

REQUEST FOR QUOTE (RFQ)

Chesapeake Conservancy is a non-profit organization that works with conservation partners and landowners to implement Best Management Practices (BMPs) on agricultural land. Chesapeake Conservancy and our Central PA Partnership were awarded a Regional Conservation Partnership Program (RCPP) grant through the USDA Natural Resources Conservation Service (NRCS). Funding for Technical Assistance for practice design and assistance with practice installation and verification is available through RCPP.

As part of the RCPP grant, Chesapeake Conservancy is soliciting quotes for the following services:

- Engineering Services to design a roofed heavy use area/waste storage facility and associated practices for a dairy operation.
- Project and Construction Oversight
- Quality Assurance Inspections and Final Certification with PE Stamp

RFQ OVERVIEW AND DESCRIPTION OF WORK

RFQ Release Date: October 1, 2024

Landowner Name: Andrew Snook

Project Location: 972 Jones Hill Road
Middleburg, PA 17842
Snyder County, Washington Township

RFQ Issuing Office: Chesapeake Conservancy
Email: paprograms@chesapeakeconservancy.org
Phone: 570-372-4075

RCPP Partners: Natural Resources Conservation Service (NRCS)

RFQ Due Date: **All quotes must be submitted by:**
October 31, 2024 at 10:00 am EDT
Quotes will not be accepted after this date and time.

RFQ Submission: **All quotes must be submitted electronically, or hand delivered in-person. DO NOT MAIL QUOTES – QUOTES WILL NOT BE ACCEPTED THROUGH U.S. MAIL.**

Email: paprograms@chesapeakeconservancy.org
Include “Snook RFQ Response – Engineering Services” in the subject line.

In Person: Chesapeake Conservancy
Attention: Kathy Rohrer/Snook RFQ Response – Engineering Services
Susquehanna University, Freshwater Research Institute Building
1250 West Sassafras Street, Selinsgrove, PA 17870
A drop box is located inside the main entrance and is accessible at any time.

Questions: All questions regarding this RFQ should be submitted to:
Email: paprograms@chesapeakeconservancy.org
Contact/Phone: Kathy Rohrer, 570-372-4075

Project Description:

The successful bidder will be responsible for providing engineering and professional services to design and oversee construction of a roofed heavy use area/waste storage facility on a dairy operation in Snyder County. The project involves construction of the roofed facility as well as a liquid storage tank, waste transfer, access roads, trails and walkways, underground outlets and other Best Management Practices (BMPs). The new facility will be a stand-alone structure that is not attached to an existing building.

The design shall include all components needed for constructing the practices identified in the **Engineering Evaluation (I&E) Addendum (Attachment A)** that will adequately address water quality. BMPs may include but are not limited to those identified in the landowner’s I&E Addendum. Bidders should refer to the I&E Addendum for practices, estimated quantities and other important information about the project site. This information is provided for informational purposes only.

Dry Run, a tributary to Susquehecka Creek runs through the southern end of the property and has a designated use of Cold Water Fishes (CWF).

This contract will include the following services:

Project Design

- Site survey(s) and engineering of planned BMPs
- Provide a concept plan for approval by NRCS after pre-design meeting
- Coordinate and communicate with NRCS staff to incorporate NRCS comments into final design
- Provide final design and drawings to NRCS for review and approval
 - The Engineer shall prepare all necessary design plans, drawings and specifications to be used for the construction of the BMPs. All information provided shall be complete in detail and contain all necessary information. Drawings shall conform with standard professional practice, including site plans, profiles and sections, erosion and sediment control plan, quality assurance/inspection plan, operation and maintenance plan and all details necessary to illustrate the complete scope of the work.
 - The Engineer shall include design calculations, documentation and cost estimate.
 - The design and drawings shall be signed and sealed by a qualified, licensed professional, and shall meet Pennsylvania Technical Guide Standards and Specification.
- Provide NRCS approved design and drawings to the Conservancy and landowner
- Provide NRCS technical standards and specifications of planned BMPs
 - Planned BMPs and estimated quantities are found in Attachment A.
- Provide printed sets of 11”x17” or larger drawings and designs for the site showing. Quantity will be determined based on number of attendees.

Project Permits

It is the responsibility of the bidder to determine what permits and plans (including stormwater management) are required for this project prior to submitting a bid. The successful bidder will be responsible for writing, submitting, overseeing and implementing any applicable permits and plans. Proposals should reflect these services and the cost associated with the permitting services should be broken out separately on the Contractor Quote Form. Bidders shall include with their proposal, a list of all required permits and plans. *The bidder is not responsible for any permit fees.*

The following are types of permits that are commonly needed on projects of this scope. Bidders should confirm which permits and plans are required, including any not listed here.

- General Permits per Pennsylvania Department of Environmental Protection (DEP) Chapter 105
- Erosion and Sediment Control per DEP Chapter 102
- Stormwater Management Plan and Permits per county and local municipality ordinances

- National Pollutant Discharge Elimination System (NPDES) Permit per U.S. Environmental Protection Agency
 - It is anticipated that less than 1 acre, as defined by DEP for agricultural BMP's will be disturbed for this project. Unless the scope of work changes, the project should not require a NPDES permit. Bidders should confirm this with the appropriate agencies.
- Zoning and Building Permits per local municipality and/or county

Project Meetings

Project meetings including but not limited to:

- Pre-design meeting on site
- Site showing for bids on site
- Bid opening or review of bids
- Pre-construction visit on site

Construction Oversight and Quality Assurance

The Engineer is expected to furnish customary engineering advice and assistance necessary to Chesapeake Conservancy, NRCS, landowner, contractors and other project partners to enable all parties to readily understand the project and design. The Engineer shall provide oversight of the project and shall coordinate with Chesapeake Conservancy, NRCS, landowner, contractors and other partners throughout the project. The Engineer is expected to work directly with NRCS and the landowner on such things as design reviews, edits and approvals, site visits and other aspects of the project. The Engineer shall visit the construction site to observe progress and quality of work, to determine if work is proceeding in accordance with the design, to keep Chesapeake Conservancy informed of progress, to guard against defects and deficiencies and to disapprove of work not in conformance with the design and NRCS specifications.

