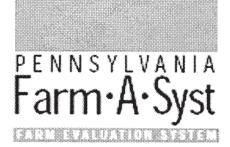
Attachment

FARM MAP EXAMPLE





CETTING STARTED

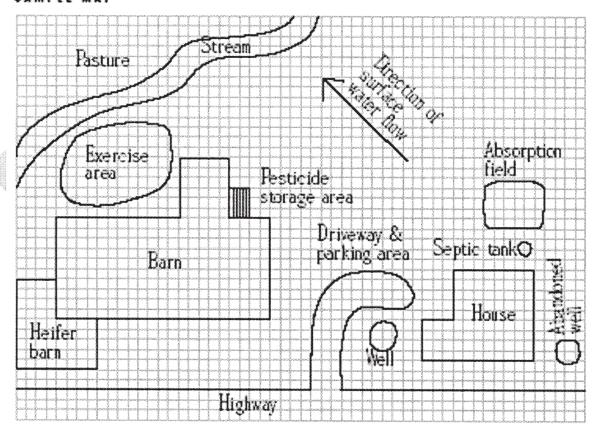
Farmstead Map

Amap can be a record of important features on the farmstead that can impact water quality. Drawing a farmstead map will make it easier to evaluate potential sources of pollution and to locate wells, septic tanks and absorption fletch in the future when they need maintenance.

WHY MAKE A MAP?

While each property has physical features that cannot be changed, there are many practices that can minimite risks. A trimisted map can indicate areas where elitoris for improvement should be focused for the best return. Some of the Pennsylvania Farm+A-Syst worksheets will refer to locations and clistances between various farmstead items and potential locations where farmstead practices or conditions can affect groundwater or surface water. A farmstead map can be a handy reference when completing these worksheets. The following farmstead map shows common features and can be used as a sample for an actual map.

SAMPLE MAP



ielemmanderschreitenstam die die schliest ausend ist gesten geste hande er vertrenzieren einen zig eingeber seitende gepoet bezeit einen den statisch gegenoliege wurd die bestellneite komen hijnig is vertreit ihre wordließ pur beitge reure neugenangen.

Attachment #____

Conservation Systems to Meet the PA E&S Guidelines to be Used as an Interim Guideline when a Plan Meeting Soil Loss (T) Cannot be Obtained

Guiding Principles for Soil Erosion Control The Following Assist in Reduction of Soil Erosion:

- No-Till
- More years of hay in the rotation
- Corn Residue left
- Contour Strips with alternating close grown crops such as small grain and hay

ORAFT

• Fields may be split to apply a different system if two different mapping units with different slopes occur

For A slopes (0% to 3%) as an average across the field as shown on the County Soil Survey

Corn Silage (Typical for dairy)

Corn silage and hay rotation, may include small grain.

Cover crop established before or immediately after corn silage harvest.

Cover crop must be 50% canopy or 4" before winter.

All grain crops planted using reduced tillage with 30% residue remaining on the surface at planting.

Corn Grain (Typical for livestock operations other than dairy)

Corn grain and hay rotation (may include small grain).

All grain crops planted and hay establishment using reduced tillage with 30% residue remaining on the surface at planting.

Cash grain operations (Typical for operations without livestock)

Corn grain, soybeans, small grain rotation.

All crops planted using reduced tillage with 30% residue remaining on the surface at planting.

Need to insert county appropriate crop rotation for most extreme situation for "A" slope (i.e. Bradford = 4 years of corn followed by 4 years of hay)

Agriculture Action Packet DRAFT 2-1-07

Conservation Systems to Meet the PA E&S Guidelines to be Used as and Iterem Guideline when a Plan Meeting Soil Loss (T) Cannot be Obtained - Page 2

For B slopes (3%-8%) as an average across the field as shown on the DRAFT **County Soil Survey**

Corn Silage (Typical for dairy)

Corn silage and hay rotation, may include small grain.

