land uses where surface water runoff control and management are needed. A few purposes of this practice it to; break up concentrations of water on long slopes, divert water away from farmsteads, and divert water away from active gullies or critically eroding areas.
554	Drainage Water Management	1		NRCS	"The process of managing the drainage volume and water table elevation by regulating the flow from a surface or

					subsurface agricultural drainage system. One purpose of the practice is to reduce nutrient, pathogen, and pesticide loading from drainage systems into downstream receiving waters."
201	Edge-of-Field Water Quality Monitoring Data Collection and Evaluation	?	Edge of Field Water Quality Data Collection	NRCS	"Activities by which a producer measures the effectiveness of conservation practices and systems through edge of field monitoring."
202	Edge-of-Field Water Quality Monitoring System Installation	?	Edge of Field Water Quality System	NRCS	"Activity addresses the system installation associated with edge-of-field water quality monitoring. "
374	Farmstead Energy Improvement	10		NRCS	Development and implementation of improvements to reduce or improve the energy efficiency of on-farm energy use.
NEW	Feed Bunk Closure	5		Qualifying Conditions	Closure of feed bunk due to investment in feed management change through State Capital Equipment Assistance Program, or as required by the State due to potential or actual water quality risk from feed bunk leachate and proximity to surface water. Feed Bunk can be used for storage, such as farm equipment, but cannot be used for the storage of loose feed.
592	Feed Management	1		NRCS	*Point Feature at the farmstead: Manipulating and controlling the quantity and quality of available nutrients, feedstuffs, or additives fed to livestock and poultry.
382	Fence	10	Livestock Exclusion	Qualifying Conditions	To enclose or divide an area of land with suitable permanent or temporary barrier to restrict movement of livestock.
NEW	Fence - Exclusion	10	Livestock Exclusion	Qualifying Conditions	Exclusion of livestock from surface waters by installing fence or other barrier. May include acceptable alternatives such as reinforced stream crossing (NRCS Code 528) or water gap structures (see qualifying conditions for water gap) providing limited access for watering or fencing to

					limit access for livestock stream crossing.
386	Field Border	10		NRCS	A strip of perennial grass or shrubs established around the edge of a field to provide erosion protection by stabilizing field edge and provide a buffering effect for improved water quality.
393	Filter Strip	10	Riparian Buffer Hay	Qualifying Conditions	Areas of managed and maintained grasses or hay located adjacent to surface waters that filter out pollutants from runoff. Minimum 25-foot width, no manure application, no gully erosion or channelized flow.
512	Forage and Biomass Planting	5	Corn/Crop to Hay Conversion	Qualifying Conditions	"Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production."
655	Forest Trails and Landings	5		NRCS	A temporary or infrequently used route, path, or cleared area.
AIR01	Future		Manure Spreading Setback		Area of field adjacent to riparian or ditch buffer where manure is not spread for purposes of enhancing performance of the riparian or ditch buffer and reducing total phosphorus content applied to fields.
410	Grade Stabilization Structure	15		NRCS	Implementation of a grade stabilization structure to stabilize grade, reduce erosion, and improve water quality.
412	Grassed Waterway	10	Grassed Waterways	Qualifying Conditions	A shaped or graded channel that is established with suitable vegetation to convey surface water at a non-erosive velocity using a broad and shallow cross section to a stable outlet. Stabilizing areas prone to field gully erosion by establishing grass-lined swales.
561	Heavy Use Area Protection	10	Agricultural Production Area Management		"Heavy Use Area Protection is used to stabilize a ground surface that is frequently and intensively used by people, animals, or vehicles in order to provide a stable, non-eroding surface for areas frequently used by animals, people or vehicles, and/or to protect or improve water quality."

315	Herbaceous Weed Treatment	5		NRCS	"Management or removal of herbaceous weeds that are invasive and noxious on all lands except active cropland. "
595	Integrated Pest Management	1		NRCS	"A site-specific combination of pest prevention, pest avoidance, pest monitoring, and pest suppression strategies."
NEW	Irrigation - Pasture/Hay	1			Controlled application of water to hay or pasture lands in order to meet crop moisture requirements when rainfall is not sufficient to do so.
NEW	Irrigation - Waste Application	1			Controlled application of wastewater from sources such as milk house waste collection pond, to hay or pasture lands in order to meet crop moisture requirements when rainfall is not sufficient to do so.
468	Lined Waterway or Outlet	15		NRCS	A waterway or protected outlet section having an erosion-resistant lining of concrete, stone, synthetic turf reinforcement fabrics, or other permanent material to prevent erosion and improve runoff water quality.
516	Livestock Pipeline	20		NRCS	Implementation of a pipeline and appurtenances to convey water for livestock or wildlife.
NEW	Manure Incorporation	1		Qualifying Conditions	Manure Incorporation is defined as the mixing of dry, semi-dry, or liquid organic nutrient sources (including manures, biosolids, and compost) into the soil profile within three days from time of application by a range of field methods.
901VTAg	Manure Injection	1	Manure Injection	Qualifying Conditions	Manure is mechanically applied below the soil surface, at the root zone with surface closure at the time of application. A method of manure incorporation with minimal soil disruption and reduced risk of surface runoff, including disk and shank injection.
719	Milking Center Wastewater Treatment System	10		Qualifying Conditions	A waste treatment practice designed by a qualified professional and meets NRCS CPS Code 629. The purpose is to provide an infiltration area to remove sediment, organic matter, chemicals,

					nutrients and other pollutants from milk house wastewater.
484	Mulching	1		NRCS	Applying plant residues or other suitable materials to the land surface for improving moisture management, preventing erosion, reducing concentrated flow, and increasing organic matter.
900VTAg	Nurse Crop	1	Cover Crop*	Qualifying Conditions	Establishing a seasonal cover on annual cropland for soil erosion reduction and conservation purposes. Seasonal cover consists of a crop of winter rye or other herbaceous plants seeded at recommended rate per acre to provide effective soil coverage. When categorized as nurse crop, accounted for as cover crop, but typically used to begin crop rotation and often accounted for as a system with crop rotation.
500	Obstruction Removal	10		NRCS	"Activity involving the removal and disposal of buildings, structures, other works of improvement, vegetation, debris or other materials. "
319	On-Farm Secondary Containment Facility	15		NRCS	Practice involving implementation of a permanent facility to provide secondary containment of oil and petroleum products used on farm to control accidental release of products and prevent contamination of groundwater and surface waters.
782	Phosphorus Removal System	10		NRCS	"A system installed to intercept subsurface (tile) flow, ground water or surface runoff flow, and reduce the concentration of phosphorus.
378	Pond	20		NRCS	Construction of a water impoundment to store water for livestock, erosion control, flow detention, and other uses such as improving water quality.
520	Pond Sealing or Lining, Compacted Soil Treatment	15		NRCS	A liner for an impoundment constructed using compacted soil with or without soil amendments, installed to reduce seepage losses from impoundments constructed for water conservation and environmental protection

522	Pond Sealing or Lining, Concrete			NRCS	"A liner for an impoundment constructed using reinforced or nonreinforced concrete and installed to reduce seepage losses from impoundments constructed for water conservation and environmental protection."
521	Pond Sealing or Lining, Geomembrane or Geosynthetic Clay Liner	20		NRCS	A liner for an impoundment constructed using a geomembrane or a geosynthetic clay material, installed to to reduce seepage losses from an impoundment for water conservation, and/or protect soil and water from contaminants.
528	Prescribed Grazing			NRCS	Managing the harvest of vegetation with grazing and/or browsing animals with the intent to achieve specific ecological, economic, and management objectives.
533	Pumping Plant	15		NRCS	A facility that delivers water at a designed pressure and flow rate. This practice may be applied as part of a resource management system to achieve one or more of the following purposes: Delivery of water for irrigation, watering facilities, wetlands, or fire protection, Removal of excessive subsurface or surface water, Provide efficient use of water on irrigated land, Transfer of animal waste as part of a manure transfer system, Improvement of air quality, Reduce energy use.
329	Residue & Tillage Management, No Till	1	Conservation Tillage*	Qualifying Conditions	Any tillage and planting system that leaves a minimum of 30% of the soil surface covered with plant residue after the tillage or planting operation (e.g., reduced till, no-till). For silage corn, this could would involve required application of a cover crop or use of zip? strip-till, zone-till or minimum tillage equipment.
345	Residue Management, Reduced Till	1	Conservation Tillage*	Qualifying Conditions	Any tillage and planting system that leaves a minimum of 30% of the soil surface covered with plant residue after the tillage or planting operation (e.g., reduced till, no-till). For silage corn, this could involve required application of a

					cover crop or use of zip-till, zone-till or minimum tillage equipment.
391	Riparian Forest Buffer	15	Riparian Buffer Forested	Qualifying Conditions	Areas of managed and maintained woody vegetation (shrubs and trees) located adjacent to surface waters that filter out pollutants from runoff. Minimum 25-foot width, no manure application, no gully erosion or channelized flow.
390	Riparian Herbaceous Cover	5		NRCS	"Establishment of herbaceous plants in the transitional zone between upland and aquatic habitats to improve water quality, reduce erosion and improve bank stability, enhance streambank protection among other purposes. "
558	Roof Runoff Structure	15		NRCS	Implementation of structure(s) that will collect, control and convey precipitation runoff from a roof to protect surface water quality by excluding roof runoff from contaminated areas among other purposes.
367	Roofs and Covers	10		NRCS	Implementation of practices to divert precipitation away from barnyards and/or waste storage facilities to protect clean water from dilution with waste water and protect nearby surface water quality.
350	Sediment Basin	10		NRCS	Implementation of a basin constructed with an engineered outlet, to capture and detain sediment-laden runoff for a sufficient length of time to allow it to settle out in the basin.
574	Spring Development	20		NRCS	Collection of water from springs or seeps to provide for livestock and wildlife
570	Stormwater Runoff Control			NRCS	Controlling the quantity and quality of stormwater runoff.
578	Stream Crossing	10		Qualifying Conditions	A stabilized area or structure constructed across a stream to provide controlled access for people, livestock, equipment, or vehicles.
395	Stream Habitat Improvement and Management	5		NRCS	Practice to maintain, improve or restore physical, chemical and biological functions of a stream, and its associated riparian zone, necessary for meeting the

					life history requirements of desired aquatic species.
580	Streambank and Shoreline Protection	10		NRCS	Treatment(s) used to stabilize and protect banks of streams or constructed channels, and shorelines of lakes, reservoirs, or estuaries.
585	Stripcropping	5	Change in Crop Rotation*	Qualifying Condition	Land that is managed to change crop types cyclically over time with the intention of reducing soil erosion and/or improving long-term soil health and quality, typically between an annual crop (e.g., corn, soybeans) and a perennial crop (e.g., hay). May involve change from continuous cropland to crop rotation or extending duration of perennial crop in existing crop rotation.
587	Structure for Water Control	20		NRCS	A structure in a water management system that conveys water, controls the direction or rate of flow, maintains a desired water surface elevation, or measures water.
606	Subsurface Drain	20		NRCS	A conduit installed beneath the ground surface to collect and/or convey excess water.
607	Surface Drain, Field Ditch	15		NRCS	A graded channel on the field surface for collecting excess water.
789	Transition to Organic Production	1		NRCS	*Point
612	Tree/Shrub Establishment	15		NRCS	Establishing woody plants by planting seedlings or cuttings, by direct seeding, and/or through natural regeneration.
620	Underground Outlet	20		NRCS	A conduit or system of conduits installed beneath the surface of the ground to convey surface water to a suitable outlet.
635	Vegetated Treatment Area	10		NRCS	An area of permanent vegetation designed for the treatment of high flow runoff from feed storage areas meeting NRCS CPS Code 635.
360	Waste Facility Closure	15		NRCS	The decommissioning of waste storage facilities, and/or the rehabilitation of contaminated soils, to improve surface water and ground water quality.
NEW	Waste Field Stacking Area	25		Qualifying Conditions	Identification and siting of waste stacking areas imposing the minimum impact to ground and surface water

					resource concerns. Sites shall meet the Required Agricultural Practices (RAPs) regulations for field stacking of manure or other agricultural wastes (Section 6.02).
NEW	Waste Field Storage Area			Qualifying Conditions	A site identified by a soil scientist where manure can be temporarily stacked while imposing the minimum impact to ground and surface water resource concerns by meeting the criteria of VT supplement 8-31-1 Field Waste Stacking Areas as per Chapter 8 in the Agriculture Waste Management Field Handbook.
632	Waste Separation Facility	15		NRCS	"A filtration or screening device, settling tank, settling basin, or settling channel used to partition solids and/or nutrients from a waste stream."
313	Waste Storage Facility - Clay Liner	15	Agricultural Production Area Management	NRCS	Practice involving containment and/or control and management of agricultural wastes by constructing an embankment, excavating a pit or dugout, or by fabricating a structure.
313	Waste Storage Facility - Concrete Liner	15	Agricultural Production Area Management	NRCS	Practice involving containment and/or control and management of agricultural wastes by constructing an embankment, excavating a pit or dugout, or by fabricating a structure.
313	Waste Storage Facility - Geomembrane Liner	15	Agricultural Production Area Management	NRCS	Practice involving containment and/or control and management of agricultural wastes by constructing an embankment, excavating a pit or dugout, or by fabricating a structure.
634	Waste Transfer	15		NRCS	"A system using structures, pipes or conduits installed to convey wastes or waste byproducts from the agricultural production site to storage/treatment or application."
629	Waste Treatment	10		NRCS	"The use of unique or innovative mechanical, chemical or biological technologies that change the characteristics of manure and agricultural waste."
 638	Water and Sediment Control Basin	10		NRCS	"An earth embankment or a combination ridge and channel constructed across the slope of a minor drainageway."

NEW	Water Gap	5		Qualifying Conditions	Water ramp or watering facility which provides livestock with stabilized access to water for drinking, adequately sized for expected usage, and where surface runoff is diverted from approach to watering gap, with fence or other barriers to delineate boundaries and sufficient to meet intended use, located and installed so as not to impede aquatic organism movement in stream.
642	Water Well	20		NRCS	A hole drilled, dug, driven, bored, jetted or otherwise constructed into an aquifer for water supply.
614	Watering Facility	20		NRCS	A watering facility is a means of providing drinking water to livestock or wildlife.
654 /659	Wetland Enhancement	15		NRCS	"The augmentation of wetland functions beyond the original natural conditions on a former, degraded, or naturally functioning wetland site; sometimes at the expense of other functions."
657	Wetland Restoration	15		NRCS	"The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site."

Appendix B. Partner Database User Agreement

Users accessing the Partner Database will be required to agree to the following user agreement after receiving training and prior to reporting practices into the Partner Database.

TERMS AND CONDITIONS OF USE:

We are all in this together. The actions individual users take can have a large impact on our system for tracking and reporting agricultural conservation practices in Vermont. That is why users must follow this User Agreement. If you violate this policy, we may suspend or terminate your Partner Database user account.

By signing below, I agree to follow the Partner Database User Agreement, including:

- i. I understand the Vermont Agency of Agriculture, Food and Markets has the right to relinquish my user access for any potential or actual breach of this agreement,
- ii. I agree to follow the Quality Assurance Project Plan for reporting practices into the Multi-Partner Agricultural Conservation Practice Tracking and Planning Geospatial Database,
- iii. I agree to maintain confidentiality of my individual user login information and password,
- iv. I agree to use the Partner Database for its intended purpose, and
- v. I understand that in the event of change or termination of my position, I am required to notify the database administrator and my user access will be terminated.

Name:

Signature:

Date:

Organization:

Appendix C. Farm Waiver Form for Practice Reporting

This is an optional form to help communicate with farmers why we are verifying and tracking conservation practices, and to be transparent around this use of and access to this information.

I understand that surveying and verifying conservation practices implemented on my farm is occurring with funding from the State of Vermont Agency of Agriculture, Food and Markets.

To this end, the practices reported will be entered into the Partner Database, a tool for conservation planning and tracking. On an annual basis, these practices will be aggregated *without* farm identifiable information and sent to the Vermont Department of Environmental Conservation (DEC) to be entered into the Lake Champlain BMP Accounting and Tracking Tool (LC BATT) for reporting nutrient reductions from agriculture for Total Dairy Maximum Load (TMDL) requirements and progress reporting.