The Engineer will, at a minimum, conduct quality assurance inspections on site during construction for critical tasks including, but not limited to:

- Placing compacted fill or subgrade/stone preparation
- Checking materials (rebar, posts, etc.) before installation
- Check reinforcing steel before concrete pour (not same day as pour)
- Pouring any concrete
- Backfilling poured concrete walls or final grading
- Setting trusses and associated truss bracing (Trusses must be approved by the Engineer prior to ordering. Final truss design needs a P.E. seal.)
- Installing stormwater pipes and drop boxes
- Final inspection for conformity with design, concept and NRCS specifications

Contractor will complete a NRCS RCPP TA-I Practice Certification Sheet (included with Attachment B) for each practice (Contract Item Number-CIN) in the NRCS contract that is part of the engineering design. An example Practice Certification Sheet has been provided by NRCS. The Contractor shall send the completed Practice Certification Sheet(s) to the local NRCS District Conservationist (DC) for functional review and DC signature and copy the Conservancy. NRCS will complete its review and return the signed Practice Certification Sheet(s) to the Contractor. The signed Practice Certification Sheet(s) shall be submitted to the Conservancy with the Contractor's invoice.

When the project is complete, the Engineer will provide the following:

- "As Built" documentation consisting of final drawings of practices and quantities installed and certification statement signed by a professional engineer stating installed practices meet the PA Technical Guide Standards and Specifications.
 - One electronic copy to Chesapeake Conservancy and NRCS.

Bidding Process

Chesapeake Conservancy (lead RCPP partner) will be required to utilize a competitive bidding process for the implementation phase of the project. The Conservancy will be responsible for compiling a bid package following their procurement policy. The Engineer and NRCS will review the final bid package for accuracy and completeness. The Engineer shall be available to answer contractors' questions pertaining to the design and supply the Conservancy with addenda, if required. The Engineer shall be prepared to provide printed sets of 11"x17" or larger of the designs and drawings for the site showing.

RFO TERMS AND CONDITIONS

CONSTRUCTION TIMELINE:

Designs shall be completed as soon as possible. Contractors shall include with their response when they can begin working on the design and their projected completion date of the design. Preference shall be given to contractors who can complete the designs in a timeframe which could allow construction to be completed by June 2026.

If the contracted services are not completed within the designated time period (as specified in the resulting contract from this RFO), the contract can be extended if agreed to in writing by Chesapeake Conservancy and the contractor.

PA ONE CALL:

Contractor shall follow all laws and regulations relating to the Pennsylvania One-Call System including submitting all required design notifications to the Pennsylvania One-Call System.

COMMUNICATION:

Communication between the Contractor, NRCS, Conservancy and the landowner is crucial to a successful project. Contractor shall work closely with NRCS, Conservancy and the landowner during the design and implementation phases of the project to ensure the project is completely timely.

PAYMENT INFORMATION:

Chesapeake Conservancy will pay Contractor when the design is completed and approved by NRCS and as practices are certified and NRCS reporting requirements are met. Payment(s) will be issued on a Net 30 schedule upon submission of an approved invoice and a completed Application for Payment form.

NRCS REPORTING REQUIREMENTS:

NRCS requires Contractor to complete Attachment B with each invoice. Attachment B includes a RCPP TA-I Certification by Practice Sheet and a RCPP TA-I Reimbursement Summary Sheet.

RCPP TA-I Certification by Practice Sheet

Contractor shall include on the Certification by Practice Sheet basic information about the conservation practice, who was involved, brief description of activities, completion date and the charge by Activity Type (Design or Installation). A separate Certification Practice Sheet is to be completed for each practice in the producer's RCPP contract that is associated with the engineering design.

RCPP TA-I Reimbursement Summary Sheet

For each invoice the Contractor submits to the Conservancy, Contractor shall complete the Reimbursement Summary Sheet by compiling the total reimbursement request for all completed Conservation Practice Sheets for the invoice period. The Reimbursement Summary Sheet shall include the invoice period start and end date, details from the Certification Practice Sheet as well as the total cost being invoiced by conservation practice. The staff position, hours worked and hourly rate associated with each conservation practice should be broken out at the bottom of the form.

EQUAL EMPLOYMENT OPPORTUNITY:

Chesapeake Conservancy is an equal opportunity employer. The successful bidder shall comply with all federal, state, and local equal employment opportunity requirements. Additional information can be found at <https://www.ecfr.gov> and searching [41 CFR 60-1.4\(b\)](#).

SMALL BUSINESS AND SMALL DIVERSE BUSINESS:

Chesapeake Conservancy encourages the use of small and small diverse businesses when soliciting Requests for Quotes. Contractors are encouraged to register with the federal government at www.sam.gov and with the Pennsylvania Department of General Services at www.dgs.pa.gov (search [Small Diverse Business Verification](#)). Please note Pennsylvania Department of General Service registration is only valid for three years. Contractors are encouraged to verify that their registration is current.

Contractors and any subcontractors who register on Sam.gov and with the PA Dept of General Services and who qualify as a small and/or small diverse business should check the applicable boxes on the Contractor Response Form.

DEBARMENT AND TAX LIABILITY:

Contractors will be required to certify that they and any subcontractors are not listed on the Debarment and Suspension List maintained by the Pennsylvania Department of General Services (<https://www.dgs.internet.state.pa.us/debarmentsearch/debarment/index>) and the General Services Administration’s List of Parties Excluded from Federal Procurement or Nonprocurement Programs (www.SAM.gov) in accordance with Executive Orders 12549 and 12689, “Debarment and Suspension” and have no outstanding tax liabilities. Contractors will also be required to certify that they and any subcontractors are not in default of a loan or funding agreement administered by any Commonwealth agency.

INSURANCE REQUIREMENTS:

Bidders shall include a copy of their current Certificate of Insurance (COI) that reflects their existing levels of liability insurance coverage. Chesapeake Conservancy will work with the successful bidder to ensure adequate levels of insurance are in place for the project prior to finalizing a contract.

Preferred levels of coverage include the following:

<i>Type of Insurance Coverage</i>	<i>Limit Required</i>
Workers Compensation and Employer’s Liability -	Statutory
Bodily Injury, Each Accident:	State Minimum
Bodily Injury By Disease, Each Employee:	State Minimum
Bodily Injury/Disease, Policy Limit:	State Minimum
General Liability -	
Each Occurrence (Bodily Injury and Property Damage):	\$1,000,000
General Aggregate:	\$1,000,000
Excess or Umbrella Liability -	
Per Occurrence:	\$1,000,000
General Aggregate:	\$2,000,000
Automobile Liability -	
Combined Single Limit (Bodily Injury and Property Damage):	\$1,000,000
Professional Liability – covering negligent acts, errors, and omissions in performance of professional services	
Each Claim Made	\$5,000,000
Annual Aggregate	\$5,000,000

It is preferred that all policies (except workers compensation) include a waiver of subrogation and list “Chesapeake Conservancy” and “National Fish and Wildlife Foundation” as additional insured.