Cover crop established immediately after corn silage harvest.

Cover crop must be 50% canopy or 4" high before winter.

All grain crops planted using reduced tillage with 30% residue remaining on the surface at planting.

Corn Grain (Typical for livestock operations other than dairy)

Corn and hay rotation (may include small grain).

All crops planted and hay establishment using reduced tillage with 30% residue remaining on the surface at planting.

Cash grain operations (Typical for operations without livestock)

Corn grain, soybeans, and small grain rotation.

All crops planted no-till

All crops planted leaving 30% residue after planting with rows on the contour.

Need to insert county appropriate crop rotation for most extreme situation for "B" slope (i.e. Bradford = 4 years of corn followed by 5 years of hay)

For C slopes (8%-15%) as an average across the field as shown on the **County Soil Survey**

Corn Silage (Typical for dairy)

Corn silage, small grain, and hay rotation.

Years of small grain and hay in the rotation must equal or exceed years of corn with residue removed.

Cover crop established before or immediately after corn silage harvest.

Cover crop must be 50% or 4" high before winter.

All crops planted in contour strips with alternating hay or close grown crop such as wheat.

All crops planted using no-till.

Corn for Grain (Typical for livestock operations other than dairy)

Corn, small grain, and hay rotation.

All crops planted in contour strips with alternating hay or close grown crop such as wheat.

All crops planted and hay establishment using no-till.

Agriculture Action Packet DRAFT 2-1-07

Conservation Systems to Meet the PA E&S Guidelines to be Used as and Iterem Guideline when a Plan Meeting Soil Loss (T) Cannot be Obtained - Page 3

Cash grain operations (Typical for operations without livestock)

Corn, soybeans and small grain rotation.

Cover crop may be established after soybean harvest.

All crops planted in contour strips with alternating close grown crop such as wheat.

All crops planted using no-till.

Need to insert county appropriate crop rotation for most extreme situation for "C" slope (i.e. Bradfore = permanent hay)

Well designed and constructed diversions and terraces to reduce the slope length, may sometimes be supplemented for agronomic practices. Where concentrated flows of water during storms cause soil erosion plow skips with good sod must be used in small areas and constructed grass waterways in larger flow areas. For assistance, call your local county conservation district office.



Attachment #____

Manure Application Record Sheet Example

Field Identification	Crop	Acres	Manure Type	Application Rate	Date	Weather
			T			
		n	RATI			
		U	2-1-07			

Attachment #_____ Nutrient Balance Sheets



Prepared For

(Operator's Name
	Operator's Address
	Operator's Telephone Number
Prepa	red By
	Nutrient Management Specialist's Name
	Nutrient Management Specialist's Program Certification Number
i	Specialist Signature
-	Date of Development

Nutrient Balance Worksheet Appendices

The following appendices need to accompany the Nutrient Balance Worksheets if applicable:

- Maps of fields where manure is to be applied including applicable manure application setbacks
- Completed P-Index spreadsheet (or other similar information summary) listing the source and transport factors and final Index result for each crop management unit (if applicable)