I understand sharing this information will help tell a more complete story of the work Vermont farmers are doing to improve water quality in Vermont. I agree to release information about conservation practices on my farm to the State of Vermont, Agency of Agriculture, Food and Markets for the purpose of tracking conservation practice implementation and nutrient reductions from agricultural sector in Vermont.

Name:

Signature:

Date:

Farm Name:

Farm E 911 Address:

Appendix D. Distribution List

Please contact the Database Administrator for any questions, concerns, or access issues with the partner database: *Judson Peck, (802) 522-7041, Judson.Peck@Vermont.gov*

Table 5. Names and contacts of those parties with access to the Partner Database.

Name	Affiliation	Email Address
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Heather Darby	UVM Extension	heather.darby@uvm.edu
Heather Johnson	Conservation District	essexnrcd@gmail.com
Henry Webb	VACD	henry.webb2@vt.nacdnet.net
Jeannie Bartlett	Conservation District	jeanne.bartlett@vt.nacdnet.net
Jeff Carter	UVM Extension	jeff.carter@uvm.edu
Jeff Farber	VACD	jeff.farber@vacd.org
Jeff Sanders	UVM Extension	jeffrey.sanders@uvm.edu
Jen Alexander	Conservation District	acap.jennifer@gmail.com
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Stefano Pinna	Conservation District	stefano@pmnrcd.org
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Tucker Malone	VACD	tucker.malone@vt.nacdnet.net

VERMONT AGRICULTURAL MANAGEMENT PRACTICE IMPLEMENTATION TRACKING SYSTEM USER MANUAL

Stone Project ID 14-243

November 20, 2018

Prepared for:

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	I
TABLE OF CONTENTS	III
1. INTRODUCTION.....	1
2. GENERAL APPLICATION NAVIGATION	2
2.1. Login Screen	2
2.2. Home Page Menu	2
3. SEARCH EXISTING FARM INFORMATION	3
3.1. General Navigation.....	3
3.2. Farm Search and Farm Details	4
3.2.1. Conduct some various searches as follows:	4
3.2.2. View Farm Details	4
3.3. Field Information.....	4
3.4. Practice Information	5
3.4.1. VT Partner Database Practices.....	5
3.5. Visits & Interactions.....	6
3.6. People Involved.....	6
4. ADD AND EDIT FARM INFORMATION.....	7
4.1. Farm Data Management	7
4.1.1. Edit Farm Information.....	7
4.1.2. Add New Farm	8
4.2. Field Data Management	11
4.2.1. Viewing a Farm's Fields	11
4.2.2. Adding Fields to a Farm	12
4.2.3. Editing a Farm's Fields.....	16
4.3. Practice Data Management.....	19
4.3.1. Viewing Practices on a Farm	19
4.3.2. Adding Practices to a Farm.....	21
4.3.3. Editing Practices on a Farm	25
4.4. Visits & Interactions Data Management	27
4.5. People Involved Data Management	29
4.5.1. Viewing People Involved.....	30
4.5.2. Editing People Involved.....	30
4.5.3. Adding People.....	31
5. CREATE A PRINTED MAP	32
5.1. General Map Tools	32
5.2. Using Map Labels.....	33
5.3. Map Printing	34
5.3.1. Printing the Current Map Display	34
5.3.2. Printing the Current Map Display Using a Preset Map Theme.....	36

6. GENERATE A DETAILED REPORT	37
6.1. Generate a CSV and Shapefile Detailed Practice Report	38
7. GENERATE A SUMMARY REPORT	43
7.1. Generate a CSV Summary Practice Report	43
8. GENERATE AN INTERACTIONS REPORT	44
8.1. Generate a CSV Interaction Report.....	44
9. USER MANAGEMENT.....	45
9.1. Adding a New User as an Administrator.....	46
9.2. Working With the 'Edit Users' Tool	47

1. INTRODUCTION

Stone Environmental has developed the Vermont Agricultural Management Practice Implementation Tracking System (Application) that will allow partners to easily enter, track, and report on farm field best management practices.

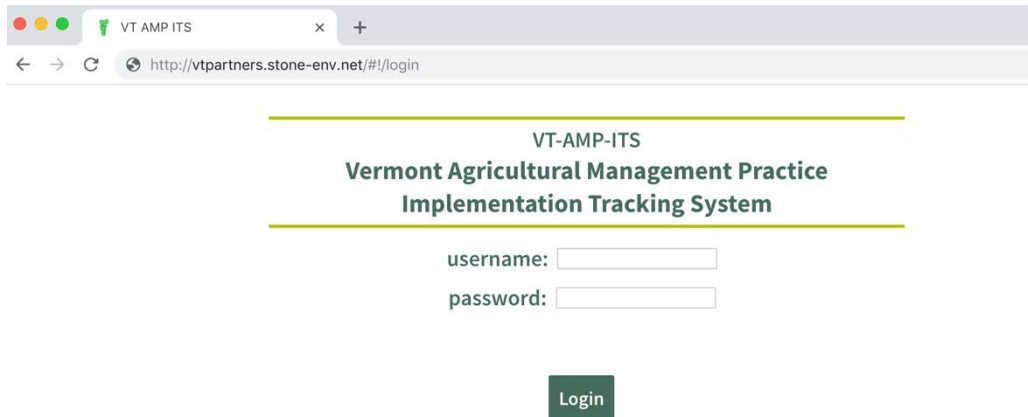
The user manual describes functionality associated with searching for practice data on farms, adding new farm, field, practice, and activity data, creating custom maps and reports, and user management. Each section will utilize different features of the Application useful for organizing and evaluating conservation practice data in Vermont. This will begin with demonstrating the overall layout and navigation of the application and how to search for data. This will be followed by describing the process to add and edit farm data from a farm you are currently working with or from a sample farm with test data. Next, the map printing tools will be reviewed including predefined map templates and custom maps. The reporting tools will be reviewed to create custom reports of selected practices and also summary reports of aggregate practice data by county or watershed. Finally, the user management tools section will illustrate how to edit user credentials. This functionality is only available to administrators.

2. GENERAL APPLICATION NAVIGATION

The application can be accessed at the following URL: <https://vtpartners.stone-env.net>. It is best if the web browser you use is either **Internet Explorer 11+** or **Chrome**.

2.1. Login Screen

After entering the URL, you will be presented with the login page. Enter the username and password that have been provided to you to proceed with logging into the application.



VT-AMP-ITS
Vermont Agricultural Management Practice
Implementation Tracking System

username:

password:

Login

If you enter your username or password incorrectly you will receive the message, 'Incorrect password. You have 2 more attempt(s) before your account is locked.' You will be locked out of the application after 3 unsuccessful attempts and receive the message 'Your account has been locked due to multiple unsuccessful login attempts. Please contact Judson Peck (Judson.Peck@vermont.gov) for assistance.'

2.2. Home Page Menu

After logging into the application you will be at the home page. At the home page you have the following menu options:

- **Search & Add Data:** Search for or add new data for farms and associated fields, practices, visits, and people
- **Generate Reports:** Create detailed or summary reports for practices or interactions by selected attributes.
- **Help:** Open the application help document
- **Logout:** Log out of the system

At any time while working in the application you can return to the main menu by selecting the icon in the upper left corner of the application window.

3. SEARCH EXISTING FARM INFORMATION

This section will familiarize you with the application layout and navigation. It will also walk you through searching for farms, viewing farm details, fields, practices, visits, and associated people. This functionality can be accessed from the ‘SEARCH & ADD DATA’ menu on the main application page.

3.1. General Navigation

Select the Search & Add Data menu item. You will notice that the application window is divided into two panes; a map pane and a data pane. Depending on the size of the browser window, the map pane will be on the left or top of the window and the farm data pane will be on the right or bottom of the window. The map pane and the farm information pane contain an expandable/collapsible map controls panel. To expand the panels, click on the arrows on the left of the window (1). The farm data pane consists of two expandable/collapsible panels; the farm list panel and the farm information panel. To collapse the panel, click on the top of the panel (2). Information related to the selected form for Fields, Practices, Visits and Interactions, and People are contained in separate tabbed panels.

The screenshot displays the application interface with the following components:

- Search Bar:** "Search farms by name, town, land owner or operator: test" with "Search", "Clear", and "Add Farm" buttons.
- Map Controls:** Includes "Map Theme" and "Basemap: Topo" options, and a list of "Optional Layers" such as "ANR Counties", "ANR Towns", "ANR Deer Wintering Areas", "ANR Rare and Endangered", "ANR Waterbody/Streams", "ANR Soils", "ANR Soil Hydrogroup", "ANR Watersheds HUC12", "ANR Watersheds HUC10", "ANR Watersheds HUC8", and "ANR Roads".
- Map:** Shows a topographic map with a green polygon labeled "test (32566)". A red circle with the number "1" is placed on the left side of the map pane.
- FARM LIST (10 farms found matching filter):** A table with columns "Farm Name", "Town", and "Operator". The first row is highlighted in yellow. A red circle with the number "2" is placed above the table header.

Farm Name	Town	Operator
new test farm	Newport Center	Abbott
Judson3	Bethel	Test
Test Test	Burlington	
Test Test 3	Bakersfield	Branon
Judson FarmTEST	Plainfield	Hall
Judson Operation TEST	Plainfield	Peck
barbtest		
Test Test 2	Bakersfield	Hanfield
Judson2	Bethel	Peck
Judson1 PrimaryTest	Bethel	Peck
- FARM INFORMATION (new test farm):** Includes "Details", "Toggle Map Label", and "Edit" buttons. It shows facility and operation details for "new test farm" at "Route 105, Newport Center, VT".
- Fields:** A tabbed panel with "Fields", "Practices", "Visits & Interactions", and "People Involved" tabs. It includes an "Add Field" button, a "Crop" dropdown menu (set to "ALL"), an "Expand All" button, and a "Toggle Map Labels" button.
- Fields Table:** A table with columns "Field ID", "Field Name", "Landuse / Crop", "Farm Tract #", and "Acres".

Field ID	Field Name	Landuse / Crop	Farm Tract #	Acres
32566	test	Range Small Fruits and Vegetables	none	18.09

3.2. Farm Search and Farm Details

The farm search functionality allows users to enter text that searches existing farm locations based on farm name, town, or farm owner name. The farm search is accessed from the search tool at the center top of the window. The search should return a listing of farms matching the search text string

3.2.1. Conduct various searches as follows:

1. Click on the SEARCH button without entering anything in the text box. A list of all farms in the system will be returned.
2. Sort the list by clicking on the farm name header, the farms will be sorted by farm name in ascending or descending alphabetical order. To sort by town name or Owner name, click on the corresponding column.
3. Search for farms in a specific town, by entering the town name in the search box and entering return or clicking on the SEARCH button.
4. Search for farms, by entering 'Test' in the search box.

3.2.2. View Farm Details

1. Select a farm from the list. The farm information will be displayed in the box below. The location will be shown on the map along with any associated fields (if assigned).
2. Collapse the Farm List by clicking on the top of the panel where it says 'Farm List'
3. The top portion of the farm information panel contains summary data about the farm, view details by selecting the 'Details' button.

3.3. Field Information

Fields associated with the selected farm are shown in the map and listed in the tabbed **Fields** panel. To browse the field information, do the following:

1. Sort the list of fields by clicking on the 'Acres' column header. The fields will be sorted by the number of acres. The field list can be sorted by any of the column headers. **(1)**
2. Select a field from the list or on the map. The field will be highlighted in the map. The 'Field Name' and 'Field Id' (in parentheses) are labeled on the map.
3. The field's record will be expanded to show more detailed information including Management, created by and updated by person and date. For Partner database fields created from CLU and PLU fields, the CLU or PLU properties are also displayed.

4. To view field details for all fields, check the ‘**Expand All**’ check box at the top of the field list. **(2)**
5. To filter the Field List by crop, select a **Crop** from the dropdown list. **(3)**

3.4. Practice Information

Practices associated with the selected farm are listed in the tabbed Practices panel and displayed on the map. When a practice is selected, detailed information about the practice is displayed and the practice is highlighted in the map.

3.4.1. VT Partner Database Practices

Practices added to the farm from the Application are listed in the Practice panel. To browse the practices, do the following:

1. Select a practice from the list, details about the practice will be displayed.
2. Try selecting different practices and note that the corresponding practice is highlighted in yellow on the map and the map feature is labeled with the Practice Id. Also note that if the practice has an associated field, the associated field is highlighted in green in the map.
3. Click ‘**Toggle Map Labels**’ **(1)** at the top right of the Practices header to turn of map labels for practices.
4. **Filter** practices by status and /or by program by selecting from the dropdowns at the top. **(2)**

Fields Practices Visits & Interactions People Involved (1)		
<div style="display: flex; justify-content: space-between; align-items: center;"> Add Practice Status: ALL <input type="button" value="v"/> Program: ALL <input type="button" value="v"/> Toggle Map Labels Upload FGDB Zip </div>		
Practice ID: (2)	Practice	Status
585	Underground Outlet	Installed
587	Conservation Cover	Installed

3.5. Visits & Interactions

The Visits & Interactions tab includes all visits, emails, and phone calls logged into the Application regarding activity on the farm.

1. Click on the ‘**Visits & Interactions**’ tab to view all communication related to the farm.
2. Sort the information by date by selecting the **Contact Date** header (1). Try also sorting by **Contact Type** and **Person Contacted**.
3. Select a record to view detailed information about the visit, phone call or e-mail.

Fields Practices **Visits & Interactions** People Involved

New Visit

Contact Date (1)	Contact Type	Person Contacted
Nov 5, 2018	On-site Visit	BarbR Patterson

Hours: 2
 Status: Complete
 Person: BarbR Patterson
 Notes:

Created by: Stone Environmental on Nov 19, 2018
 Updated by: Stone Environmental on Nov 19, 2018

Edit Delete

3.6. People Involved

The People Involved tab lists all people associated with the farm. Click on an individual’s name to view their contact information and their ‘role’ or how they are involved with the selected farm.

Fields Practices Visits & Interactions **People Involved**

Add People To Farm

First Name	Last Name	Role
Robert	Smith	Operator

Mailing Address: 7132 VT Rte 17W
 City: Addison
 State: VT
 ZIP: 5491
 E-Mail: PETERSMITH@GMART.NET
 Home Phone: 802-759-2673
 Cell Phone: 802-989-0659
 Organization: (no data)

Role/Type: Operator [X]
 or... [Add!]

Edit Delete

4. ADD AND EDIT FARM INFORMATION

This exercise will walk you through adding and editing information for a farm you are currently working on.

4.1. Farm Data Management

This section will review editing existing farm information and adding new farms. Users can edit information related to existing farms. Additionally, a new farm can be added using the ‘Add Farm’ button at the top of the screen. During this exercise you will be referencing a real-life farm that you are currently working on.

4.1.1. Edit Farm Information

Search for the farm of interest.

1. Using the search box at the top of the screen, search for your farm by name, town, or owner. The current set of farms within the database came from VAAF. The owner name or farm name may not match exactly to what you are expecting, so if you are unable to find the farm using one of the criteria, try another one, like by town.
2. If you are able to find your farm of interest, continue to **Step 3**. If you are unable to find your farm of interest, move on to [Step 4.1.2, Add New Farm](#).
3. Click on the ‘**Details**’ button to review the Farm Information for your farm of interest.
4. The Owner of the farm is stored in the ‘**People Involved**’ tab. To edit the owner associated with the farm, or to edit the owner information, click on the ‘People Involved’ tab **(1)** for the farm of interest.
 - a. To edit the information about the owner, click on the record that has a ‘Role’ of ‘owner’.
 - b. Click the ‘**Edit**’ button at the bottom right of the record details.
 - c. To edit, use the data entry boxes and update details. Some attributes have dropdowns to assist in the data entry process.
 - d. Click the ‘**Save**’ button after all edits have been completed.

The screenshot displays the 'FARM LIST (837 farms found matching filter)' with columns for Farm Name, Town, and Operator. The 'Chimney Point Farm Lp' is highlighted. Below the list is the 'FARM INFORMATION (Chimney Point Farm Lp)' section, which includes tabs for 'Details', 'Toggle Map Label', and 'Edit' (3). The 'Details' tab shows facility and operation information for Chimney Point Farm Lp (4). The 'People Involved' tab (1) shows a table with columns for First Name, Last Name, and Role. A record for Robert Smith, Operator (2), is shown with contact details and an 'Add!' button. At the bottom right are 'Edit' and 'Delete' buttons.