Once Chesapeake Conservancy and the successful bidder have reached an agreement pertaining to insurance coverage, the successful bidder shall provide Chesapeake Conservancy with a current COI certified by a licensed insurance broker. The approved COI needs to be provided to Chesapeake Conservancy prior to signing a contract.

Note: Bidders do not need to add the additional insured to their policy when responding to the RFQ. Only the successful bidder will be required to name the additional insured on their policy after the bid is awarded. The Certificate Holder should be as follows: Chesapeake Conservancy, 1212 West Street, Suite 42, Annapolis, MD 21401.

GRANTS:

The terms and conditions of the RCPP Supplemental Agreement for Technical Assistance and Financial Assistance for Easement Due Diligence Entered Into By USDA Natural Resources Conservation Service and Chesapeake Conservancy apply to the contracts that result from this RFP. Copies of the Agreement are available upon request.

PREVAILING WAGE AND ENHANCED MINIMUM WAGE REQUIREMENTS:

Prevailing wage and enhanced minimum wage rates do not apply to this RFQ.

SUBMISSION OF QUOTES AND SELECTION CRITERIA

SUBMISSION OF QUOTES:

Quotes are requested for the items described in the Project Description. Any estimated quantities included in this RFQ are for information only. The successful bidder will be responsible for determining the final quantities and practices as part of the design process.

At a minimum each quote response must include:

- Contractor Quote Form
 - Price – Must follow NRCS Crosswalk format outlined below*
 - Proposed start date
 - Proposed completion date
 - List of exclusions and assumptions (if applicable)
 - Signed by authorized representative
- Contractor General Information Form and corresponding documents**
 - Three references
 - Debarment and tax liability certification
 - Current Certificate of Insurance
 - Signed by authorized representative

****Contractors bidding on more than one 2024 RCPP Engineering Services RFQ, will only need to submit one Contractor General Information Form and corresponding documents. Contractors should note on the Contractor Quote Form whether they are including the Contractor General Information Form with this response or if they submitted it with a separate 2024 RCPP Engineering Services response.**

All quotes must be submitted electronically, or hand-delivered to Chesapeake Conservancy by the RFQ due date specified on Page 1 of the RFQ.

***NRCS Crosswalk**

A Generalized Crosswalk: Aligning SA TA-I Practices to NRCS 9 Step Planning Process	
TA-I Practice Code and Name	Implementation TA Tasks – Must be directly related to a potentially viable RCPP funded FA application or contract, and not be otherwise precluded like are TA-E items (per APF), and partner administrative expenses (per Statute.)
RTIP001 – TA-I, Negotiated Pre-Application	Pre-application assistance may assistance to producers in completion of application, establishing FSA records, and or field work to support eligibility or screening. (Reminder: this activity does NOT include outreach to producers or general meetings to raise producer awareness of project, which are TA-E or contribution tasks.)
RTIP002 – TA-I, Negotiated Planning	Steps 1-7 Note: TA-I Planning, Design tasks require adherence to NRCS planning procedures and or practice standards as described for each agreement in Attachment 5 (and or valuation methods attached to individual deliverables). Where partners will not complete entity of a plan or design (e.g. partner will provide a range health assessment in support of a grazing plan to be prepared by NRCS planner), Attachment 5 must also identify specific requirements of items partner will complete to earn payment.
RTIP003 – TA-I, Negotiated Design	Steps 5, 6, 8 (Design)
RTIP004 – TA-I, Negotiated Installation	Step 8 (Installation)
RTIP005 – TA-I, Negotiated Checkout	Step 8 (Checkout) Note: TA-I Checkout, requires NRCS job approval authority as checkout determines eligibility of completed work for FA payment. Not generally delegated to partners.
RTIP006 – TA-I, Negotiated Post-Application	For post-application assistance Note: Post application assistance is not outcome assessment or monitoring (which are TA-E/Contribution tasks); RTIP006 should be used only where NRCS FA policy requires follow-up e.g. easement monitoring, 5% spot checks (with appropriate separate of duties)

CONTRACTOR SELECTION CRITERIA:

Contractor will be evaluated on the following criteria:

- Quote price
- Proposed start date
- Proposed completion date
- References - Demonstrates experience by providing examples of at least three (3) similar projects in Pennsylvania. More than 3 references are allowed.
- Debarment and tax liability status
- Exclusions and assumptions (if applicable)
- Provided Certificate of Insurance with current levels of coverage

Quotes will be awarded to the most qualified economic bidder, as determined by Chesapeake Conservancy. Chesapeake Conservancy reserves the right to reject any or all quotes and/or cancel the quote for any reason.

CONTRACTOR QUOTE FORM

Page 1 of 2

Contractor Name: _____

Project Name: Andrew Snook Engineering Services

Project Location: 972 Jones Hill Road, Middleburg, PA 17842, Snyder County

1. Price– Complete Contractor Quote Form Page 2 – **Required**

RCPP funding for Technical Assistance is provided through NRCS therefore we are using their categories for defining technical service categories. Include all Staff Position Titles that will be involved with the implementation of this project and Range Rate of staff for those positions, Estimated Number of Hours Per Activity and the Total Cost per Activity. The range of rates should account for the current staff rates and the expected pay increases for those positions over the next 3 years (term of the RCPP producer contract). Bidders may include overhead/admin expenses as a component of their claimed rate but that rate should be customary and reasonable and will be subject to review by NRCS and the Conservancy. Any cost associated with the 6 categories must be broken out. Activities 2-4 are the most typical for this type of project since we have producers with RCPP contracts in place already. Please include additional documentation if you are proposing costs associated with activity 5-6. **DO NOT include any costs associated with permitting on page 2. Please break out permitting costs below.**

Total price to complete the services related to permitting only as outlined in the Project Description – **Required:**

Permitting Services \$_____

2. Date on which design can be started - **Required:** _____

3. Estimated completion date of the design - **Required:** _____

4. Identify any permits required for this project - **Required:** _____

5. List any exclusions and assumptions associated with your proposal - _____

6. Please check whether you are submitting the Contractor General Information Form and supporting documents with this response or if you submitted them under a separate 2024 RCPP Engineering Services RFQ – **Required:**

I have included the Contractor General Information Form with this RFQ response.

I submitted the Contractor General Information Form with a separate 2024 RCPP Engineering Services RFQ.