Nutrient Balance Worksheet

Crop Management Unit Identification				Acres		Crop			Yield	
(Area must be clearly identified on a map)										
Manure Plan Basis	P removal rates >150' application setback from streams, lakes or ponds (Use the P ₂ O ₅ column to determine acceptable rate and complete the		 N r >15 from por Soi 	N requirement rates >150' application setback from streams, lakes or ponds Soil test < 200 ppm			P Index P Index P Index evaluation (must be attached) (Use the appropriate column(s)			Notes:
		N column to determine additional N needed)		(Use the N column to determine acceptable rate)			based on the P Index to determine acceptable rate)			
Manure Type Manure Analysi <u>Total N</u> P₂O₅				is Applic K₂O			ation Timing A			pplication Method
A) D		- (II- (A)			1		P ₂ O ₅	Ар	plication	Record & Notes ¹
Nitrogen 6;1.2-7) Phospho	orus (option 2 &	or Soil Test (AG Table 3) - Table 3 or Soil Test (AG Table 1.2-9)							<i></i>	
B) Fertilizer Applied (lb/A) (Regardless of Manure e.g. Starter)										
Other Organic Sources Applied (lb/A) (e.g. Biosolids, Other Manure)			/A)							
C) Residual Manure N (lb/A) (Rarely 0 lb N/A; Frequent 20 lb N/A; Continuous 35 lb N/A)										
D) Previous Legume N (lb/A) Table 4 or Soil Test Report (AG Table 1.2-8)										
E) Net Nutrient Requirement (lb/A) (A – B – C - D)					<i>*</i>		I			
F) Manure Nutrient Content (lb/ton or lb/1000gal)										
G) Nitrogen Availability Factor Table 5 (AG Table 1.2-14)									R	1-07
H) Available Nitrogen (lb/ton or lb/1000gal) (F x G)										2-1-07
I) Balanced Manure Rate (ton/A or gallons/A) For N: (E ÷ H) For P: (E ÷ F)										
J) Actual Planned Manure Rate						1				
(ton/A or gallons/A) Must be less than or equal to the appropriate Balanced Rate based on the plan basis being used										
K) Nutrients Applied at Planned Rate (lb/A) For N: (J x H) For P: (J x F)										
L) Nutrient Balance at Planned Rate										

¹ Use this column to record when the planned manure and fertilizer rates where applied or to note changes to the planned groups or rates.



Operation Maps

Maps (or aerial photographs) required to accompany Nutrient Balance Sheets must identify: crop management unit (field) identification, acreage and boundaries, manure application setback areas and buffers and associated landscape features, and location of in-field manure stacking areas (including each site in stacking rotation).

Phosphorus Index

Include the current Pennsylvania Phosphorus Index Spreadsheet or paper worksheet for each field that required Part B of the P Index when using Manure Plan Basis Option 3.

Attachment #____

Excerpts from the Pennsylvania Clean Streams Law Chapters 102 & 91

Agricultural Nutrient Management Requirements In Pennsylvania¹

Pennsylvania Clean Streams Law — Under the Clean Streams Law it is unlawful to discharge pollutants to surface or groundwater except as allowed by regulations or a DEP permit. All agricultural operations are subject to the provisions of the Clean Streams Law. Generally speaking, activities on agricultural operations that could result in pollution are only allowed if best management practices are implemented to comply with the requirements for meeting water quality protection standards. Agricultural activities that result in the release of nutrients that pollute surface or groundwater could result in enforcement actions. This risk of an enforcement action is greatest when pollution from these activities occurs during conditions up to and including 25 year/24 hour storm events² for production and manure storage areas, and 10 year/24 hour storm events³ in fields where nutrients are applied, or when pollution from these areas impairs designated water uses.

DEP Regulations for All Farms (25 Pa. Code § 91.36)

- a. All Manure⁴ Storage Facilities⁵
- 1. Design/operation:
 - a) Must be designed, operated and maintained to prevent discharges:
 - i. No discharges to surface and groundwater, up to a 25 year/24 hour storm
 - ii. New/expanded swine, veal and poultry Concentrated Animal Feeding Operations (CAFOs) after 4/13/03 -- 100 year/24 hour storm.
 - b) Liquid and semi-solid manure storage facilities must have adequate freeboard

¹ This is a summary of current legal requirements, and available guidance, for all farms in Pennsylvania. Details are contained in the regulations. Other requirements may also apply in certain circumstances, such as where the farm is in a Special Protection watershed. A separate summary describes legal requirements for erosion and sediment control.