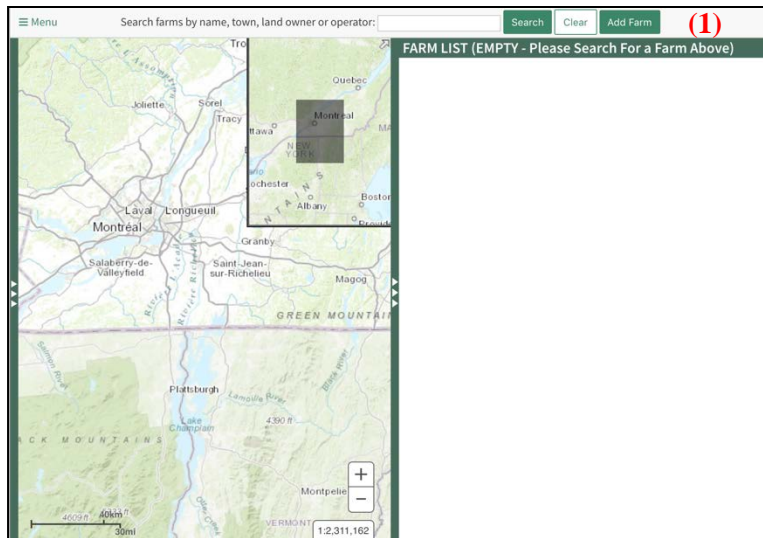
Farm Name	Town	Operator
Chimney Point Farm Lp	Addison	Smith
Dubois Farm	Orwell	Wood
Bruce and Laurie Perron	Albany	Perron
Davis Farm	Richford	Hurtubise
Roger Farm How Long Can This Be Is There Any Kind of Limit Here?	Bakersfield	
Christopher Lekberg	Brandon	Lekberg
Paul and Kari Lussier	Benson	Lussier
Heifer Facility	West Pawlet	Hulett
Vosburg Farm	St Albans	Vosburg
Four Hills Farm Partnership	Bristol	Hill
Lambert Farm	Washington	Lambert
Gilead Brook Farm	Bethel	Wright
Heifer Barn	Brookfield	Sprague
Monument Farms	Weybridge	James
Pleasant Acre Farm	Swanton	Bourdeau

First Name	Last Name	Role
Robert	Smith	Operator (2)

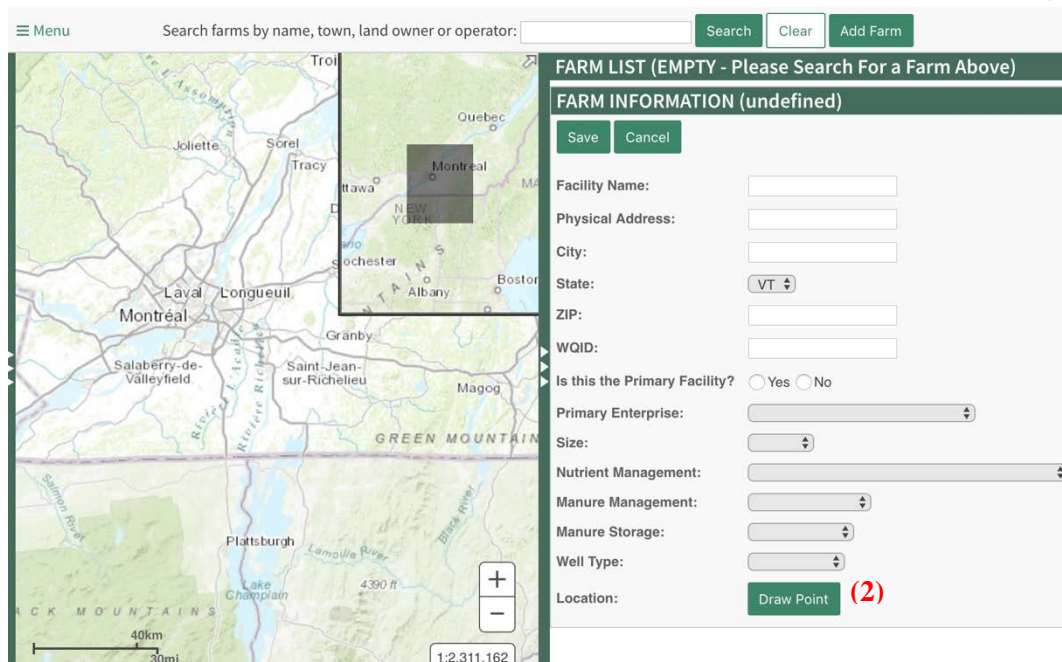
- e. To update or add **'Roles'** for the person, use the dropdown menu from the detailed view of the owner. **(2)**
- 5. Click the **'Edit'** **(3)** button to make updates to the **Farm Information**.
 - a. To edit, use the data entry boxes and update details. Some attributes have dropdowns to assist in the data entry process.
 - b. The location information (County, Major watershed, and HUC12 watershed) is automatically populated from the farm point location and cannot be edited. **(4)**
 - c. To edit the point location, click the **'Move Point'** button **(5)** in the editor interface. Use the mouse pointer to click and drag the point to the desired location. Once finished, click the **'Finish Point'** button in the Farm Information Interface.
 - d. Click the **'Save'** **(6)** button after all edits have been completed.

4.1.2. Add New Farm

- 1. If you have confirmed that a farm you need to interact with in the system is actually not in the system, you will want to add a new farm. However, be aware that if you add a farm to the system that is already in the system, you will be creating a duplicate copy of the farm. This is why it is important to always search for the farm of interest thoroughly, first, before adding a new farm.
- 2. Click the **'Add Farm'** **(1)** button at the top of the screen where the farm search is performed. This will open a new, empty **'Farm Information'** form.

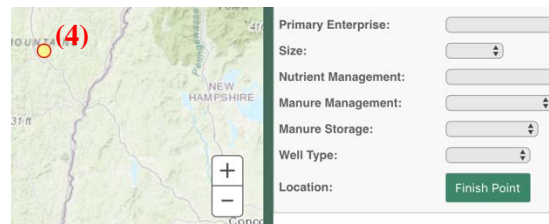
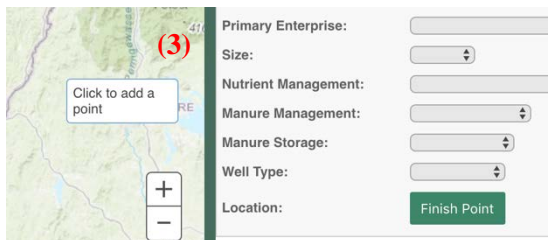


3. Fill-in all of the values for the farm that you have.
 - a. The farm’s owner is not an attribute of the farm specifically, but rather the relationship that a contact in the database has to the farm. Therefore, you cannot set a farm’s owner when first filling in the Add Farm form – you must create the farm and then establish a related person who is the farm’s owner.
 - b. The farm’s location is set with the button ‘**Draw Point**’ at the bottom of the ‘**Farm Information**’ form (2).
 - i. To set the location first click the button ‘**Draw Point**’ and note that its label changes



to ‘**Finish Point**’

- ii. Move the mouse cursor over the map and note that the mouse cursor is labeled with the label ‘**Click to Add a Point**’ (3)
- iii. Click the map to add a point for the farm’s location. This is shown as a yellow circle with a red border until saved (4). The point can be moved by dragging it to a different place on the map.
- iv. When finished, click ‘**Finish Point**’ to save the point feature (2) Once saved the border of the circle turns black.



- v. When the form is filled out as completely as possible, click the **'Save'** button in the top corner of the Farm Information form. All of the fields may be edited later should more information about the farm become available.
4. Once a new farm is saved, the **Farm Information** form that was initially displayed and filled in will become a standard Farm Information form with the appropriate lower 'tabs' for Fields, Practices, and so-forth.

4.2. Field Data Management

When a farm is selected by the user, the **FARM INFORMATION** panel also includes associated field information in the 'Fields' tab. From this tab, the user has the ability to view, add, and edit those farm fields.

4.2.1. Viewing a Farm's Fields

The 'Fields' tab (1) of the Farm Information panel in the application shows, by default, a list of the fields on the farm, along with some basic field information (2). Clicking one of the items in the list – one of the rows in the table – will highlight the given field on the map, and expand the row in the field list to show additional details about that field. Alternately, you may select a field by clicking it on the map.

Along the top of the field list are some tools you can use to work with fields.

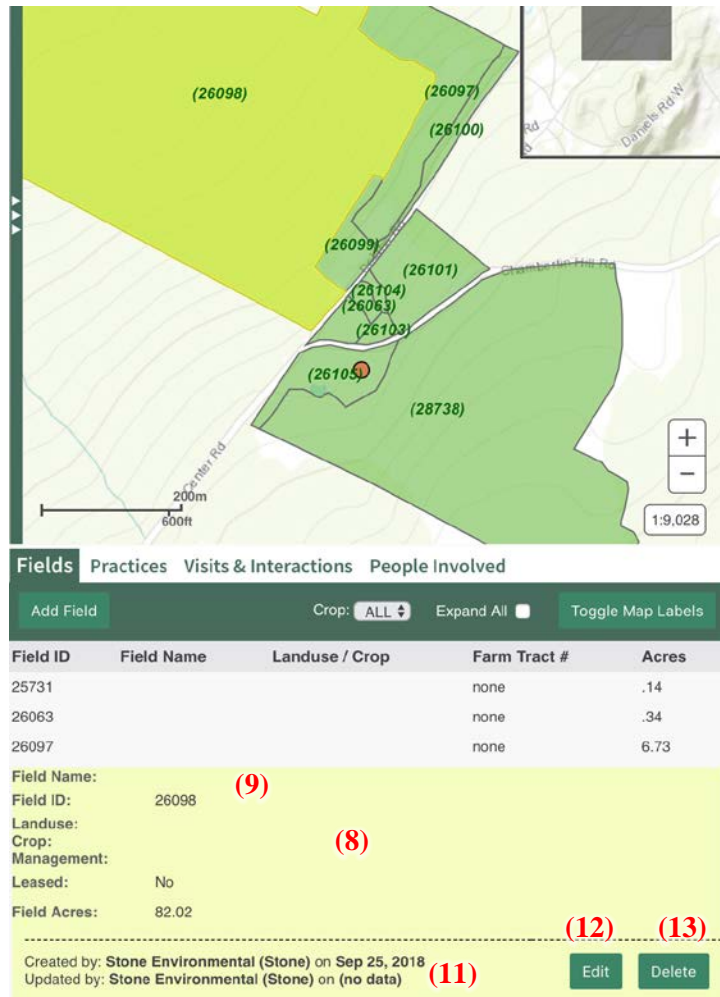
1. Crop Selection Dropdown – The 'Crop' dropdown list (3) is a list of all crops grown in the fields on the farm. Selecting one of the options from the list will filter the display of the fields on the list and the map to only show fields that have the selected crop on them. This dropdown list/filter is dynamically adjusted to contain only the crops from fields on the farm – if you add a new field with a new crop, this dropdown will automatically include it in the list.
2. Expand All – The Expand All checkbox (4) will expand all rows in the table/list to show all details for all fields on the farm. Depending on your screen size this may expand the list off screen such that you will need to scroll the list to see all of the fields.
3. Add Field – This button (5) launches the Field Editor to add a new field to the farm. **See section 4.2.2.**
4. Toggle Map Labels – This button (6) simply toggles the display of the field name labels on the map.
5. Field Header Sorting – The field headers (titles) (7) such as 'Field Name' and 'Landuse / Crop' in the field list can be clicked on to sort the list of fields in ascending or descending order based on that header item. Clicking the header will show a small up-or-down facing arrow to indicate if the header is being used to sort the fields in an ascending or descending order.

Field ID	Field Name	Landuse / Crop	Farm Tract #	Acres
25731			none	.14
26063			none	.34
26097			none	6.73
26098			none	82.02
26099			none	1.47
26100			none	1.30
26101			none	3.63
26102			none	.78
26103			none	.35
26104			none	.22
26105			none	2.59
28738			none	33.38

The field list only shows a few details about each field by default. Depending on the field and the details known about that field, different information may be shown.

The expanded field, in the list, will show a number of details all fields have (9): Field Name, ID, Landuse, Crop, Management Plan, and Field Acres. The Field Acres value is calculated by the database based on the field's polygon – so if the polygon is edited and saved, the Field's Acres value in the field list will update as well.

At the bottom of the field’s expanded details display are four interesting items. First there is the ‘Created by’ and ‘Updated by’ entries (11). These show the Application user that created the field, and last edited the field, along with the dates of the respective operations. Then, in the lower-right corner are two buttons: Edit and Delete. The Edit button (12) will open the Field Editor form allowing editing of the field’s editable details. **Refer to section 4.2.3 for more information about editing an existing field.** The Delete button (13) will remove the field from the farm.



4.2.2. Adding Fields to a Farm

1. Search (1) for the farm you added above. Select your farm from the Farm List by clicking it to highlight it in yellow (2a) and zoom the map’s extent to that farm’s location (shown as a yellow point on the map (2b)). This should also display the Farm

Information panel for the farm with the information you filled-in in exercise 4.1.2 above, although by default the Farm Information panel only shows the abbreviated farm information (3), so you won’t immediately see everything you entered for the farm.

2. Note that your new farm now has the various tabs, for related items on the farm (Fields, Practices, Visits & Interactions, and People Involved), displayed at the bottom of the Farm Information panel. Select the Fields tab (4).

(1)

(2a)

(2b)

(3)

(4)

(5)

Field ID	Field Name	Landuse / Crop	Farm Tract #	Acres
5201	none	none	10.75	
5202	none	none	2.43	
5203	none	none	.77	
5204	none	none	.65	
5205	none	none	.67	

3. We will add a new field for the farm of interest. We can do so by either drawing the field boundary 'by hand' (with your mouse or touchpad), or by selecting a pre-existing CLU boundary and copying that boundary to our new field.

In either case, start by clicking the 'Add Field' (5) button to display the Field Editor Form.

4. Fill in the Field name, Landuse, Crop, and Management form items as you want. For example, try adding a new field named 'Corn,' where the Landuse is 'Crop,' the Crop is 'Corn - Silage,' and the Management for the field is 'Corn SilageCorn,silage; FP,fall and spring manure, Z60' (7).
5. To define the boundary for the field, we will start by drawing one 'by hand' – click the 'Draw shape' (8) button.
- a. Move your cursor over the map and notice that the cursor is labeled 'Click to start drawing.'

(7)

(8)

Field Editor

Field name:

Landuse:

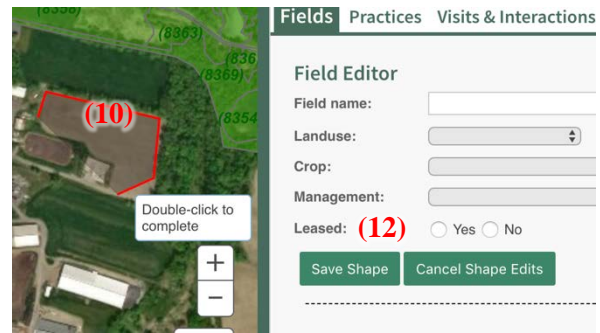
Crop:

Management: (7)

Leased: Yes No

Boundary: -OR- (8)

- b. Using your mouse or touchpad, click/tap on the map to define vertices for the polygon that will be a boundary for your field. You can use as few or as many clicks/vertices as needed to properly define the field boundary. Once you start this ‘drawing’ process, you will see a red line (10) marking the boundary you have drawn. When you are done, double-click on the map for the final vertex point and it will complete the polygon for you. At this point the polygon will be displayed with small circular handles (11) for each of the vertices to allow you to refine it as desired (by dragging the gray vertex handles). You can insert an additional vertex between 2 gray vertices by dragging the white vertex handle to further define the boundary.