This quote is submitted in response to the RFQ for the project described above. The quote is based on my knowledge of the plans and specifications identified within. This quote will remain valid for 90 days after submission. If awarded the RFQ, I agree to sign a contract with the Chesapeake Conservancy.

Company Name: _____ Company Tax ID (EIN): _____

Company Address: _____

Representative's Name: _____ Telephone: _____

Email Address: _____

Signature: _____ Title: _____ Date: _____

CONTRACTOR QUOTE FORM

			INSERT REQUIRED INFORMATION (Staff Position Titles, Rate Range, Estimated Hours and Total Cost)			
TA-I Activity Code	Activities	Tasks	Staff Position Title(s)	Rate Range \$xx-\$xx/hr	Estimated # of hours per activity	Total Cost (using avg rates)
RTIP-001	TA Implementation Payment Pre-Application Activity	RCPP related Farm Visits (Follow up visits with NRCS or the farmer to develop application, review documents prior to contract, updating CNMPs or I&Es during ranking, screening, and contracting)				
RTIP-002	Updates to CNMPs as Needed. Amount not to exceed \$2,500/farm	Conservation and Nutrient Management Plan development according to NRCS planning procedures				
RTIP-003	TA Implementation Payment Design on FA Applications or Contracts	Design/Engineering (5. Form Alternatives, 6. Evaluate Alternatives, 8. Design to Std, permit design/app, land rights, surveys, final designs)				
RTIP-004	TA Implementation Payment Installation (TA) on FA Applications or Contracts	Installation (8. Installation, inspections for structural practices)				
Total Cost						

CONTRACTOR GENERAL INFORMATION FORM

Page 1 of 1

Chesapeake Conservancy released ten RFQs for RCPP Engineering Services. Each RFQ is for a different project within the Conservancy's central PA rapid stream delisting catchment areas.

Contractors may bid on one or more of the RFQs. Contractors bidding on multiple RFQs only need to complete and return the Contractor General Information Form and related supporting documents with one of their RFQ submissions.

Contractor Name: _____

Project Name: **2024 RCPP Engineering Services**

1. The following three references are provided with telephone numbers of projects completed of similar scope and size - **Required:**

Name: _____ Telephone: _____

Name: _____ Telephone: _____

Name: _____ Telephone: _____

2. Small Business or Small Diverse Business (See Terms and Conditions for details) - *Check all that Apply*
I have registered with Sam.gov and my business (or any subcontractors listed above) qualifies as a Small Business and/or Small Diverse Business

I have registered with the PA Dept of General Services and my business (or any subcontractors listed above) has been certified as a Small Business and/or Small Diverse Business.

3. Debarment and tax liability status (See Terms and Conditions for details) - **Required:**
 I certify that my business, and any subcontractors, are not debarred by the State of Pennsylvania or the federal government.
 I certify that my business, and any subcontractors, have no tax liabilities and are not in default of a loan or funding agreement administered by the State of Pennsylvania.

7. Certificate of Insurance (See Terms and Conditions for details) - **Required:**
 I have included with my response a copy of my Certificate of Insurance with my current levels of coverage.

This quote is submitted in response to the RFQ for the project described above. The quote is based on my knowledge of the plans and specifications identified within. This quote will remain valid for 90 days after submission. If awarded the RFQ, I agree to sign a contract with the Chesapeake Conservancy.

Company Name: _____ Company Tax ID (EIN): _____

Company Address: _____

Representative's Name: _____ Telephone: _____

Email Address: _____

Signature: _____ Title: _____ Date: _____

ATTACHMENTS:

Attachment A – Andrew Snook NRCS Inventory and Evaluation (I&E) Addendum

Attachment B – NRCS Reporting Requirements (Certification by Practice Sheet and Reimbursement Summary Sheet)

Attachment A

NRCS Inventory and Evaluation (I&E) Addendum

Subject: Inventory and Evaluation Addendum
Andrew Snook farm, Washington Township, Snyder County, PA

Date: 5/3/2024

To: Brandon Ford

Wetland investigation done on Andrew Snooks farm has revealed the proximity of wetlands too close for construction of the originally planned structure. Additionally, Andrew does not like that the structures were separated instead of being a singular structure and Andrew now does not oppose an exterior round manure storage tank.

This addendum will combine the two structures into one longer structure and move to a round tank.

As the original I&E encompasses all of this, the only change will be to the liquid manure storage tank. An adjusted cost scenario is included. The HUA and waste stacking area are capped based on current animal numbers. The reason that the liquid storage tank quantity is effected is that the proposed tank is smaller than the previous allocated tank.

Resizing of the structures and tank (not manure volume) are included in this addendum.

Incentive payment will not deviate from originally calculated I&E.

Sincerely,

Matthew Q. Fisher

Matthew Q. Fisher
Soil Conservation Technician

APPROVED: 5/23/2024

Robert J. Deeski



Desired herd (pen #2):

From original I&E: bedded pack area = 56' feed table length x 39' bedded pack depth
With a 11' wide scrape lane

2,535 ft³ from bedded pack needed in stacking storage.

Desired herd (pen 1):

From original I&E: bedded pack area = 72' feed table length x 32' bedded pack depth
With a 12' wide scrape lane
(Increase this width to 38' to maintain a straight roof line with
above animal group.)

4,403 ft³ from bedded pack needed in stacking storage.

2,535 ft³ + 4,403 ft³ = 6,938 ft³ stacking storage needed with an available depth of 38'

By adding 40' to the end of the structure, adequate storage will be obtained for the dry manure.

Milkhouse waste: 25 cows x 6 gal/day = 150-gallon x 183 days / 7.48 gal/ft³ = 3,670 ft³
56 ft³/day * 50% * 183 days = 5,124 ft³ + 3,670 ft³ = 8,794 ft³

Scrape Lane waste: (pen 2) 2,617 ft³ + (pen 1) 5,124 ft³ + 8,794 ft³ = 16,535 ft³

January:	2.28"	May – October = critical months
February:	2.09"	3.88" + 4.06" + 4.95" + 3.62" + 4.23" + 4.03" = 20.72"
March:	2.49"	
April:	3.45"	25 year, 24 hour storm event = 5.06"
May:	3.88"	
June:	4.06"	
July:	4.95"	
August:	3.62"	
September:	4.23"	
October:	4.03"	
November:	2.78"	
December:	2.92"	

10' desired depth – 20.72" – 5.06" – 6" freeboard – 6" solids = 6.85

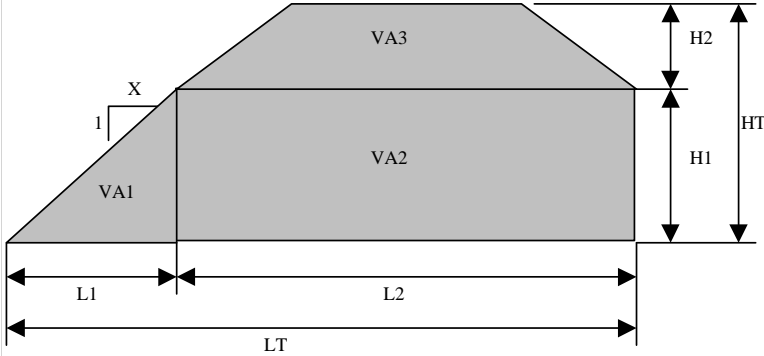
AWM calculates a larger tank (Use AWM).