² In PA, depending on your location, this can range from 4.1" to 5.8" of rainfall. County specific data is available in DEPs Erosion and Sediment Pollution Control Manual or your local county conservation district

³ In PA, depending on your location, this can range from 3.6" to 5.0" of rainfall. County specific data is available in DEPs Erosion and Sediment Pollution Control Manual or your local county conservation district

⁴ Manure – animal excrement, including poultry litter, which is produced at an agricultural operation. It includes bedding and raw materials, which are commingled with that excrement.

⁵ Manure storage facility – permanent structure or pond, a portion of a structure or pond, or a group of structures or ponds at one agricultural operation, used to contain manure or agricultural process wastewater. This includes concrete, metal or other fabricated tanks or under building structures, as well as earthen and synthetically-lined manure storage ponds. Anaerobic digesters and treatment lagoons are two examples. Compost facilities must follow the approved practices in the composting supplement to the Manure Management Manual, plus the applicable rules for facility permitting, design and management that apply to the operation.

- i. New or expanded after 1/29/00 and > 1000 Animal Equivalent Units⁶ (AEUs): 24" (or 6" for enclosed)
- ii. All others: 12" for earthen (lined or unlined) ponds and 6" for structural
- 2. *DEP permit*: Required unless the Manure Management Manual and the *Pennsylvania Technical Guide* Standards are followed⁷, and:
 - a) For new or expanded liquid and semi-solid manure storage after 1/29/2000:
 - i. If not certified by a licensed Professional Engineer as meeting the Manure Management Manual and applicable NRCS standards
 - ii. Any operation > 1000 AEUs
 - b) Also, for new or expanded liquid and semi-solid manure storage after 10/22/2005 if:
 - i. Pond with total capacity > 1 million gallons and in watersheds of HQ/EV streams⁸ or agricultural nutrient impaired stream segment ⁹
 - ii. ii. Any facility with a total capacity > 2.5 million gallons

b. Land application of manure

- 1. **Setbacks:** Minimum 100' manure application setback or 35' vegetative buffer¹⁰ from certain surface waters (streams with a defined bed and bank, lakes and ponds)
 - a) For all CAOs, CAFOs and their importers
 - b) For CAFOs, setbacks also apply to all surface waters, and conduits to surface waters
- 2. **DEP permit/approval:** required unless follow Manure Management Manual¹¹, except:
 - a) CAFOs¹²: DEP CAFO permit always required
 - b) CAOs¹³: must follow Nutrient Management Plan required by State Conservation Commission (SCC) under Act 38 (no DEP permit required unless also a CAFO)
- c. <u>Overall legal requirement</u>: Unlawful to discharge pollutants from an agricultural operation to surface or groundwater unless permitted or authorized under DEP regulations. Unlawful discharges, including those from fields, silage and manure storage facilities, milkhouses, barnyards and animal concentration areas, are subject to enforcement.

⁶ An animal equivalent units is 1,000 pounds of live animal weight

⁷ PA Tech Guide Standard 313 provides design criteria and requires a written O&M plan for manure storage facilities. Other PATG standards such as 634 Manure Transfer shall apply as needed for the individual site design. The Manure Management Manual specifies system designs based on a nutrient management plans and proper O&M ⁸ As identified on DEPs Chapter 93 list

⁹ As identified on DEPs 303 (d) list

¹⁰ Vegetated buffer – permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field to slow water runoff, enhance water infiltration, and minimize the risk of any potential pollutants from leaving the field and reaching surface waters. Buffer and setback areas can continue to be used for crop production. Pasturing of animals within the buffer must follow prescribed grazing standards in the PATG. A predominant pattern of sheet flow must be established through the buffer for it to be effective. Under the setback option, nutrients, if needed, will have to be provided by sources other than mechanically applied manure. Pasturing in the setback areas is done to minimize stream and stream bank damage, and to avoid over-grazing of the vegetative cover. Under the buffer option, management plans for crop and pasture uses in these areas assure that the buffer's design capacity to remove sediments and nutrients is maintained. Buffer areas are managed in such a way as to control invasive and noxious plant species.