- c. **When you are satisfied with your polygon, you must click the ‘Finish Shape’ (12) button on the Field Editor form.** This will cause the field polygon you have defined to go into a non-editing mode where the vertex/corner handles disappear from the border, and the border is only shown in the standard solid yellow color. Saving the shape does not mean you cannot edit the field polygon later, but the shape must be ‘saved’ into this non-editing mode for us to then save it into the database. However, note that clicking ‘Save Shape’ *only* finalizes the geometry edits to the polygon and does not commit anything to the database.
- d. If all other selections look correct, then click the ‘Save’ button in the lower right corner of the Field Editor form to finally save the field to the database. Note that if you click the ‘Save’ button on the Field Editor form but have not clicked the ‘Save Shape’ button as described in step 6c, your field’s polygon will not be saved.
- e. Once you click ‘Save’ the Field Editor form will close and you will return to the farm’s Fields tab with the field list highlighting the new field you just created (15).

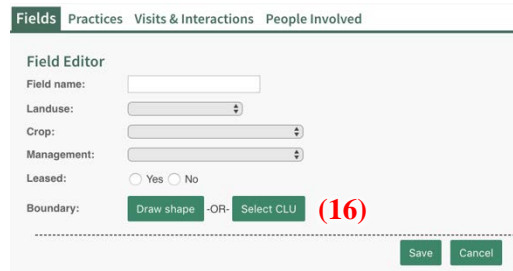
Field ID	Field Name	Landuse / Crop	Farm Tract #	Acres
5201			none	10.75
5202				

Field Name: 5202
 Field ID: 5202
 Landuse:
 Crop:
 Management:
 Leased: No (15)
 Field Acres: 2.43

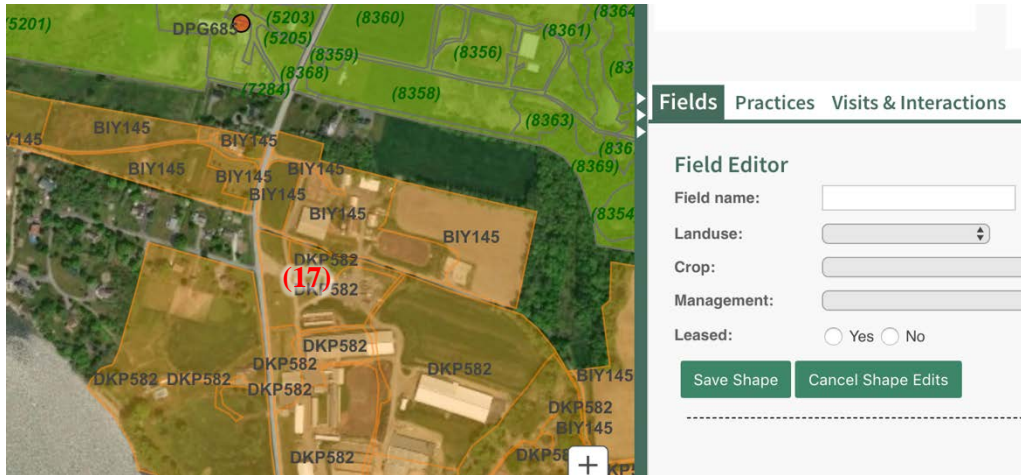
Created by: Stone Environmental (Stone) on Sep 25, 2018
 Updated by: Stone Environmental (Stone) on (no data)

6. Now the alternative method to defining a field's polygon/geometry on the map is to copy the boundary for a field already defined in the CLUs layer. We will work through the steps to define a geometry for our new field from the PLU layer, however the steps are the same for using the CLU boundaries as your source.

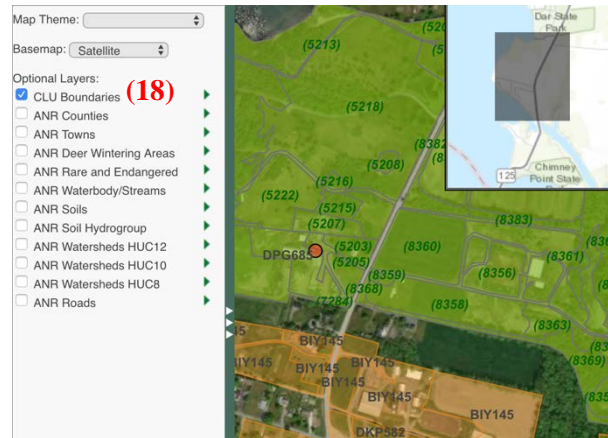
a. On the Field Editor form, click the button 'Select CLU' (16) to initiate selection of a pre-existing boundary for your new field's polygon.



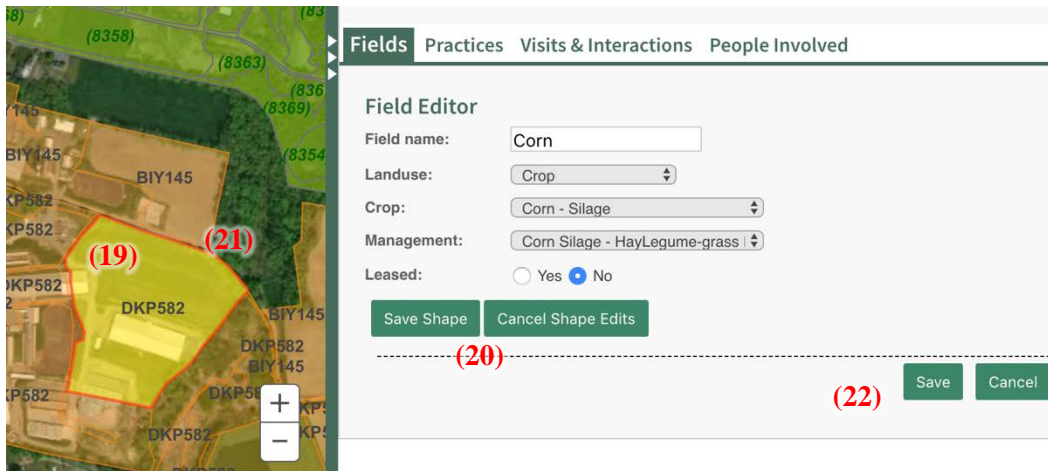
b. The map will then update to display the CLU layer automatically. CLUs will be displayed as reddish-brown polygons (17) around the farm if they are present. The buttons on the Field Editor form for 'Draw Shape' and 'Select CLU' will be replaced with 'Save Shape' and 'Cancel Shape Edits.'



c. Note that if you open the Map Controls panel, you will see that the optional layer 'CLU Boundaries' is enabled (18). To select from the CLU Boundaries instead, you would choose that checkbox in the optional layers list.



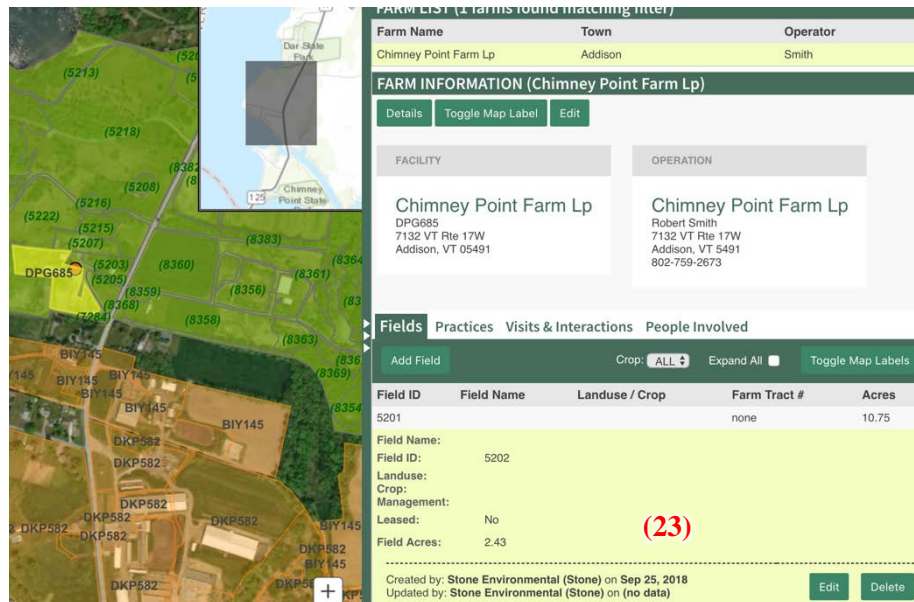
- d. Navigate the map to locate the boundary you wish to use for your field’s new polygon. Dragging the map and zooming the map will work as expected. If you click one of the CLU boundaries on the map, however, it will be selected for use. This can be seen as the polygon will be given a yellow highlight fill with a red border (19). When you have found and selected the CLU polygon you wish to use, click the ‘Save Shape’ button (20) on the Field Editor form.



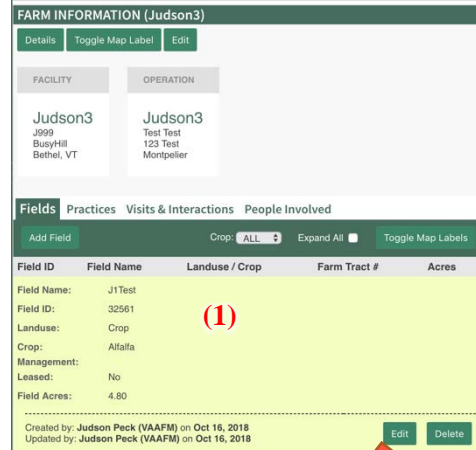
- e. Clicking ‘Save Shape’ will switch the polygon you’ve defined to a non-editing mode. You will note that the border for the select polygon becomes solid yellow instead of red (21), and the buttons ‘Save Shape’ and ‘Cancel Shape Edits’ change back to ‘Draw Shape’ and ‘Select CLU.’ At this point the polygon for your field is defined, but neither the polygon nor the field itself are committed to the database. To do so, click the ‘Save’ button (22) in the lower right corner.
- f. Once the field is saved the Field Editor will disappear and you will once again see the Fields Tab with the field list for your farm highlighting the field you have just created (23).

4.2.3. Editing a Farm’s Fields

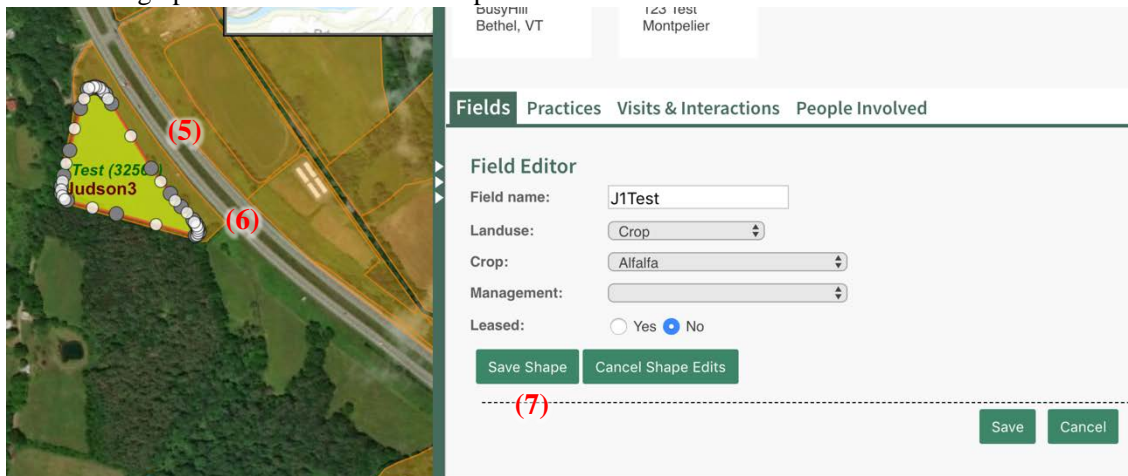
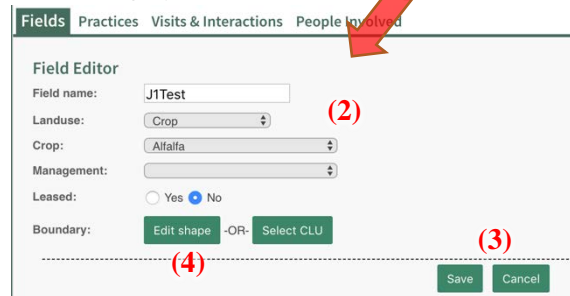
The Farm Information Fields Tab displays a list of all fields for the selected farm. To edit the details of a given field, first select the field on the map or in the list of fields – this will highlight the selected field in yellow on the map and in the list.



1. The list will expand the selected field to show additional details for that field. In the bottom right corner of the selected field's details display is the Edit button (1). Click the 'Edit' button to open the Field Editor form.
2. The **Field Editor** form (2) shows the editable details of a field – the field Name, Landuse, Crop, and Management Plan. The Field Editor also allows editing the field's boundary/polygon.
3. Changing the field's Name, Landuse, Crop, or Management plan is simple – make the change, and click the 'Save' button (3) in the bottom right corner to commit your change to the database.
4. Changing a field's boundary involves a few extra steps. If you want to 'hand-edit' (i.e., with mouse or touchpad) the boundary of a field click the 'Edit shape' button (4).



- a. Clicking 'Edit shape' places the field's polygon, on the map, into 'edit mode' where you can interact with the polygon. Each vertex of the polygon will be represented with a small gray circle (5). The mid-point of the line between two vertices of the polygon is shown as a small white circle (6).
- b. To Edit the polygon, you can click the gray vertices (5) and drag them to reshape the polygon without altering the number of vertices in the polygon.
- c. To expand the polygon by adding vertices, click and drag one of the white mid-point handles. Interacting with one of the white mid-point handles (6) will create a new vertex at that mid-point's location. You can then drag the gray vertex (5) to continue shaping the field, or click more of the white mid-point handles to add more vertices.
- d. To remove a vertex, right-click your mouse (or control-click... but holding down the 'control' button on the keyboard and then clicking with the left button of the mouse). Doing so will bring up a button/menu with the option to 'delete' the vertex at that location.



- e. **When you are done editing the polygon you must click ‘Save Shape’ (7) in the Field Editor form.** Doing so takes the field’s polygon out of edit mode – but does not commit the change to the database.
5. If you want to swap the boundary of a field with an existing CLU boundary (whether or not the existing boundary is based on a CLU boundary) click the ‘Select CLU’ button (8).

- a. Clicking the ‘Select CLU’ button will update the map by enabling the ‘CLU Boundaries’ map layer
- b. Navigate the map as normal to find the new CLU boundary you wish to use. Click the field boundary you want to use. It will highlight in yellow with a red border (9).
- c. When you have finished making your selection for the new field boundary, **you must click ‘Save Shape’ (10) to exit the map boundary editing-mode.**

The screenshot shows the 'Field Editor' form with the following fields: Field name: J1Test, Landuse: Crop, Crop: Alfalfa, Management: (empty), Leased: Yes (selected), No. The 'Boundary' section has two buttons: 'Edit shape' and 'Select CLU', with the latter highlighted by a red circle (8). There are 'Save' and 'Cancel' buttons at the bottom right.

The screenshot shows a map on the left with a field boundary highlighted in yellow with a red border (9). The field is labeled '1Test (32561) Judson3'. To the right is the 'Field Editor' form with the following fields: Field name: J1Test, Landuse: Crop, Crop: Alfalfa, Management: (empty), Leased: Yes (selected), No. The 'Save Shape' button is highlighted with a red circle (10). Below the form, the 'Save' button is highlighted with a red circle (11). There are also 'Cancel Shape Edits' and 'Cancel' buttons.

6. Once you have finished making all edits – to the form items, or the boundary – click the ‘Save’ (11) button to commit your change to the database and finally update the field. Doing this will close the Field Editor and return the Fields tab to displaying the field list – with the field you have just edited highlighted, as well as highlighting the field on the map.

4.3. Practice Data Management

When a farm is selected by the user, the **FARM INFORMATION** window also includes associated Practice information in the **'Practices'** tab. From this tab, the user has the ability to view, add, and edit farm practices managed in the partner database.

4.3.1. Viewing Practices on a Farm

Once a farm has been selected in the Farm List, and is being displayed in the Farm Information panel, you may navigate to the Farm Information panel's **'Practices'** tab (1) to view a list of all practices related to this farm in the database.