Ice cream production may increase waste to manure storage tank and is not accounted for in this I&E

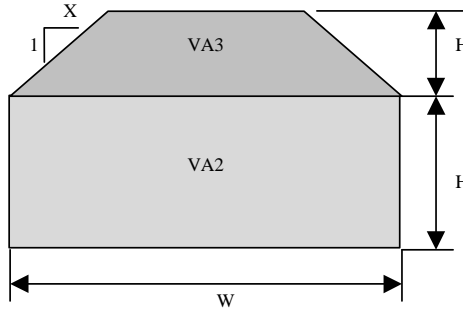
STACKING STRUCTURE CALCULATION SHEET
STRUCTURE WITH ONE END OPEN

Version 2.1
 02/2024

COUNTY		DATE	
OWNER		ADDRESS	
PREPARER		TITLE	DATE
CHECKED		TITLE	DATE



SIDE VIEW



FRONT VIEW

Storage Volume Required	6,938	cu. ft.	
Storage Duration	183	days	
STRUCTURE DIMENSIONS			
X - Angle of repose for manure	1	:1 ratio, (1:1 suggested)	
HT - Total Manure Height	5	ft.	
H1 - Structure Wall Height -4 Ft. max.	4	ft.	
H2 - Stackable Height above wall	1	ft.	
LT - Total Structure Length	38	ft. (Recommend making length divisible by 8')	
L1 - Length for VA1	4	ft.	
L2 - Length for VA2	34	ft.	
W - Structure Width	40	ft.	
CALCULATED VOLUMES			
VA1 =	320.0	cu. ft.	$(V=5*L1*W*H1)$
VA2 =	5,440.0	cu. ft.	$(V=L2*W*H1)$
VA3 =	1,287.3	cu. ft.	$(V=(L2*W*H2)-(X*L2*H2^2)-(X*W*H2^2)+(1.33*X^2*H2^3))$
TOTAL VOLUME =	7,047.3	cu. ft.	6938 cu. Ft. = Required volume

Practice	General	Component Name	Quantity	Units	Payment per Unit	Incentive Payment
313		Waste Storage Facility				
313		Dry Stack, <2K Concrete Fl walls	1200	SF		
313		Tank, 15K<25K CF	14004	CF		
313		Composted Bedded Pack, Concrete Floor, Concrete Wall	4575	SF		
367		Roofs and Covers				
367		Timber Frame Roof	4064	SF		
367		Timber Frame Roof, complex foundation	2864	SF		
382		Fence				
382		Exclusion Fence	134	Ft		
382		ChIn Link Fence	154	Ft		
468		Lined Waterway or Outlet				
468		Rock Lined - 12 inch	200	SF		
500		Obstruction Removal				
500		Removal and Disposal of Wood Structures Regional	1200	SF		
512		Pasture and Hay Planting				
512		Organic, Overseeding with nutrients	1	AC		
516		Livestock Pipeline				
516		2 inches or less buried by LF	300	Ft		
516		Boring, Pipeline, All sizes	33	Ft		
558		Roof Runoff Structure				
558		Roof Gutter	336	Ft		
558		Roof Gutter with Fascia		Ft		
558		Roof Gutter		Ft		
560		Access Road				
560		Constructed road with Heavy Stone Base and Geotextile	91	Ft		
560		Constructed road with Heavy Stone Base and Geotextile		Ft		
561		Heavy Use Area Protection				
561		Concrete Slab, reinforced with gravel foundation	240	SF		
561		Concrete Slab, reinforced with gravel foundation	240	SF		
561		Concrete Slab with Curbs, Reinforced	1152	SF		
575		Trails and Walkways				
575		Walkway with Gravel and Geotextile	500	SF		
578		Stream Crossing				
578		Ramps and channel with Cattle Slats	300	SF		
587		Structure for Water Control				
587		Grated Dropbox	1	EA		
606		Subsurface Drain				
606		Corrugated Plastic Pipe, Single Wall, Less than or equal to 6 inches	336	Ft		
606		Corrugated Plastic Pipe, Single Wall, Less than or equal to 6 inches		Ft		
614		Watering Facility				
614		Frost Proof Trough (2 Ball)	1	EA		
620		Underground Outlet				
620		UO 6 inch or less	100	Ft		
620		UO 6 inch or less	96	Ft		
634		Waste Transfer				
634		Long Scrape with Pushoff, 20LF or greater	367	SF		
Totals					Estimated Payment	

Engineers Estimate:

Structure and associated costs: $50' * 80' = 4,000 \text{ sq.ft.} * \$28 = \$112,000 * 1.45 = \$162,400$

Tank and associated costs: $24.5 * 24.5 * 3.14 * 12' * \$4.00 * 1.45 = \$131,181.5$

$\$162,400.00 + \$131,181.50 = \$293,581.50$

Animal Waste Management Plan Report

prepared for snook 2

Designed By: mqf

Checked By: _____

Date: 5/23/2024

Date: _____

Farm Information

of Operating Periods: 1 State: PA

Data Source: NRCS-2008

Operating Period: January - December

Climate Data

County: Snyder

Station: SELINSGROVE 2 S PA7931

25 Yr - 24 Hr Storm Event: 5.7 inches

Lagoon Loadings:

Rational Design Method:

Barth KVAL: 0

Load Rate for Odor, OCV: 0 lbs VS/cu. ft/day

LRV Max: 0.00625 lbs VS/cu. ft/day

NRCS Design Method:

Anaerobic Load Rate: 0 lbs VS/1000 cu. ft/day

Month	Prec. (in)	Evap. (in)
January	2.28	0.90
February	2.09	0.90
March	2.49	1.50
April	3.45	2.10
May	3.88	3.00
June	4.06	3.90
July	4.95	4.50
August	3.62	4.20
September	4.23	3.60
October	4.03	2.70
November	2.78	1.80
December	2.92	0.90
Total	40.78	30.00