¹¹ Manure Management Manual specifies a current written plan that balances nutrient applications with crop needs, record keeping and BMPs to protect water quality.

¹² See below

¹³ See below

<u>DEP's Manure Management Manual</u> — This manual, along with the *Pennsylvania Technical Guide* (for manure storage facilities and animal concentration areas) and the Penn State Agronomy Guide (for land application and nutrient management plans under the Manure Management Manual), identifies the preferred practices to comply with § 91.36. These practices are similar to those in the SCC's nutrient management program for CAOs except for minimum setback/buffer requirements and accounting for the use of exported manure. Also, required plans need not be prepared by a certified specialist or approved unless required by the department.

a. Manure storage facilities

- 1. BMPs for manure storage and management follow PATG standards for design, installation, operation and maintenance.
- 2. Liquid and semi-solid manure storage systems are designed, construction overseen and certified to meeting standards by a Professional Engineer, or DEP permit/approval needed (some large storage facilities will always require a permit¹⁴

b. Land application of manure

- 1. Manure generation and application rates follow the Penn State *Agronomy Guide*, Soil Fertility Management Section including Soil Testing, Typical Plan Nutrient Recommendations and Manure Nutrient Management.
- 2. Manure nitrogen application rates will not exceed the crop nutrient needs (after accounting for residual nutrients and other applied nutrients).
- 3. Manure hydraulic loading rates do not exceed the soil infiltration rate.
- 4. Manual revisions in 2006 will describe both nitrogen and phosphorus (based on the options available for P-based planning) considerations following the Nutrient Management regulation update.
- 5. Manure applied adjacent to streams will follow the requirements in the Manual Management Manual related to snow-covered, frozen, saturated ground and potential flooding.

c. Nutrient Management Plans Under the Manure Management Manual

- 1. Written Nutrient management plan under the Manure Management Manual includes:
- a) BMPs for manure management and storage; including BMPs for fields, silage and manure storage areas, milking centers, barnyards and Animal Concentration Areas and other nutrient sources utilized on the operation._Practices are required to prevent discharge of nutrients to surface and groundwater. Acceptable BMPs conforming with the PATG standards will address clean water diversion or exclusion, and treatment or land application of nutrients.
 - b) Calculations for manure generation and nutrient availability for the operation
 - c) Crop field and pasture management plans including methods, timing and rates of all nutrient applications (total nitrogen not to exceed crop and forage needs; and, selection of P-based planning options according to Manure Management Manual revisions)
 - d) Guidelines and special conditions for manure management and application for efficient use of nutrients and environmental protection

¹⁴ Generally, manure storage ponds > 1 million gallons in HQ/EV or Ag impaired watersheds and all manure storage ponds and structures > 2.5 million gallons require permits

- e) Maps to scale identifying the fields, pastures and BMPs in the plan
- 2. Written nutrient management plan under the Manure Management Manual need not be developed by certified specialists or approved by DEP, unless requested by the department
- 3. A current, implemented and approved NMP under Act 38 of 2005 will met this standard.

d. Records

- 1. Records are kept on manure (and other nutrient sources generated and utilized on the operation) applications and crop yields by field, exported manure ¹⁵ and revisions made to the nutrient management plan.
- 2. Plans and records shall be retained on site and available for inspection for the previous 3 years.
- 3. The written nutrient management plan shall be updated to the current operation as needed and be ret ained on site

State Conservation Commission's Regulations for CAOs (25 Pa. Code Chapter 83) – Additional requirements apply to farms that are CAOs under Act 38 of 2005, which replaced the Nutrient Management Act. Other farms may volunteer to meet these requirements to obtain grant funds and other benefits.

CAOs are agricultural operations with more than two AEUs per acre of land suitable and available for manure application. Contact you local county conservation district for more information.