Search farms by name, town, land owner or operator:

FARM LIST (10 farms found matching filter)		
Farm Name	Town	Operator
new test farm	Newport Center	Abbott
Judson3	Bethel	Test
Test Test	Burlington	
Test Test 3	Bakersfield	Branon
Judson FarmTEST	Plainfield	Hall
Judson Operation TEST	Plainfield	Peck
barbtest		
Test Test 2	Bakersfield	Hanfield
Judson2	Bethel	Peck
Judson1 PrimaryTest	Bethel	Peck

FARM INFORMATION (Test Test 3)

FACILITY	OPERATION
Test Test 3 ERRORRRRR 363 King Road Bakersfield, VT 05541	Test Test 3 Cecile Branon 539 Maple Road Fairfield, VT 05455

(1)

Fields **Practices** Visits & Interactions People Involved

Status: Program:

Practice ID:	Practice	Status
585	Underground Outlet	Installed
587	Conservation Cover	Installed

The practices tab has a few extra tools at the top of the panel to help work with the practices.

1. Status Dropdown Filter – The Status (4) dropdown filter allows you to filter the display of Application practices by their status value. The dropdown options are based on values are present in the practice records for the farm – if the farm does not have any ‘installed’ practices, then this dropdown list will not show ‘installed’ as an option. If you change one of the existing practices to be ‘installed’ then ‘installed’ will show up in the dropdown list.
2. Program Dropdown Filter – Like the Status dropdown filter, the Program (5) dropdown filter lets you set the list of practices to display only those practices that match a certain program from the dropdown list. In the same way that the status filter only shows status values found in the practice records for the selected farm, the Program filter only shows program values from the practice records of the selected farm.
3. Add Practice – The Add Practice (6) button displays the empty Practice Editor form to allow adding new practices to the farm. See section 4.3.2 for more details on adding practices to the farm.
4. Toggle Map Labels – The Toggle Map Labels (7) button toggles the map’s labeling of practices. This is useful if the map display is getting too cluttered by labels.

When you click on a practice record in the practices list, the record will expand to display much more detail about the selected practice, as well as highlight the selected practice in yellow in the list, and its associated geometry on the map (8).

Practices on a farm have often have a ‘geometry type’ which defines mostly how the practices are drawn on the map. Some practices are represented as points, some are represented as lines, and some are represented as

polygons. Examples of points are digesters, pits, and structures. Examples of lines are roads, pipes, and fences. Examples of polygons are cover crops, grassed waterways, and buffer strips. There are a few practices, however, that have no associated geometry type such as ‘record keeping,’ and ‘Milking System Wastewater Treatment.’


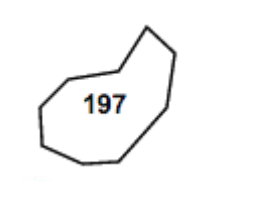
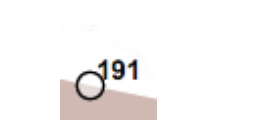


Amongst the data values related to practice management, there are a few additional items to note.

1. Associated Field ID – a practice is often associate with a specific field on a farm, even if the practice is not shown covering the entire field. For example, a manure pit is a point feature on the map, but is

located within a field. In cases where the practice’s map geometry does not exactly match the field to which the practice should be related, we can assign an ‘Associated Field’ (9) to the practice to keep track of the relationship.

2. Created By and Updated By – The Created By and Update By (10) values, as with the farm fields tab, show the Application user that created the item, and who the last person was to edit the record.
3. Edit and Delete Buttons – the Edit (11) and Delete (12) buttons respectively initiate the Practice Editor form to edit the editable portions of the practice, and remove the practice from the farm. For more information on editing a practice see section 4.3.3.

On the map, the practices are displayed using the following symbology:

Line Practice	
Polygon Practice (note: this has a transparent white fill)	
Point Practice	
Fields (defined in Fields tab)	
Field associated with selected practice	

Note that because the polygon practices have a transparent white file, if a polygon practice overlays a field or associated field on the map, it the field will appear as a very faded version of whatever color it should be (i.e., a very faded light green) with a black border.

4.3.2. Adding Practices to a Farm

Most practices are represented by points, lines, or polygons. We will add one of each type of practice to your farm.

- To add a new practice to a farm start by clicking the ‘**Add Practice**’ button (1) on the Practices tab. Click this button and it will display a blank Practice Editor form (2).
- The practice dropdown contains the most common practices used on farms in Vermont (3).

FIG. 45 Practices Visits & Interactions People Involved

Practice Editor

Practice:

Status:

Meets NRCS Standard:

Is Req'd Ag Practice:

Notes:

Program:

Application Date:

Approval Date:

Install Date:

End Date:

Added to Toolkit:

Grant Status:

Grant ID:

Save Cancel

Practice ID:	Practice	Status
585	Underground Outlet	Installed
587	Conservation Cover	Installed

- Adding a Fence: Start by selecting ‘Fence’ from the practice dropdown list. You will notice that two additional fields are displayed at the bottom of the form: Associated Field and Map Feature (4).
 - Start by filling in data for Status, Program, and Application Date.
 - Associated Field:** If the new practice, in this example a fence, is associated with a specific field, click the button ‘**Select Field**’. Click on the field on the map where the fence will be located. The selected field will turn green and the field ID will be displayed next to the Associated Field label. Click ‘**Save Field**’

Fields Practices Visits & Interactions People Involved

Practice Editor

Practice:

Status:

Meets NRCS Standard:

Is Req'd Ag Practice:

Notes:

Program:

Application Date:

Approval Date:

Install Date:

End Date:

Added to Toolkit:

Grant Status:

Grant ID:

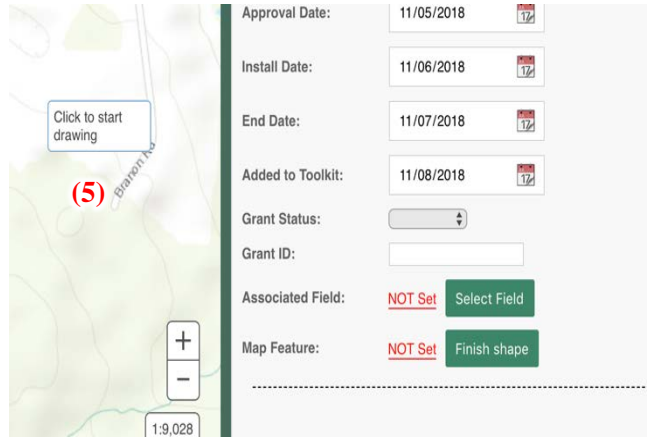
Associated Field: NOT Set

Map Feature: NOT Set

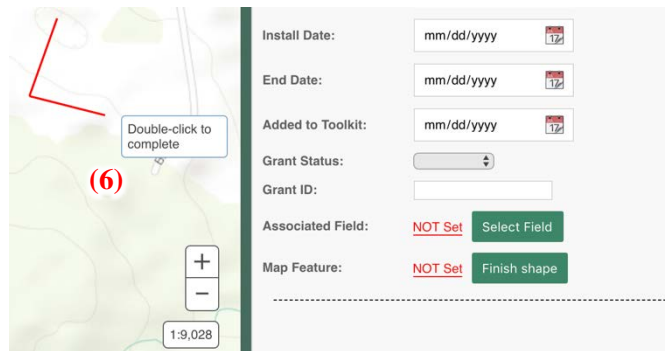
Save Cancel

- Map Feature:** To add the fence to the field, click on the ‘**Draw Shape**’ button (4).

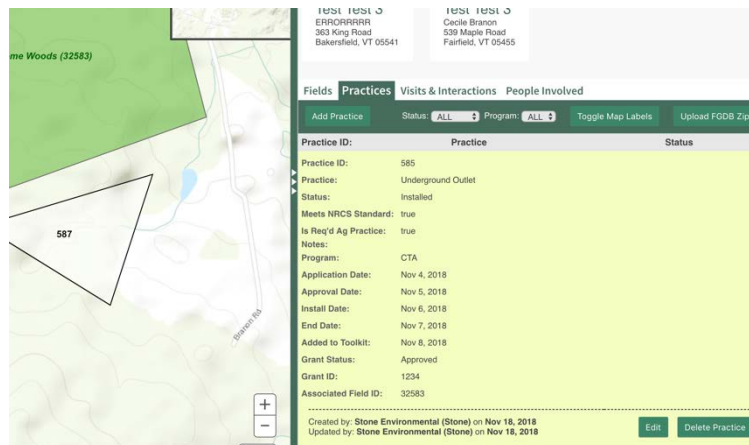
- d. As you move the mouse over the map the cursor prompt will say ‘Click to start drawing.’ (5)



- e. Add as many vertices as necessary by single clicking and then double click to finish the fence (6). Click ‘Finish Shape’ to complete the creation of the fence and then click ‘Save’ to save the practice including its attributes.

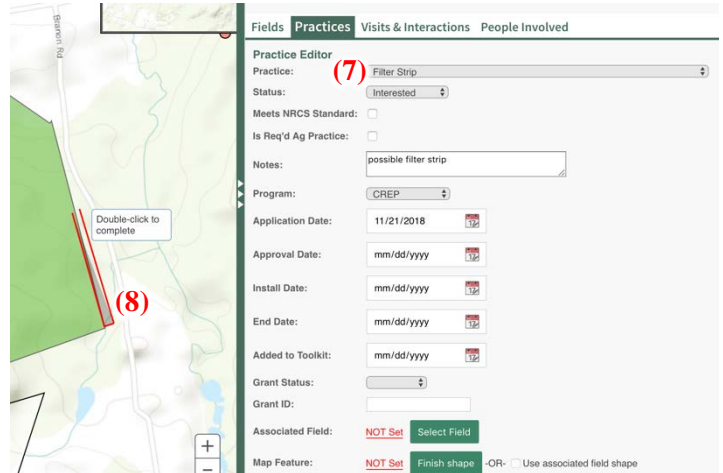


- f. The new fence will be highlighted on the map and in the practice list with the practice details expanded.

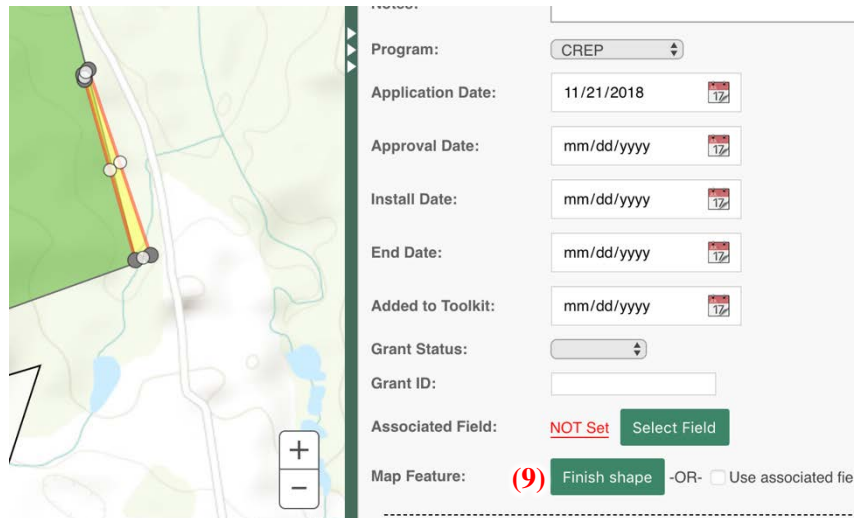


4. Adding a Filter Strip: Select the ‘**Add Practice**’ button again and this time select Filter Strip (7) from the practice dropdown list. Filter strip is an example of a practice represented by a polygon that will be hand drawn.

- a. Fill in the information for the filter strip including the status, any notes, the program, application date, etc.
- b. Select the field where the filter strip is located as you did above for the fence.
- c. Make sure to draw both sides of the filter strip (8). If a filter strip is at the edge of the field, the edge of the field needs to be traced. The application does not know to automatically use the edge of the field.



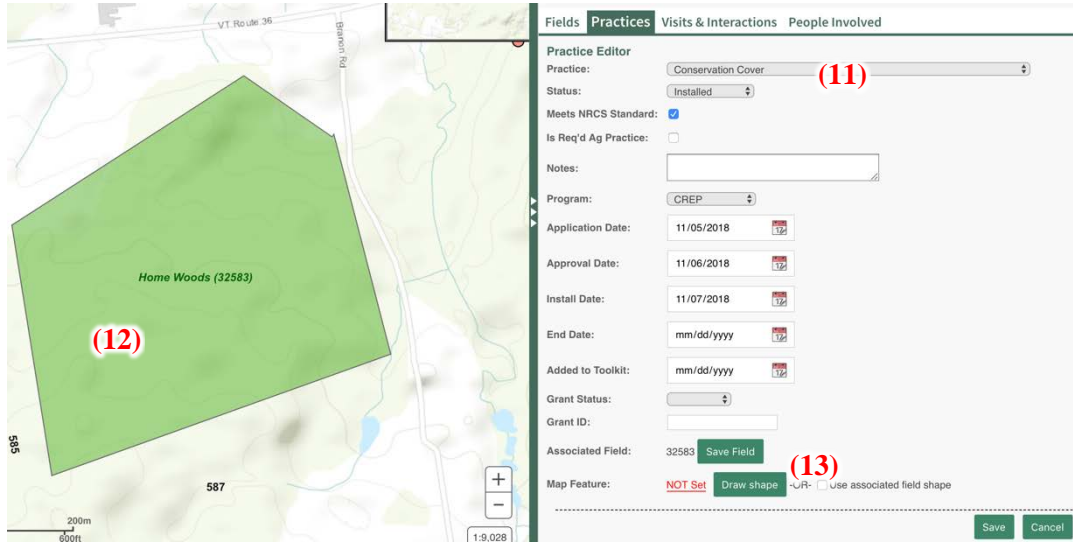
- d. Double click to finish the sketch and select ‘**Finish Shape**’ (9) to complete the filter strip. Select ‘**Save**’ to save the new practice and its attributes to the database.



5. Adding a Conservation Cover: Select the ‘**Add Practice**’ button again and this time select conservation cover from the practice dropdown list. Like filter strip, conservation cover is an example of a practice that is represented by a polygon. Since conservation cover generally covers an entire field, however, we will use the associated field shape option.

- a. Fill in the information for the conservation cover including the status, any notes, the program, application date, etc. Note that you can select ‘installed’ (11) if you are entering information for a practice previously installed with relevant dates.

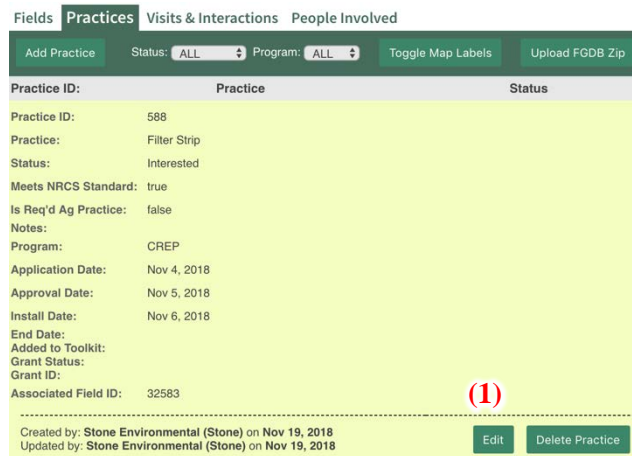
- b. Select the field where the cover crop is located (12) as you did previously.
- c. Since the cover crop covers the entire field, check the box next to 'Use associated field shape' (13) and the Save the new practice.