Animal Data

Animal	Type	Quantity	Weight	Manure	VS	TS	Manure	Manure	VS	TS
			lbs	cu.ft/day/AU	lbs/day/AU	lbs/day/AU	cu.ft/day	lbs/day	lbs/day	lbs/day
Dry Cow	Dairy	6	1400	0.84	5.60	6.60	7.06	423.6	47.04	55.44
Heifer (970 lb)	Dairy	20	1200	0.90	7.30	8.50	21.60	1296.0	175.20	204.00
Milker (50 lb)	Dairy	25	1400	1.60	9.20	12.00	56.00	3360.0	322.00	420.00
Totals		51	N/A	N/A	N/A	N/A	84.66	5079.6	544.24	679.44

Location Data

Percent of Manure Deposited in Each Location:

Period 1

structure	Animal Name	Percent Manure
	Milker (50 lb Milk)	50
	Heifer (970 lb)	50
	Dry Cow	50
Totals	Animal Name	Percent Manure
	Milker (50 lb Milk)	50
	Heifer (970 lb)	50
	Dry Cow	50

Additions Data

Waste Water VS Loading: 12.9

Operating Period: 1

Location	Wash Water	Flush Water	Bedding	Amount
	gal/day	gal/day		lbs/day
structure	150.00	0.00		0.00

Runoff Data

Runoff Volume Method: Calculate Monthly Runoff Volumes with AWM

Pervious Watershed Area: 0 acres

Pervious Curve Number Storm: 90

Pervious Curve Number Monthly: 90 (1 day), 77 (30 day)

Impervious Area: 200 sq. ft

25 Year Pervious: 0.00 cu. ft

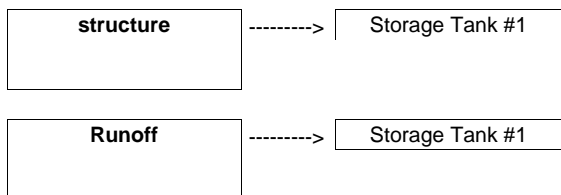
25 Year Impervious: 90.00 cu. ft

25 Year Total: 90.00 cu. ft

Runoff Volumes (1000 cu. ft.)

Month	Pervious	Impervious	Month Total
January	0.00	0.03	0.03
February	0.00	0.03	0.03
March	0.00	0.03	0.03
April	0.00	0.05	0.05
May	0.00	0.06	0.06
June	0.00	0.06	0.06
July	0.00	0.07	0.07
August	0.00	0.05	0.05
September	0.00	0.06	0.06
October	0.00	0.06	0.06
November	0.00	0.04	0.04
December	0.00	0.04	0.04
Total	0.00	0.57	0.57

Management Train



Facility Volume Data (cf/day)

Operating Period 1

Facility	Manure	Wash Water	Flush Water	Bedding	Total Vol
Storage Tank #1	42.33	20.05	0.00	0.00	62.38

Waste Facilities

Storage Tank #1

Max. Storage Vol. Method: Storage Volume

Covered: No

Storage Months: 6 months

Critical Months: May - Oct

Design Dimensions

Shape: Circle

Top Diameter: 48.5 ft

Bottom Diameter: 48.5 ft

Storage Depth: 9.5

Freeboard: 0.5 ft

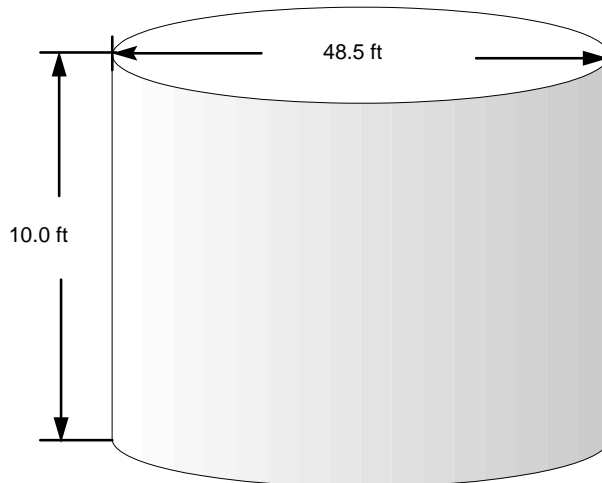
**Permament
Additional
Storage** 0.50 ft

Design Quantities

25Yr24Hr Storm Depth: 5.7 in

Prec Minus Evap Depth: 2.06 ft

Volume Required (Wastes): 11838 cu. ft



Water Budget (1000 cu. ft.)

Month	Runoff	Withdrawal	Waste	Prec - Evap	Ext Prec	CumStorageVol
January	0.03	<input type="checkbox"/>	1.93	0.35	0.00	2.31
February	0.03	<input type="checkbox"/>	1.81	0.32	0.00	2.16
March	0.03	<input type="checkbox"/>	1.93	0.38	0.00	2.35
April	0.05	<input type="checkbox"/>	1.87	0.53	0.00	2.45
May	0.06	<input type="checkbox"/>	1.93	0.60	0.00	2.59
June	0.06	<input type="checkbox"/>	1.87	0.62	0.00	2.56
July	0.07	<input type="checkbox"/>	1.93	0.76	0.00	2.77
August	0.05	<input type="checkbox"/>	1.93	0.56	0.00	2.54
September	0.06	<input type="checkbox"/>	1.87	0.65	0.00	2.58
October	0.06	<input type="checkbox"/>	1.93	0.62	0.00	2.61
November	0.04	<input type="checkbox"/>	1.87	0.43	0.00	2.34
December	0.04	<input type="checkbox"/>	1.93	0.45	0.00	2.42