DEP CAFO Regulations (25 Pa. Code § 92.5a) – These regulations implement the federal permit requirements for "concentrated animal feeding operations." New changes were put in place in October 2005 expanding the definition of a CAFO and adding requirements for water quality protection.

CAFOs now include:

- 1. Operations with any combination of animals that result in more than 1000 AEUs
- 2. CAOs with more than 300 AEUs
- 3. Any operation that exceeds any of the following thresholds:
 - a) 700 mature dairy cows, whether milked or dry;
 - b) 1,000 yeal calves;
 - c) 1,000 cattle other than mature dairy cows or veal calves;
 - d) 2,500 swine each weighing 55 pounds or more;
 - e) 10,000 swine each weighing less than 55 pounds;
 - f) 500 horses;
 - g) 10,000 sheep or lambs;
 - h) 55,000 turkeys;
 - i) 30,000 laying hens or broilers, if using a liquid manure handling system;
 - i) 125,000 chickens (other than laying hens) if using a dry handling system;
 - k) 82,000 laying hens if using a dry handling system;
 - 1) 30,000 ducks, if using a dry manure handling system;

¹⁵ Proposed regulations under Pennsylvania Act 49 of 2004 for a Commercial Manure Haulers and Broker Certification Program include relevant Nutrient Balance Sheet, record keeping and certification requirements.

m) 5,000 ducks, if using a liquid manure handling system.

These operations are required to obtain a permit from DEP. Failure to obtain a permit is a violation of state and federal law, and violators are subject to citizen suits. The permit requires an approved Nutrient Management Plan under Chapter 83. Contact your regional DEP office for more information.



Erosion And Sediment Control Requirements for Agricultural Operations In Pennsylvania

Pennsylvania Clean Streams Law – Under the Clean Streams Law it is unlawful to discharge pollutants to surface or groundwater except as allowed by regulations or a DEP permit. All agricultural operations are subject to the provisions of the Clean Streams Law. Generally speaking, activities on agricultural operations that could result in pollution are only allowed if best management practices are implemented to comply with water quality protection standards. Agricultural activities that cause accelerated soil erosion from areas such as fields and stream banks that pollute surface or groundwater could result in enforcement actions. This risk of an enforcement action is greatest when pollution from field erosion and sedimentation begins during conditions less than 10 year/24 hour storm events or impairs designated water uses.

The Clean Streams Law also provides that a complete and fully implemented Conservation Plan can protect farmers from penalties related to sediment pollution resulting from agricultural activities included in the plan.

DEP Regulations on Erosion and Sedimentation Control (25 Pa. Code § 102.4) – This regulation applies to all agricultural operations that conduct plowing and tilling, as well as other activities that disturb the surface of the land.

a. Agricultural plowing or tilling (§102.4a)

1. BMPs

- a) Must minimize the potential for accelerated erosion and sedimentation¹⁶ that would result in pollution during conditions up to and including 10 year/24 hour storm events or violate water quality standards¹⁷
- b) Landowner, lessee, renter, tenant and other occupiers who conduct plowing or tilling are all responsible for implementing the required BMPs

2. Written E&S plan

- a) Required if plowing or tilling (includes no-till farming) > 5,000 square feet
- b) Must be designed to minimize the potential for accelerated erosion and sedimentation for plowing or tilling
- c) A farm conservation plan meets this requirement for plowing and tilling when it includes ¹⁸
 - i. Conservation practices¹⁹ necessary to protect water quality from accelerated E&S, and
 - ii. Meets "T"²⁰ across the crop rotation for plowed or tilled fields

¹⁶ Accelerated erosion and sedimentation is anything greater than natural loss up to and including a 10 year/24 hour storm event . In Pennsylvania, depending on your location, this can range from 3.6" to 5.0" of rainfall. County specific data is available in DEP's Erosion and Sediment Pollution Control Manual or from your local county conservation district office.

¹⁷ The requirement is to prevent loss of sediment to surface waters.