4.3.3. Editing Practices on a Farm

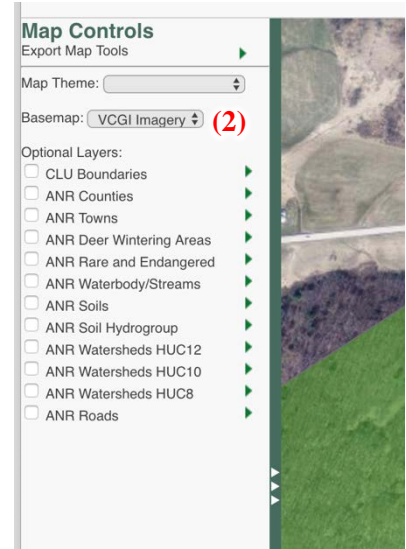
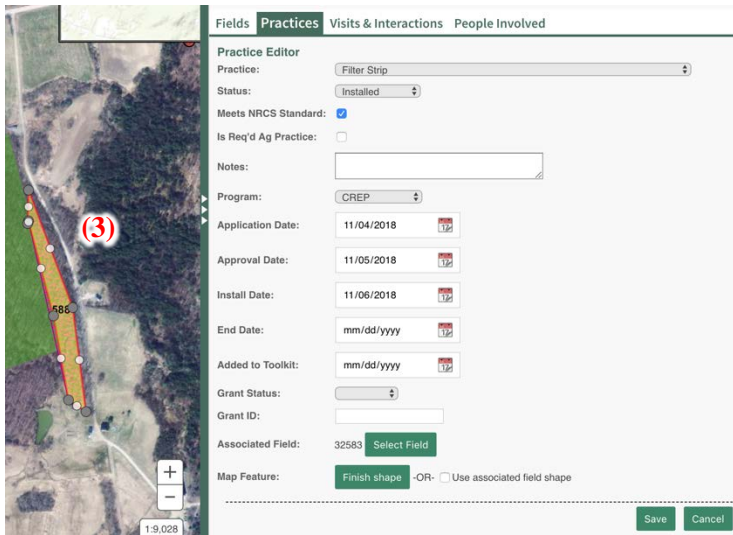
You will regularly be editing practices in order to update the status, approval, and installation dates. You can also modify the physical dimensions of a practice if necessary. It will probably be less likely that you will delete a practice but this functionality is available if a practice is added in error.

1. Select the filter strip you added in the previous exercise and select 'Edit' (1)



2. Change the status to 'installed' and enter an approval date and an install date.

3. You can then choose to 'Edit shape'. Perhaps you want the filter strip to follow a feature on the imagery basemap.
 - a. Turn on the VCGI Imagery map them by expanding the Map Controls panel and selecting 'VCGI Imagery' from the Basemap dropdown (2).
 - b. Select 'Edit Shape' and use the orthophoto as a guide to refine the filter strip dimensions. Place the mouse cursor over the vertices and drag them to reshape the polygon (3).



4. Editing for other practices with line or point geometry is similar. Practice editing one other practice.
5. IDEA practices are listed below the Application practices and can be viewed on the map and expanded to view details but cannot be edited. See section 3.4.2 in this document for more information.

4.4. Visits & Interactions Data Management

When a farm is selected by the user, the FARM INFORMATION window also includes associated Visit & Interaction information in the 'Visits & Interactions' tab. From this tab, the user has the ability to view, add, and edit visits and interactions.

4.4.1 Adding Visits and Interactions

1. To add a new visit from the Visit and Interactions tab, select the 'New Visit' button (1).

Fields Practices Visits & Interactions People Involved		
New Visit (1)		
Contact Date	Contact Type	Person Contacted
Nov 5, 2018	On-site Visit	BarbR Patterson
Nov 19, 2018	Phone Call	Alan Hammersmith

2. A blank form will open.
 - a. Select the type of visit or interaction from the 'Type' dropdown (2). Options include phone call, email, or on-site visit.
 - b. Duration: Enter the length of the visit or call as a number or fraction of hours.
 - c. Date will default to the current date and can be changed if necessary.

Fields Practices Visits & Interactions People Involved	
Edit Visit/Interaction	
Type	Phone Call (2)
Duration (Hours):	<input type="text"/>
Date:	11/20/2018
Status	Planned
Person Contacted:	NOT set <input type="button" value="Change"/>
Created by:	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

- d. To enter the person contacted, select the ‘**Change**’ button (3). This will expand a list of contacts in the VTAMPITS system. To find the person you contacted or visited first check to see if they are in the system by entering any part of their name in the search box (4).

The screenshot shows the 'Edit Visit/Interaction' form with the 'Visits & Interactions' tab selected. On the left, there is a search box labeled 'enter name to filter' with a red (4) next to it. Below the search box is a list of people with their first and last names and a green '+' button next to each name. The names listed are Arman, Tanner Abbott, Tim Abbott, Chester Abbott, James Ackermann, William Acquaviva, and Paul Adamczak. A red (5) is placed next to the '+' button for Paul Adamczak. At the bottom of the list is a green button labeled 'Create New Person'. On the right side of the form, there are fields for 'Type' (Phone Call), 'Duration (Hours)', 'Date' (11/20/2018), 'Status' (Planned), and 'Person Contacted' (NOT set). A green 'Change' button with a red (3) is next to the 'Person Contacted' field. There is also a 'Notes' text area and a 'Created by:' field. At the bottom right are 'Save' and 'Cancel' buttons.

- e. As you type, the list will be filtered to only display names matching the text you entered. Select the person using the ‘+’ sign (5) and they will be added to the visit/interaction.
- f. If the contact person is not already in the system, a new contact can be added using the ‘**Create New Person**’ (6) button. Adding a new person is covered in section 4.5.3
- g. Add any notes and make sure to select ‘**Save Record**’ (7).

This screenshot shows the filtered list of people from the previous screenshot. The search box now contains 'Pat'. The list shows only people whose names contain 'Pat': Lorraine/P... Conlon/Heaghey, Simon Depatie, Patrick Harrison, Patrick Howrigan, David Major, and Richard Nelson. A red (6) is placed next to the '+' button for Lorraine/P... Conlon/Heaghey. The right side of the form is partially visible, showing the 'Notes' field and 'Save'/'Cancel' buttons.

This screenshot shows the 'Edit Visit/Interaction' form with the 'Person Contacted' field now populated with 'BarbR Patterson'. A green 'Change' button is next to the name. The 'Notes' field now contains the text 'First visit'. At the bottom right, a red (7) is placed above the 'Save' and 'Cancel' buttons.

4.4.2 Editing and/or Deleting Visits and Interactions

Any visits displayed under the **Visits and Interactions** tab can be edited.

1. Select the visit of interest to expand the details. The record can be deleted if necessary by selecting the **'Delete'** button.
2. To makes changes to the visit record, select the **'Edit'** button (1).

Fields Practices Visits & Interactions People Involved		
New Visit		
Contact Date	Contact Type	Person Contacted
Nov 19, 2018	Phone Call	BarbR Patterson
Hours:	1	
Status:	Planned	
Person:	BarbR Patterson	
Notes:	First visit	
Created by: Stone Environmental on Nov 19, 2018		(1) Edit Delete
Updated by: Stone Environmental on Nov 19, 2018		
Nov 5, 2018	On-site Visit	BarbR Patterson
Nov 19, 2018	Phone Call	Alan Hammersmith

3. Edit and/or update any information. Editing on-site visits is the type of visit most likely to require that the status and date are updated once a visit actually occurs.
4. Any of the data fields can be modified except for Created by. After making changes, select **'Save Changes'** (2). To exit without saving changes, select **'Cancel Changes'**.

Fields Practices Visits & Interactions People Involved		
Edit Visit/Interaction		
Type	On-site Visit	Notes: First visit
Duration (Hours):	1	
Date:	11/19/2018	
Status	Planned	
Person Contacted:	BarbR Patterson Change	
Created by:	Stone Environmental	
		(2) Save Cancel

4.5. People Involved Data Management

The people involved tab lists all of the people associated with the farm, fields, practices, and visits and interactions. From this tab any people associated with the farm in any way can be added. If the person exists in the system already, their role on the farm is added as opposed to adding the person to the system again. When a

4.5.1. Viewing People Involved

When you select the People Involved tab, a list of people involved with the farm is displayed. The list displays the person’s first and last name and their roles. Clicking one of the items in the list – one of the rows in the table – will highlight the row and expand the list to show additional details (1). From the view details pane, you can also view the address and contact information for the person. On the right side of the pane, is the role/type information for the person. A person can have multiple roles. Additional roles can be added and removed from the view pane.

First Name	Last Name	Role
Anthony	Brown	Operator

Mailing Address: 1095 Davis Rd (1)
 City: Randolph
 State: VT
 ZIP: 05061-9557
 E-Mail: carbrown15@yahoo.com (2)
 Home Phone: 802-728-5068
 Cell Phone:
 Organization: (no data)

Role/Type: Operator [X]
 or... Add!

[3] Edit Delete

4.5.1.1. Adding and removing roles

1. Select from the dropdown list (2) to add an additional role for a person.
2. Once the desired role is selected, choose the add button and the new role/type will be displayed.
3. To remove a person’s role, select the ‘X’ next to the role name.

4.5.2. Editing People Involved

To edit a person’s contact information, select the **Edit (3)** button. The edit person form (4) will be displayed a person’s contact information and/or organization can be changed. Select ‘**Save Changes**’ to save the person’s information. *Note: When a person’s information is updated, it is updated for that person for its relationships to all farms.*

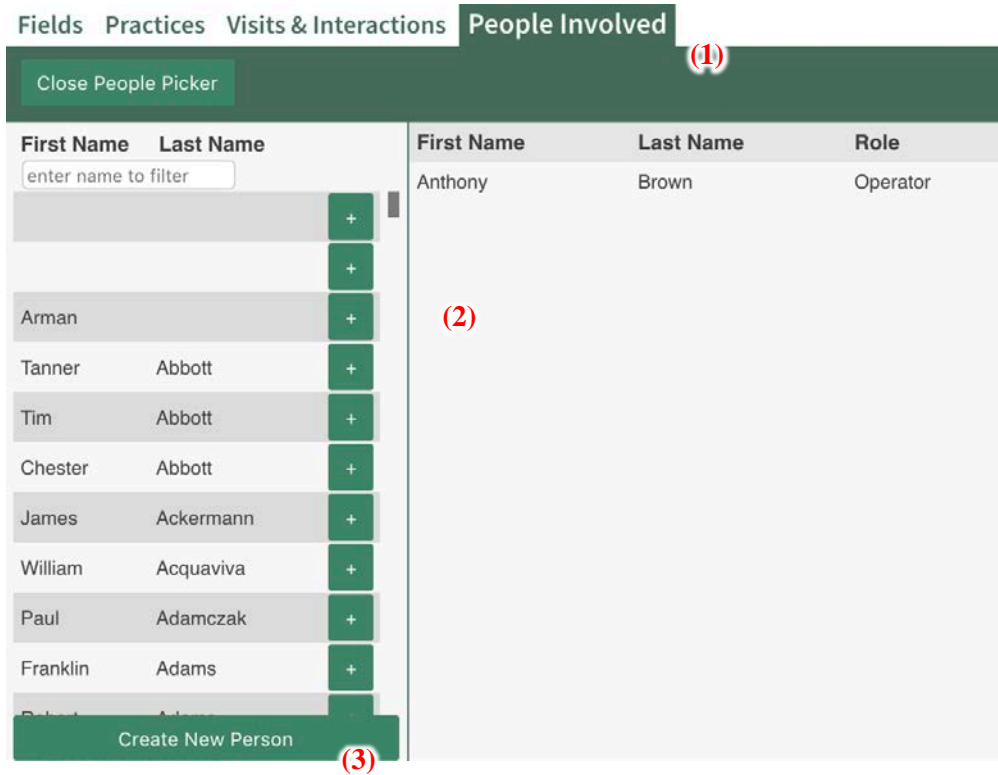
Fields Practices Visits & Interactions **People Involved**

First Name: Anthony
 Last Name: Brown
 Mailing Address: 1095 Davis Rd
 City: Randolph
 State: VT
 Zip: 05061-9557
 Email: carbrown15@yahoo.co
 Home phone: 802-728-5068
 Cell phone:
 Organization:
 Save Cancel

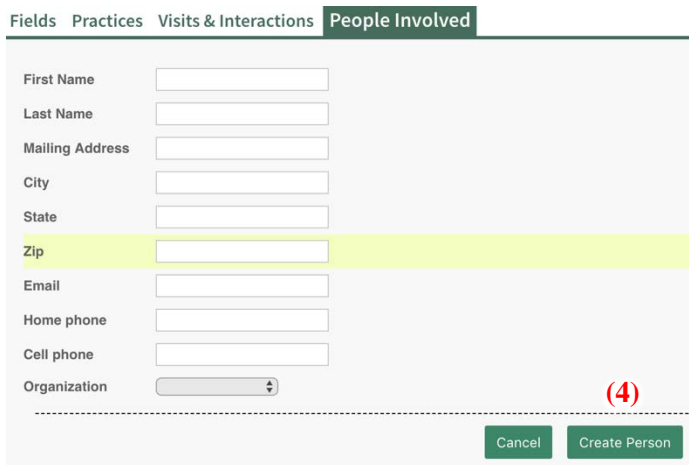
(4)

4.5.3. Adding People

1. Select the ‘**Add People to Farm**’ button (1) at the top of the People Involved list. The list of people will shift to the right (2) and on the left is a list of all people in the database.



2. Filter the list before adding new person to confirm the person is not in the database
3. Select ‘**Create New Person**’ (3) to open up a blank person form (4).
4. Enter the person’s name and contact information and select ‘**Create Person.**’



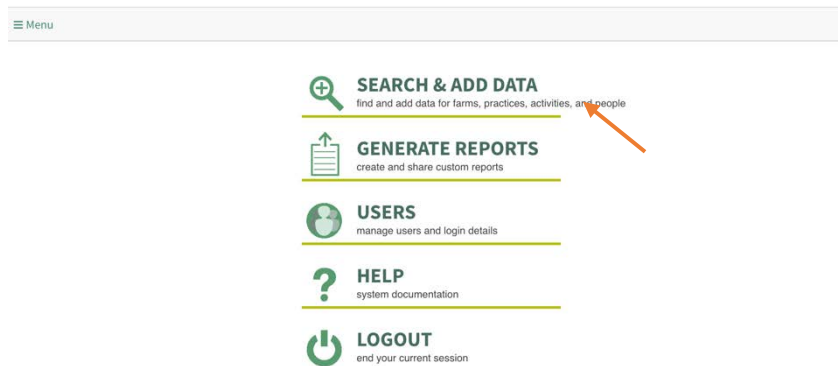
5. CREATE A PRINTED MAP

Map tools are meant to be used to navigate to an area of interest, to view information about a farm of interest, and to print PDF or PNG maps. Many components of the map tools are best used when working with an individual farm, as opposed to state-level.

5.1. General Map Tools

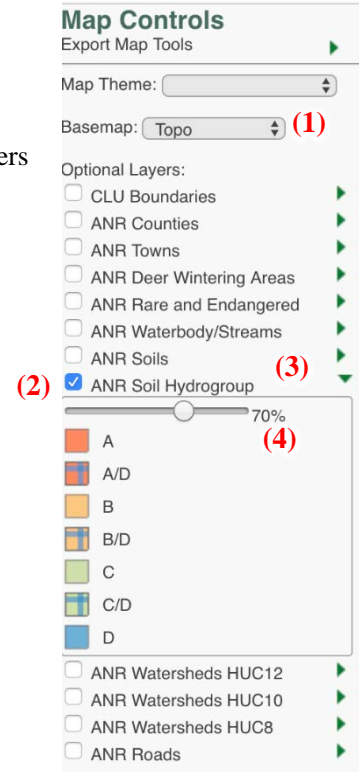
This section will describe general map tools including navigation (pan, zoom), change basemap, and turn on/off layers, and change transparency of layers.

1. To access the map tools, login and click on the **'SEARCH & ADD DATA'** link.



2. Next, search for a farm of interest and click on the farm to zoom to the location.
3. Click on the far left panel of the map. This panel can be opened or collapsed, as needed:

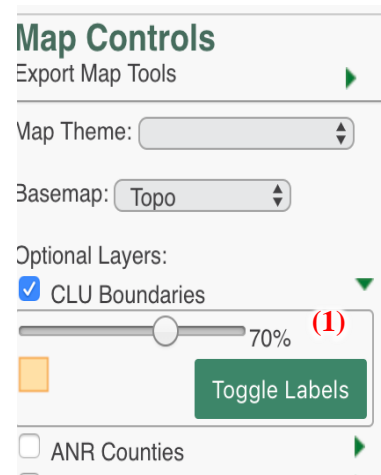
4. To change the basemap, use the ‘**Basemap**’ dropdown (1) in the ‘Map Controls’ pane to select the basemap of choice. There are six basemaps available for display. Note that not all layers are visible at all scales.
5. There are several map layers that can be turned on and off that can be used to general printed maps or inform decisions. Most of the map layers are published and hosted by Vermont Agency of Natural Resources (noted by ‘ANR’) and Vermont Center for Geographic Information (noted by ‘VCGI’). To toggle visibility of map layers, click the check box at the left of the map layer name (2). Note that not all layers are visible at all scales. Also, CLU and PLU Boundaries are not available in all areas of the state.
6. Using the arrow to the right of each layer or by clicking on the layer name, access the layer legend (3).
7. Using the arrow to the right of each layer or by clicking on the layer name, access the layer transparency slider. Use the slider to update the layer transparency in the map (4). Note that this transparency selector may look different depending on the internet browser (e.g., IE versus Chrome).