Andrew Snook
Conceptual Plan



DESIGNED	mqf	DATE	5/2024
DRAWN	mqf	CHECKED	5/2024
CHECKED		APPROVED	

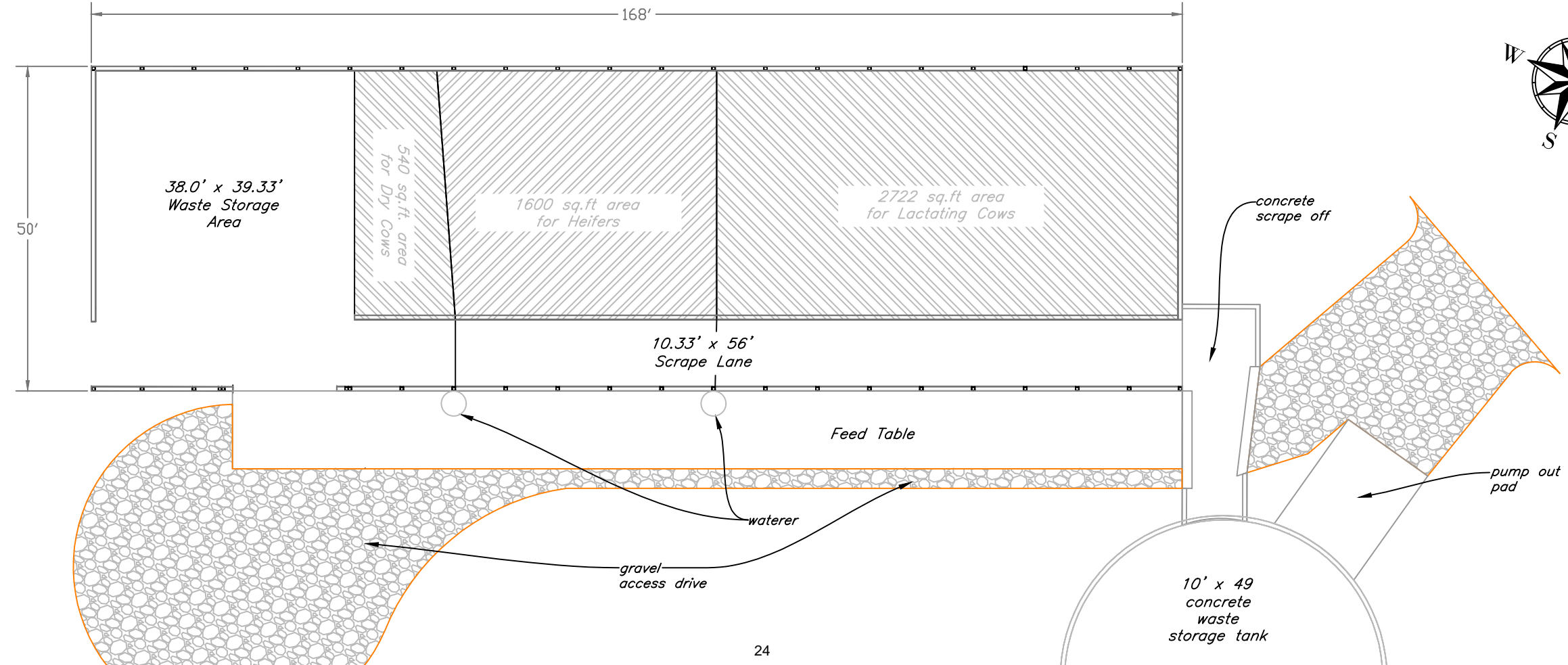
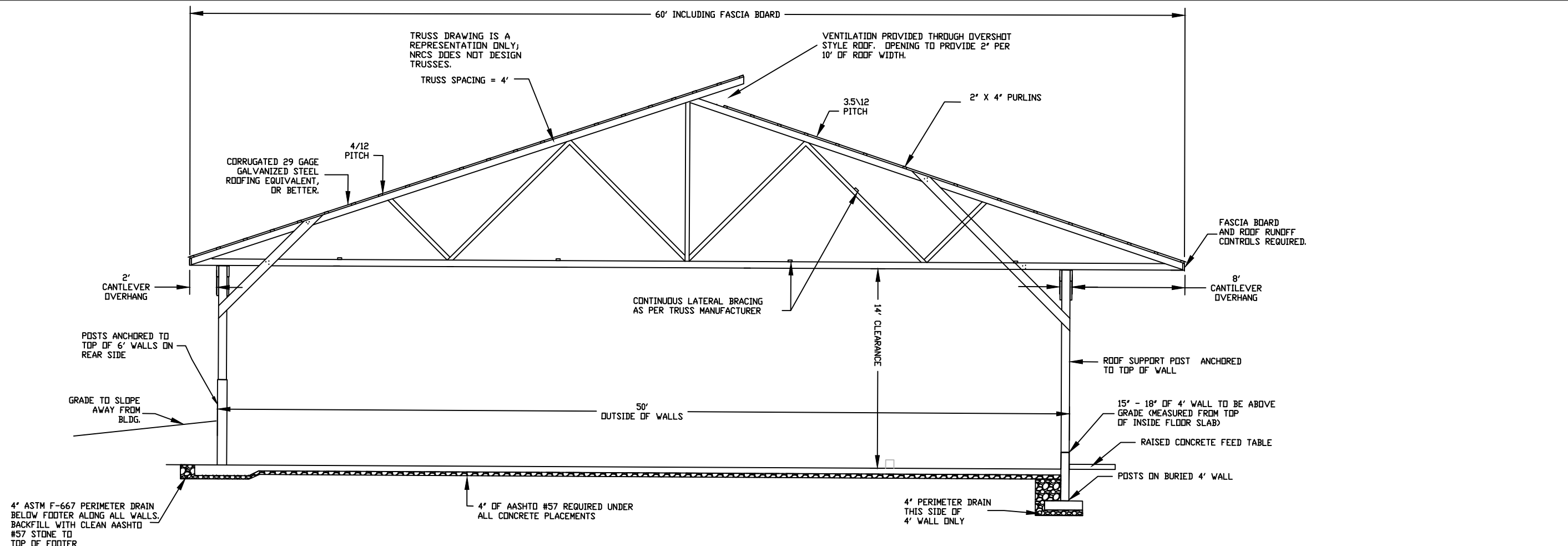
Washington Township
Snyder County, PA

Andrew Snook Inventory and Evaluation Conceptual Plan



FILE NO.
M&E1_RECOVER000.DWG

DRAWING NO.
SHEET 1 OF 2



DATE	1/2024
DESIGNED	mqf
DRAWN	mqf
CHECKED	
APPROVED	

Andrew Snook
Inventory and Evaluation
Conceptual Plan
Washington Township
Snyder County, PA

United States
Department of
Agriculture
USDA
Natural Resources
Conservation Service

FILE NO.
A&E1_RECOVER000.DWG

DRAWING NO.