¹⁸ Will be defined in terms of NRCS standards – Jana M. to obtain an NRCS 1991 plan, as referenced in the regulation, as well as a current plan

¹⁹ Acceptable practices are described in the *Pa Tech Guide*

- d) Landowner, lessee, renter, tenant and other occupiers who conduct plowing or tilling are all responsible for making sure a plan exists for the operation
- e) E&S plan shall contain
 - i. Plan maps
 - ii. Soil maps
 - iii. Surface waters (e.g., streams on the property)
 - iv. Drainage patterns (e.g., indication of the direction of sheet flow and location of flow concentrations, such as gullies or swales)
 - v. Description of BMPs
 - A. Tillage systems (e.g., no-till, contour strips)
 - B. Schedules (e.g. crop rotations and associated BMPs)
 - C. Cost effective and technically practical conservation measures (e.g. grassed waterways)
- f) E&S plan shall be available at farm
- b. Construction: Obtain permits as required in §102.5 for earth disturbances over 1 acre (e.g., buildings, road construction)



²⁰ T (soil loss tolerance) is the maximum level of soil erosion that allows high levels of sustainable economic crop activity.



Attachment

Guidance Documents

• DEP Manure Management Manual for manure storage and land application practices (web link)

http://www.dep.state.pa.us/eps/docs/cab200149b1126000/fdr200149e0051190dr200149e32221af/doc20026sb4948013/361-0 300-001.pdf

 $\frac{http://www.dep.state.pa.us/eps/docs/cab200149b1126000/fldr200149e0051190/fldr200149e32221af/doc20033fa5358002/361-0300-002.pdf$

- DEP Erosion and Sedimentation Pollution Control Manual for E&S practices and standards and county specific rainfall information (web link) (couldn't find it!)
- Penn State Agronomy Guide practices for land application of manure (web link) http://agguide.agronomy.psu.edu/cm/default.cfm
- NRCS Conservation Catalog for guidelines for E & S and manure storage and land application guidelines (web link) http://www.pa.nrcs.usda.gov/news/FTPPublications/conscatalog.pdf
- Pennsylvania Technical Guide for agricultural water quality protection practices and standards
 (web link) <a href="http://efotg.nrcs.usda.gov/treemenuFS.aspx?Fips=42027&MenuName="http://efotg.nrcs.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda.gov/treemenuFS.aspx.usda
 - o (The list would be more than a page, and is continually being updated. The standards are listed in eFOTG section IV.)
- The PennState Fact Sheets 254 through 257 and the *NRAES-89 Liquid Manure Application System Design Manual* for manure application provide recommended application rates.
- The NRCS National Irrigation Guide for other types of irrigation (web link)

http://www.wcc.nrcs.usda.gov/nrcsirrig/irrig-handbooks.html

Sources of Technical Assistance

- a. Conservation districts www.pacd.org/
- b. Cooperative Extension <u>www.extension.psu.edu/</u>
- c. Certified Nutrient Management Specialists http://panutrientmgmt.cas.psu.edu/pdf/cert_county_listing.pdf
- d. Certified Crop Advisors http://www.agronomy.org/cca/search_cca.html, other qualified consultants Phone book, newspapers
- e. Farm organizations

menuPA.zip

- f. SCC http://www.agriculture.state.pa.us/agriculture/cwp/view.asp?a=3&q=127144
- g. Natural Resources Conservation Service http://www.pa.nrcs.usda.gov

Attchment #____

Sources of Technical Assistance

- 1. County Conservation District Name/Address/Phone/email/WEB
- 2. County NRCS Name/Address/Phone/email/WEB
- 3. County Extension Service Name/Address/Phone/email/WEB
- 4. DEP Regional Office Name/Address/Phone/email/WEB
- 5. PDA State Office Name/Address/Phone/email/WEB
- 6. SCC State Office Name/Address/Phone/email/WEB