5.2. Using Map Labels

Map labels can be toggled on and off for farms, fields, practices, and CLU boundaries. The labels displayed in the map, which can be controlled by the user, will carry through to a printed version of the map.

1. Using the arrow to the right of each layer in the table of contents (Map Controls pane) or by clicking on the layer name for CLU data, expand the display so that it includes the transparency slider bar, legend, and ‘**Toggle Labels**’ button. Turn CLU and PLU labels on and off by clicking the ‘**Toggle Labels**’ button (1). This will turn the CLU labels on and off within the map. Note that CLU boundaries can only be visible one at a time.



5.3. Map Printing

The map printing functionality allows you to print PDF, JPEG or PNG versions of the displayed map. The layers and labels that the user has selected to activate in the visible extent will be displayed in the printed map. Additionally, preset 'Map Themes' have been developed based on common maps generated by partners. The map printing tools can be accessed in the 'Map Controls' pane.

5.3.1. Printing the Current Map Display

1. Open the '**Map Controls**' pane by clicking on the three white arrows on the left-hand side of the map window.
2. In the 'Map Controls' pane, expand the '**Export Map Tools**' by clicking on the name or the arrow to the right **(1)**.
3. Enter a '**Title**' of interest and select a Format (i.e. - PDF)**(2)**.
4. Click the '**Print Map**' button to export map. **NOTE: You will need to allow pop-ups for this site. Depending on the Basemap selected, the generation of the output map may take several seconds.**

Map Controls

Export Map Tools **(1)**

Title: My Map **(2)**

Format: PDF

Print Map

Map Theme: No map theme

Basemap: Topo

Optional Layers:

CLU Boundaries 70%

Toggle Labels

ANR Counties

ANR Towns

ANR Deer Wintering Areas

ANR Rare and Endangered

ANR Waterbody/Streams

ANR Soils

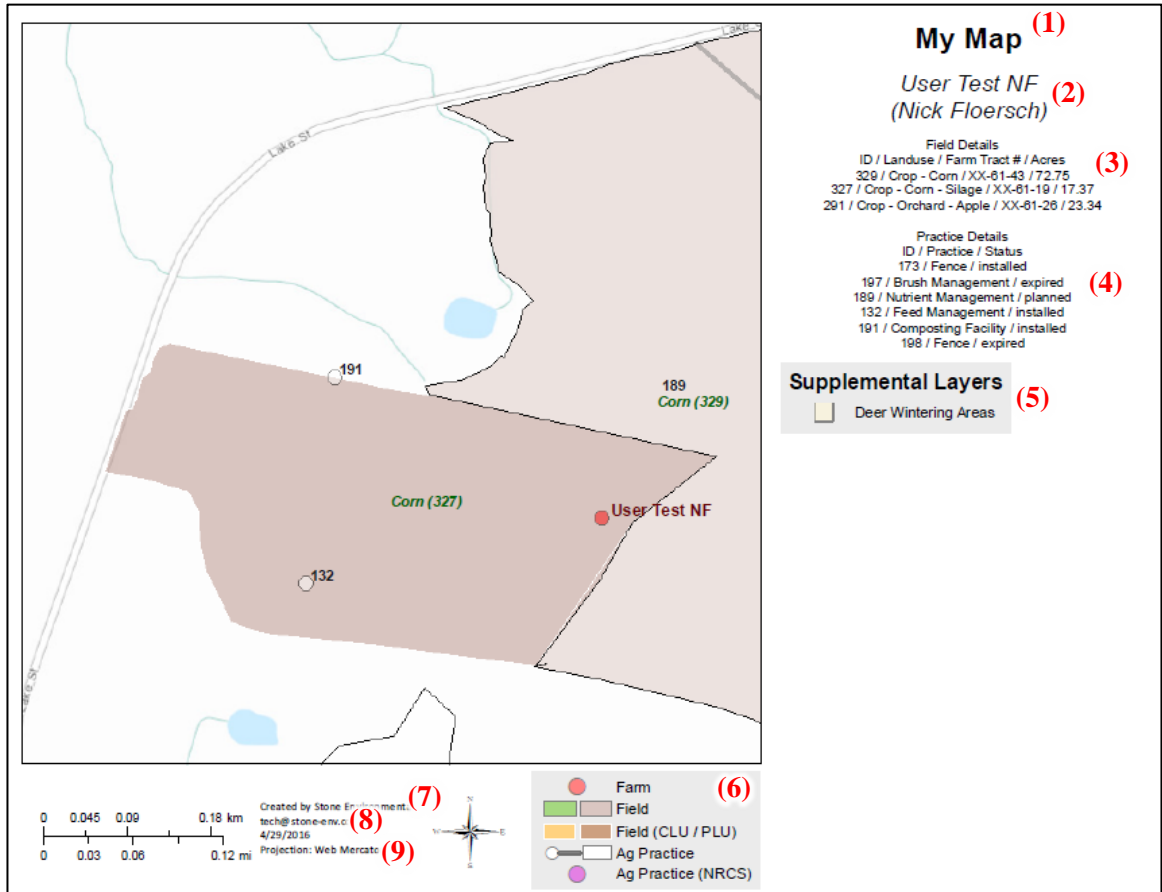
ANR Soil Hydrogroup

ANR Watersheds HUC12

ANR Watersheds HUC10

5. The printed map will include the following elements
 - a. **(1)** Specified Title
 - b. **(2)** Farm Name and Farmer Name in parentheses. This is automatically generated based on the farm selected in the FARM INFORMATION pane.
 - c. **(3)** Field Details. The ID can be used to reference the field in the map.
 - d. **(4)** Practice Details. The ID can be used to reference the practice in the map.
 - e. **(5)** Legend for supplemental layers in the map

- f. (6) Legend for Farms, Fields, and Practices
- g. (7) Name of the logged in user, with e-mail address. This is automatically generated based on the logged in user.
- h. (8) Date the map was printed. This is automatically generated based on the current date.
- i. (9) Map projection.



5.3.2. Printing the Current Map Display Using a Preset Map Theme

Map Themes have been developed to streamline map generation for commonly required maps and figures. These map themes turn map layers and labels on and off, depending on the purpose of the map. There are seven different map themes that can be used.

6. Open the **'Map Controls'** pane by clicking on the three white arrows on the left-hand side of the map window **(1)**.
7. In the **'Map Controls'** pane, use the **'Map Theme'** dropdown **(2)** to view and select a preset Map Theme. Select the **'Conservation Plan'** map theme. Turning on the **'Conservation Plan'** map theme will toggle all layers off except **'ANR Waterbody/Streams'** and **'ANR Roads'**. The Basemap will toggle to **'Satellite'**. Additionally, if you the **'Practices'** tab was not activated, the application will open that tab to add **'Practices'** to the map.
8. In the **'FARM INFORMATION'** pane, on the right hand side of the screen, on the **'Practices'** tab, filter the status using the **'Status'** dropdown and also the Program, using the **'Program'** dropdown **(3)**. The filtering will practices off from the display within the map.
9. In the **'Map Controls'** pane, expand the **'Export Map Tools'** by clicking on the name or the arrow to the right **(4)**.
10. Enter a **'Title'** of interest and select **PDF** **(5)**.
11. Click the **'Print Map'** button **(6)** to export map. **NOTE: You will need to allow pop-ups for this site. Depending on the Basemap selected, the generation of the output map may take several seconds.**

The screenshot displays the Stone Environmental Inc. web application interface. The main map area shows a satellite view of a farm with a yellow highlighted area labeled '588'. The interface is divided into several panes:

- Map Controls (Left):** Contains 'Export Map Tools' with a 'Print Map' button (6), 'Title: My Map', and 'Format: PDF' (5). Below is a 'Map Theme' dropdown (2) set to 'Conservation Plan' and a 'Basemap' dropdown set to 'Satellite'. A list of 'Optional Layers' includes 'ANR Waterbody/Streams' and 'ANR Roads' (1).
- FARM LIST (10 farms found matching filter) (Right):** A table listing farms with columns for Farm Name, Town, and Operator. The row for 'Test Test 3' is highlighted.
- FARM INFORMATION (Test Test 3) (Right):** Shows details for 'Test Test 3' under 'FACILITY' and 'OPERATION' tabs. The 'Practices' tab (3) is active, showing a table of practices for field 588.

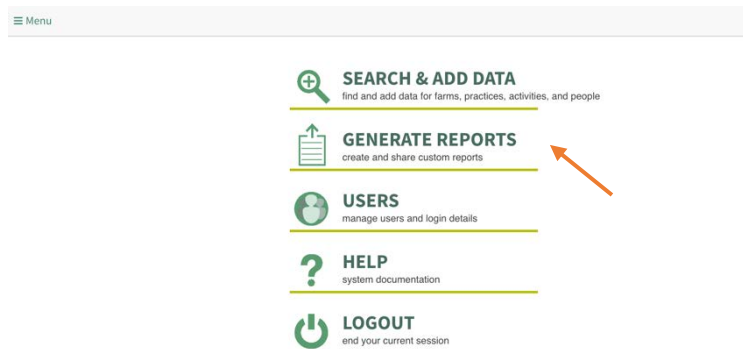
Farm Name	Town	Operator
new test farm	Newport Center	Abbott
Judson3	Bethel	Test
Test Test	Burlington	
Test Test 3	Bakersfield	Branon
Judson Farm TEST	Plainfield	Hall
Judson Operation TEST	Plainfield	Peck
barbtest		
Test Test 2	Bakersfield	Hanfield
Judson2	Bethel	Peck
Judson1 PrimaryTest	Bethel	Peck

Practice ID:	Practice	Status
588	Filter Strip	Installed

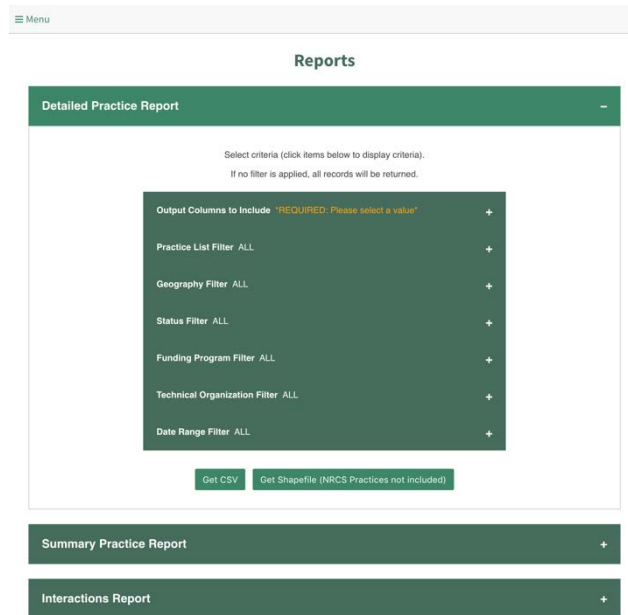
6. GENERATE A DETAILED REPORT

The functionality to query and summarize data to a CSV report or Shapefile is available through the GENERATE REPORTS interface. Reporting can be used to extract full details about individual practices (Detailed Practice Report), or summarized practice information (Summary Practice Report).

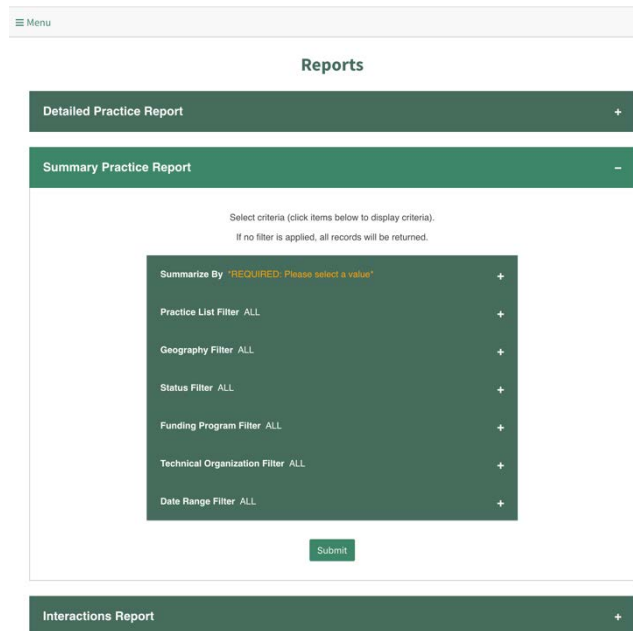
To access the reporting tools, login and click on the 'GENERATE REPORTS' link.



To access the practice details, click the '**Detailed Practice Report**' bar to access the reporting options. Each of the green bars can be expanded to access reporting options. As filters are added, the green bar will indicate the option selected when collapsed:



To access a summarized practice report, click the ‘**Summary Practice Report**’ bar to access the reporting options. Each of the green bars can be expanded to access reporting options. As filters are added, the green bar will indicate the option selected when collapsed.

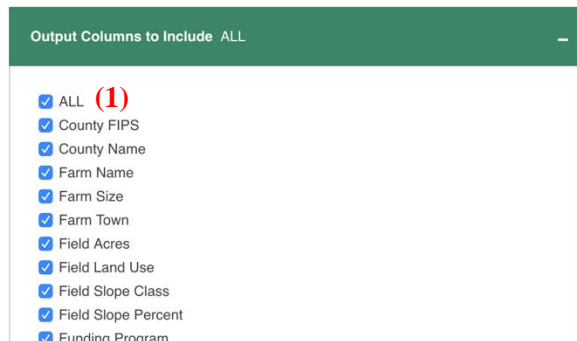


6.1. Generate a CSV and Shapefile Detailed Practice Report

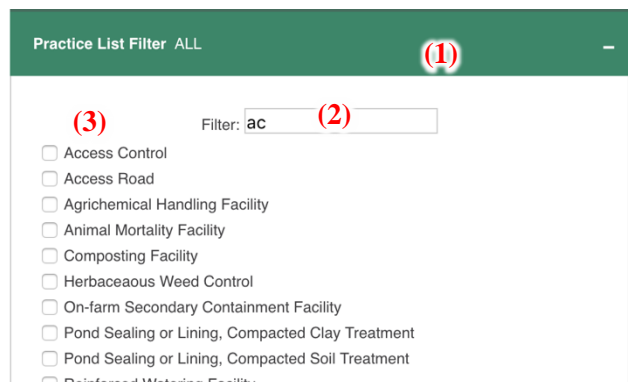
The detailed report provides information on individual practices. The practices returned can be filtered by Practice Type, Geography (County, HUC 8 watersheds, HUC 12 watersheds, and Lake Segment), Status,

Funding Program, Technical Organization, or Date Range (Applied/Installed or Expiration Date). The user can specify the output columns to include in the report. The report can be exported to a CSV table or a GIS Shapefile. If exporting to a shapefile, only Partner Database practices will be extracted (no NRCS IDEA practices will be included, due to permissions). In this example, we will generate a detailed CSV report and shapefile of associated practices.