SHEET 2 OF 2

Attachment B

RCPP TA-I Practice Certification Sheet

RCPP Project Name: Delisting Ag-Impaired Streams in Central PA
 RCPP Project Number: 2761
 RCPP Contract Participant and Contract Number:

Technical Assistance - Implementation (TA-I) Verification of Certification for Payment

Date:					Activity Type (\$)					Travel Expenses			
CIN	Practice Code and Name	Certified by:	Description	Completed	Pre-Application	Planning	Design	Installation	Checkout	Mileage	IRS Rate	Total Travel Expenses	Reimbursement Request

**Attach all invoices and travel logs (if applicable) associated with this practice, showing applicable hourly staff rates and detailed travel records (if applicable), and Design Cover Sheet showing certification
 Complete a separate sheet for each practice*

I hereby certify that to the best of my knowledge this practice has been completed fully and to NRCS standards.

<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <i>Functional Review w/JAA (if certified by consultant)</i>	<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> Printed Name and Title:
<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> <i>NRCS DC - (signature, date)</i>	<hr style="border: 0; border-top: 1px solid black; margin-bottom: 5px;"/> Printed Name:

EXAMPLE - RCPP TA-I Practice Certification Sheet

RCPP Project Name: XXXXXXXXXXXXXXXX
 RCPP Project Number: 1111
 RCPP Contract Participant and Contract Number: Joe Smith, 111222333444

Technical Assistance - Implementation (TA-I) Verification of Certification for Payment

Date: 1/1/2024

CIN	Practice Code and Name	Certified by:	Description	Completed	Activity Type (\$)					Travel Expenses			Reimbursement Request
					Pre-Application	Planning	Design	Installation	Checkout	Mileage	IRS Rate	Total Travel Expenses	
1	340 - Cover Crop	Joe Planner - Partner xyz	Cover crops planted on planned land units per conservation plan. Establishment verified.	12/1/23	\$0.00	\$0.00	\$0.00	\$0.00	\$79.00	23	\$0.63	\$14.49	\$93.49

*Attach all invoices and travel logs (if applicable) associated with this practice, showing applicable hourly staff rates and detailed travel records (if applicable), and Design Cover Sheet showing certification

I hereby certify that to the best of my knowledge this practice has been completed fully and to NRCS standards.

Functional Review w/JAA (if certified by consultant) _____ Printed Name and Title: _____

NRCS DC - (signature, date) _____ Printed Name: _____

Technical Assistance - Implementation (TA-I) Verification of Certification for Payment

Date: 1/1/2024

CIN	Practice Code and Name	Certified by:	Description	Completed	Activity Type (\$)					Travel Expenses			Reimbursement Request
					Pre-Application	Planning	Design	Installation	Checkout	Mileage	IRS Rate	Total Travel Expenses	
2	313 - Waste Storage Facility	Ag, Inc	XXXX gallon waste storage completed. Supporting practices complete. Inspection and redline docs completed.	11/15/23			\$4,000.00	\$5,200.00	\$2,200.00	0	\$0.63	\$0.00	\$11,400.00

*Attach all invoices and travel logs (if applicable) associated with this practice, showing applicable hourly staff rates and detailed travel records (if applicable), and Design Cover Sheet showing certification

I hereby certify that to the best of my knowledge this practice has been completed fully and to NRCS standards.

Functional Review w/JAA (if certified by consultant) _____ Printed Name and Title: _____

NRCS DC - (signature, date) _____ Printed Name: _____

Technical Assistance - Implementation (TA-I) Verification of Certification for Payment

Date: 1/1/2024

CIN	Practice Code and Name	Certified by:	Description	Completed	Activity Type (\$)					Travel Expenses			Reimbursement Request
					Pre-Application	Planning	Design	Installation	Checkout	Mileage	IRS Rate	Total Travel Expenses	
4	102 - CNMP	Ag, Inc	I&E, NMP, Conservation Plan components complete, CNMP done.	10/6/23		\$3,252.50				0	\$0.63	\$0.00	\$3,252.50

*Attach all invoices and travel logs (if applicable) associated with this practice, showing applicable hourly staff rates and detailed travel records (if applicable), and Design Cover Sheet showing certification

I hereby certify that to the best of my knowledge this practice has been completed fully and to NRCS standards.

Functional Review w/JAA (if certified by consultant) _____ Printed Name and Title: _____

NRCS DC - (signature, date) _____ Printed Name: _____

RCPP TA-I Reimbursement Summary Sheet

RCPP Project Name: Delisting Ag-Impaired Streams in Central PA
 RCPP Project Number: 2761
 RCPP Contract Participant and Contract Number:

Technical Assistance - Implementation (TA-I) Reimbursement Request Summary Sheet

Period Start: Period End:

CIN	Practice Code and Name	Certified by:	Description	Certification Date	Activity Type (\$)					Mileage (\$)	Reimbursement Request
					Pre-Application	Planning	Design	Installation	Checkout	Total Travel Expenses	
TOTAL					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

3rd Party or Partner Staff Information for Reimbursement				
Position	Organization	CIN	# of Hours	\$/hr rate

*Staff rates must match rates in current TA-I Supplemental Agreement

EXAMPLE - RCPP TA-I Reimbursement Summary

RCPP Project Name: XXXXXXXXXXXXXXXXX

RCPP Project Number: 1111

RCPP Contract Participant and Contract Number: Joe Smith, 111222333444

Technical Assistance - Implementation (TA-I) Reimbursement Request Summary Sheet

Period Start: 1/1/2023

Period End: 12/31/2023

CIN	Practice Code and Name	Certified by:	Description	Certification Date	Activity Type (\$)					Mileage (\$)	Reimbursement Request
					Pre-Application	Planning	Design	Installation	Checkout	Total Travel Expenses	
1	340 - Cover Crop	Partner xyz	RCPP related Farm Visits (certification of practice)	12/1/23					\$79.00	\$14.49	\$93.49
2	313 - Waste Storage Facility	Ag, Inc	RCPP related Farm Visits (Follow up visits for design and installation of contracted practices)	11/15/23			\$4,000.00	\$5,200.00	\$2,200.00		\$11,400.00
4	102 - CNMP	Ag, Inc	IE, NMP, Conservation Plan, CNMP attachments	10/6/23		\$3,252.50					\$3,252.50
TOTAL					\$0.00	\$3,252.50	\$4,000.00	\$5,200.00	\$2,279.00	\$14.49	\$14,745.99

3rd Party or Partner Staff Information for Reimbursement				
Position	Organization	CIN	# of Hours	\$/hr rate
Engineer	Team Ag	2	76	150
Conservation Planner	Team Ag	4	26.25	102
Drafter	Team Ag	4	5.75	100

*Staff rates must match rates in current TA-I Supplemental Agreement