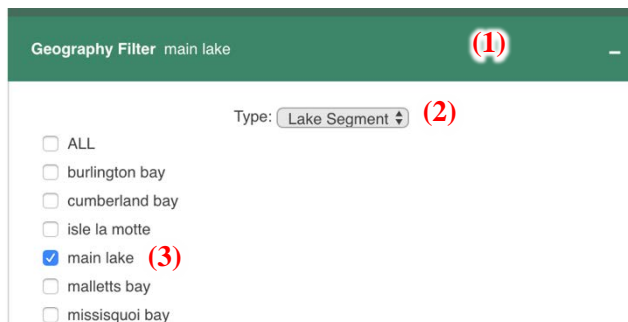
1. Click the **‘Detailed Practice Report’** bar to access the detailed practice report criteria.
2. Expand the **‘Output Columns to Include’** bar to select output column information to include in the output report. Select **‘All’ (1)**. This action will automatically select all of the output columns. **NOTE: Specifying output columns is required.**



3. Expand the **‘Practice List Filter’ (1)** to select Practice types to include in the output report. For example, if **‘Access Road’** is selected, only practices that are **‘Access Roads’** will be included in the report. In the **‘Filter’** box (2), start entering **‘Access Road’**. As you type, the list will start narrowing based on your search. Select practice of interest (e.g., **‘Access Road’ (3)**).

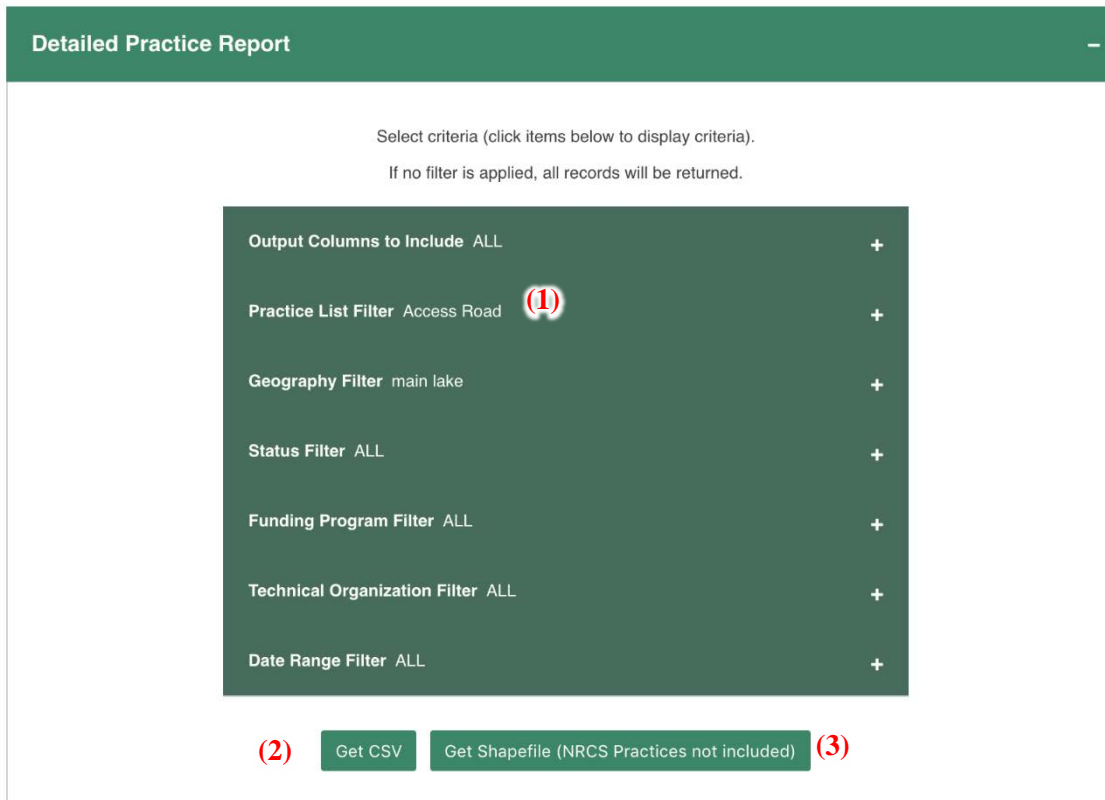
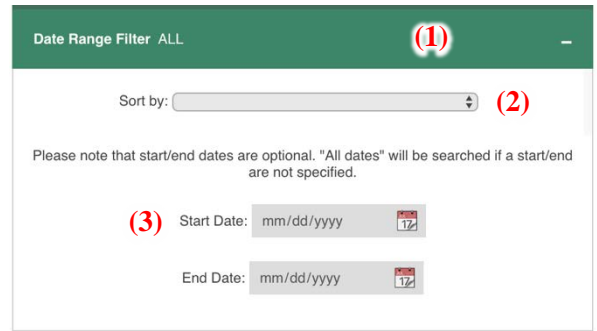


4. Expand the **‘Geography Filter’ (1)** to select Geographies to include in the output report. For example, if the user selects County and then **‘Addison’** is selected, only practices that are in **‘Addison County’** will be included in the report. First select the **‘Type’ (2)** as **‘Lake Segment’**. Select **‘main lake’ (3)**.



5. Expand the '**Status Filter**' to select practices by status including Not Specified, expired, installed, interested, and planned. For example, if the user selects 'expired', only practices that are expired will be included in the report. 'All' are selected by default.
6. Expand the '**Funding Program Filter**' to select practices by funding program to include in the output report. For example, if the user selects 'ACEP', only practices that funded by ACEP will be included in the report. 'All' are selected by default.
7. Expand the '**Technical Organization Filter**' to select practices by technical organization to include in the output report. For example, if the user selects 'LCBP', only practices that have LCBP listed as the technical organization will be included in the report. 'All' are selected by default.

8. Expand the ‘Date Range Filter’ (1) to select Date Ranges to include in the output report. Select ‘Applied/Installed Date’ (2). Then Specify a start and end date using the format specified (mm/dd/yyyy). (3)
9. Once you have specified all of your filters, you can check your filters in by the label in each filter bar. For example, in the screenshot, the ‘Practice List Filter’, the filter is set to ‘Access Road’ (1).
10. To export the detailed report to a CSV, based on the criteria specified, click the ‘Get CSV’ button (2) at the bottom of the ‘Detailed Practice Report’ menu. A CSV file will be generated. If in IE, a popup at the bottom of the screen will appear prompting you to save the file. **NOTE: Depending on the filters specified by the user, the report generated may have zero (0) records.**
11. To export the detailed report to a shapefile, based on the criteria specified, click the ‘Get Shapefile’ button (3) at the bottom of the ‘Detailed Practice Report’ menu. This shapefile will only include Partner Database Practices and will not include NRCS IDEA practices, due to permissions. The export will include a zipfile with shapefile contents. **NOTE: Depending on the filters specified by the user, the shapefiles generated may have zero (0) records.**



7. GENERATE A SUMMARY REPORT

The summary report provides a summary of practices by either County, Funding Program, HUC 8 watershed, HUC 12 watershed, Lake Segment, or Technical Organization. The practices summarized can be filtered by Practice Type, Geography (County, HUC 8 watersheds, HUC 12 watersheds, and Lake Segment), Status, Funding Program, Technical Organization, or Date Range (Applied/Installed or Expiration Date). The output report summarizes the practices by the selected summary field and depending on practice units returns either the count, acres, or length by the criteria specified. The report is exported to a CSV table. If the report is summarized by County, HUC 8, HUC 12, or Lake Segment the results can be joined to the appropriate shapefile for viewing in ArcGIS.

Note that filtering may result in empty reports (i.e., reports with zero (0) records).

7.1. Generate a CSV Summary Practice Report

1. Click the **'Summary Practice Report'** bar to access the summary practice report criteria.
 2. Expand the **'Summarize By'** bar to select the information that you would like to 'group by' in the summary. Options include County, Funding Program, HUC 12, HUC 8, Lake Segment, and Technical Organization. Select 'Lake Segment'. **NOTE: Specifying a summary attribute is required.**
-
3. Expand the **'Practice List Filter'** to select Practice types to include in the output report. For example, if 'Access Road' is selected, only practices that are 'Access Roads' will be summarized in the report. 'All' are selected by default.
 4. Expand the **'Geography Filter'** to select Geographies to include in the output report. For example, if the user selects County and then 'Addison' is selected, only practices that are in 'Addison County' will be summarized in the report. Use the 'Filter' search box to search for HUC12's of interest. 'All' are selected by default.
 5. Expand the **'Status Filter'** to select practices by status to include in the output report. For example, if the user selects 'expired', only practices that are expired will be summarized in the report. 'All' are selected by default.
 6. Expand the **'Funding Program Filter'** to select practices by funding program to include in the output report. For example, if the user selects 'ACEP', only practices that funded by ACEP will be summarized in the report. 'All' are selected by default.
 7. Expand the **'Technical Organization Filter'** select practices by technical organization to include in the output report. For example, if the user selects 'LCBP', only practices that have LCBP listed as the technical organization will be summarized in the report. 'All' are selected by default.
 8. Expand the **'Date Range Filter'** to select Date Ranges to include in the output report. Select 'Expiration Date (Partner DB Practices Only)'. Then Specify a start and end date using the format specified (mm/dd/yyyy).
 9. To export the detailed report to a CSV, based on the criteria specified, click the **'Submit'** button at the bottom of the 'Detailed Practice Report' menu. A CSV file will be generated. If in IE, a popup at the

bottom of the screen will appear prompting you to save the file. **NOTE: Depending on the filters specified by the user, the report generated may have zero (0) records.**

8. GENERATE AN INTERACTIONS REPORT

The interactions report provides a summary of Interactions, including site visits, education outreach activities, or other communication. The Interactions summarized can be filtered by E-mail, Education Outreach, On-site Visit or Phone Call or Status for a chosen Date Range. The report is exported to a CSV table.

Note that filtering may result in empty reports (i.e., reports with zero (0) records).

8.1. Generate a CSV Interaction Report

1. Click the **'Interactions Report'** bar to access the Interactions Report criteria.
2. Expand the **'Output Columns to Include'** bar **(1)** to select the information that you would like to select which data columns to include in the report. **NOTE: Specifying Output Columns is required.**
3. Expand the **'Type Filter'** to select Interaction types to include in the output report. For example, if 'E-mail' is selected, only Interactions that are 'E-mails' will be summarized in the report. 'All' are selected by default.
4. Expand the **'Status Filter'** to select Status' to include in the output report. 'All' are selected by default.
5. Expand the **'Date Range Filter'** to select Date Ranges to include in the output report. Specify a start and end date using the format specified (mm/dd/yyyy).

Output Columns to Include *REQUIRED: Please select a value* **(1)**

- ALL
- County
- Farm Address
- Farm Name
- Farm Size
- Hours
- Organization
- Person Visited/Contacted
- Visit Status
- Visit Type
- Visit/Contact Date
- Visit/Contact Notes

To export the detailed report to a CSV, based on the criteria specified, click the **'Submit'** button at the bottom of the 'Interactions Report' menu. A CSV file will be generated and automatically begin to download.

9. USER MANAGEMENT

An Introduction to Users

The User Management functionality is available to Administrative users. ‘Users’ in the Application are the records that keep track of who can login to the system and use it. A user in the Application is not necessarily related to a person or contact record.

When a new USER is created by the administrator of the system, a new PERSON record is automatically created. If the administrator entered the appropriate information, this new PERSON record will contain some of the vital information about the real-life person that is represented by the PERSON and USER records. It is also possible that the administrator does not know, or care to enter, the details for the real-life person when creating the new USER. In that case, a new USER may be created with a related PERSON record that has little-to-no information in it.

When assigning relationships between a farm and various persons, a user is not going to be shown in the people-picker based on their login name. If the user has a related person record, then that is what will show up in the people-picker.

The User Management tool does not have an option to delete a user. This function can be performed by request at Stone.

9.1. Adding a New User as an Administrator

1. Login as a user with an admin role administrator
2. On the main menu choose 'Users' – note that if you are not an administrator, you will not see the Users menu.
3. This will display the user manager pane, which by default is on the 'Edit Users' tab. Select the 'Add User' tab. **(1)**
4. Fill in the Add New User form. Items marked with a red * are required for the USER record **and** without values in these fields, the 'Add User' button will fail to function. All other fields are used to populate the related PERSON record for this user.
5. Hit the 'Add User' button – this will create the USER record, and the related PERSON record. The User Manager will then switch tabs automatically to show the Edit Users tab. If you scroll through the list of users on the left, you will find the new user listed, by the user name (not the person name). Select the user by clicking on their name in the list to view the user's details.

User Management

(1) Add User Edit Users

Login Information

* User Name:

* Password:

Contact Information

First Name: <input type="text"/>	Work Phone: <input type="text"/>
Last Name: <input type="text"/>	Cell Phone: <input type="text"/>
Mailing Address: <input type="text"/>	* E-Mail: <input type="text"/>
Mailing City: <input type="text"/>	* Organization: <input type="text" value="VAAFM"/>
Mailing State: <input type="text"/>	
Mailing ZIP: <input type="text"/>	

Role Information

<input type="checkbox"/> reader This role can view any data, but cannot make changes to any of it. They can also run reports.	<input type="checkbox"/> editor This role can view/edit any data and run reports, but cannot manage users.
<input type="checkbox"/> reporter This role can only run reports. Viewing/querying the data or managing users is not available.	<input type="checkbox"/> sysadmin This role can do whatever they want on the system. They can view/query data, run reports & manage users.

Add User
Cancel

9.2. Working With the ‘Edit Users’ Tool

1. If you have not completed the exercise in section 8.2, please complete steps 1 & 2 in that exercise.
2. The Edit Users tab is displayed by default when opening the User Manager. If it is not displayed at this moment, switch to the Edit Users panel.
3. Explore the users of the system by navigating the user list (1). Recall that Users are not the same as Persons. A User has, in most cases, a related Person record. This related Person detail is shown on the bottom of the Edit Users panel.
4. The key elements that define a USER in the system are the username, password, and whether the account is locked (as well as an internal UserID).
5. To change a user’s ‘person’ information, just select the user in the user list, and edit the related form items on the right-side of the Edit Users panel. Click ‘Cancel’ or ‘Save’ (2). to cancel the edit, or save the changes. You can also cancel the edit simply by switching the user selected in the user list.
6. To change a user’s password, click the ‘Change Password’ button to expand the password change form.
7. A user’s login ability will be blocked if they fail to enter their password 3 times in a row. In this case the account will be considered to be ‘locked.’ A user with a locked account should contact the administrator. The administrator will then enter the Edit Users panel, find the user in the list, and see that the user’s ‘Status’ is ‘locked’ (3). The administrator can then click the ‘Unlock Account’ button to reset the account’s status (4). This would give the user 3 more attempts to login – although the administrator may also just want to update the user’s password so the user doesn’t get locked out again if they really have forgotten their password.

The screenshot shows the 'Edit Users' interface. At the top, there are two tabs: 'Add User' and 'Edit Users'. Below the tabs, there are two main sections. On the left, under 'Select User', there is a scrollable list of usernames: admin, alan, astone, astone2, astone3, barb, barb, barbpatterson, barbreport, barbtest, bcarpenter, beditor, bgabos, bpatterson, breader, cbrink, daveblodgett, dblodgett, gtucker, jpeck, and jthurgood. A red circled '1' is placed to the left of this list. On the right, under 'Change Password', there are two input fields for 'New Password:' and 'New Password again:', followed by an 'Update Password' button. Below that is a 'Role' section with a dropdown menu set to 'sysadmin' and a 'Save Role' button. At the bottom, there is a 'Status' section with the text 'unlocked'.

The screenshot shows the 'Edit Users' interface with a different view. On the left, there is a scrollable list of usernames: bgabos, bpatterson, breader, cbrink, daveblodgett, dblodgett, gtucker, jpeck, and jthurgood. On the right, there is a 'Status' section with the text 'unlocked'. Below that is a section titled 'Edit details for user: admin'. This section contains several form fields: 'First Name' (Stone), 'Last Name' (Environmental), 'Mailing Address' (535 Stone Cutters Way), 'City' (Montpelier), 'State' (VT), 'Zip' (05602), 'Email' (tech@stone-env.com), 'Home phone' (867-5309), 'Cell phone' (867-5309), and 'Organization' (Stone). At the bottom of this section are two buttons: 'Save' and 'Cancel'. A red circled '2' is placed to the right of these buttons.

- astone2
- astone3
- barb**
- barbpatterson
- barbreport
- barbtest
- bcarpenter
- beditor
- bgabos
- bpatterson
- breader
- cbrink
- daveblodgett
- dblodgett
- gtucker
- jpeck
- jthurgood

Update Password

Role

Save Role

Status

locked

Unlock Account

(4)

(3)