VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the issuance of the VPDES permit listed below. This permit is being processed as a **Large Concentrated Animal Feeding Operation (CAFO)** permit for a facility that was previously issued an individual VPA permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260 et. seq (effective 1/6/11). The discharge results from release of storm water and wastewaters from an existing CAFO via Discharge Points 001, 002, 003 and 004.

1. Facility Name and Address: Murphy-Brown LLC, Farm 13 and 14
P.O. Box 1240
Waverly, VA 23890

Location: 34373 Munford Lane
Wakefield, VA 23888

SIC Codes: 0213

Permit No: VA0C40003

2. Permit Expiration Date: N/A (issuance)*

*The existing permit for the site was issued as VPA00573, which was issued on May 4, 2001 and expired on May 4, 2011.

3. Owner Contact

Name: Kraig Westerbeek

Title: Assistant VP of Env./Health/Safety

Telephone No.: 910-293-3434

Address: P. O. Box 856, Warsaw, NC 28398

4. Application Technically Complete Regional Office: **Piedmont**

Permit Drafted By: Seth Mullins Date: 04/2014 – 05/2014

Reviewed By: Kyle Winter Date: 05/2014

Public Comment Period Dates: From: To:

5. Receiving Stream Information

Discharge Points	Latitude	Longitude	Name of Nearest Potential Receiving Stream
001	36°55’53.98” N	77°2’04.87”W	UT to Seacorrie Sw
002	36°55’45.65” N	77°2’03.30”W	UT to Seacock Sw
003	36°56’32.41” N	77°2’27.43”W	UT to Mill Run Cr
004	36°56’34.95” N	77°2’15.25”W	UT to Mill Run Cr

Stream:	Unnamed Tributary to Mill Run Creek and Seacorrie Swamp	Section:	2, 2B
River Basin:	Chowan River and Dismal Swamp	Class:	VII, VII
River Subbasin:	Chowan River	Special Standard:	NEW-21, None

7-Day, 10-Year Low Flow (7Q10): MGD	**Attachment 6**: Flow Frequency Analysis and 303(d) Fact Sheets
1-Day, 10-Year Low Flow (1Q10): MGD	**Attachment 6**: Flow Frequency Analysis and 303(d) Fact Sheets
30-Day, 5-Year Low Flow (30Q5): MGD	**Attachment 6**: Flow Frequency Analysis and 303(d) Fact Sheets
30-Day, 10-Year Low Flow (30Q10): MGD	**Attachment 6**: Flow Frequency Analysis and 303(d) Fact Sheets
7Q10 High Flow months*: MGD	**Attachment 6**: Flow Frequency Analysis and 303(d) Fact Sheets
1Q10 High Flow months*: MGD	**Attachment 6**: Flow Frequency Analysis and 303(d) Fact Sheets
Harmonic Mean Flow (HM): MGD	**Attachment 6**: Flow Frequency Analysis and 303(d) Fact Sheets
Tidal?	No
On 303(d) list?	YES

6. Operator License Requirements: N/A
7. Reliability Class: N/A

8. Permit Characterization:

Private X Federal State POTW PVOTW

Possible Interstate Effect Interim Limits in Other Document

9. Discharge Description

Discharge Points	DISCHARGE SOURCE	TREATMENT	ADDITIONAL BEST MANAGEMENT PRACTICES DISCHARGE SOURCE
001	Production Area – Farm 13	Secondary Containment	Nutrient Management Plan, Buffers, Setbacks, Conservation Tillage, Grass Filter
002	Production Area – Farm 13	Secondary Containment	
003	Production Area – Farm 14	Secondary Containment	
004	Production Area – Farm 14	Secondary Containment	

Comments:

Farms 13 and 14 consist of 14,700 swine weighing 55 pounds or over and 6,300 swine weighing under 55 pounds. Approximately 20.4 MG of wastewater is generated at this site annually and 188 acres of land under the control of the applicant are available for land application of this wastewater.

Sanitary wastes from the employees are directed to a separate drainfield.

See **Attachment 4** for Facility Diagrams

10. Sewage Sludge Use or Disposal: N/A

11. Discharge Location Description:

Name of USGS Topographic Map: Manry
See **Attachment 3**: Topographic Map

12. Material Storage: Wastewater is stored in two anaerobic lagoons with a combined capacity of 58.9 MG.

13. Ambient Water Quality Information:
During the 2012 305(b)/303(d) Integrated Water Quality Assessment Report, Airfield Pond UT was considered Category 5A waters ("A Water Quality Standard is not attained. The water is impaired or threatened for one or more designated uses by a pollutant(s) and requires a TMDL (303d list).") The applicable fact sheets are attached. The Fish Consumption Use was impaired due to a VDH advisory for mercury, the Recreation Use was impaired due to E. coli exceedances, and the Aquatic Life Use was impaired due to low dissolved oxygen. The Wildlife Use was not assessed.
Seacorrie Swamp UT was not assessed for any Designated Use; therefore, it is considered a Category 3A water.
Seacock Swamp UT was also considered a Category 5A water. The Fish Consumption Use was impaired due to a VDH advisory for mercury, the Recreation Use was impaired due to E. elevated fecal coliform, and the Aquatic Life Use was impaired due to low dissolved oxygen. The Wildlife Use was not assessed.
See also Item 29 for TMDL information.

14. Antidegradation Review & Comments:

Tier 1 X Tier 2 Tier 3
The State Water Control Board's Water Quality Standards includes an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters. Dry ditches and intermittent streams are considered Tier 1 waters. The Airfield Pond watershed is considered Class III waters. The Seacorrie- and Seacock Swamp watersheds are classified as Class VII swampwater.
The antidegradation review begins with a Tier determination.

15. Site Inspection Date: September 24, 2013

16. **A. Discharge and Pollution Management Authorization:**

The facility is authorized to manage pollutants at the locations identified in the permit application and the facility's Nutrient Management Plan (NMP), and is authorized to discharge:

a. from the facility's production area, manure, litter or process wastewater to surface waters of the state in the case of an overflow caused by a storm event greater than a 25-year, 24-hour storm;
b. from areas identified in the permit application as discharge points, storm water which may come into contact with manure, litter or process wastewater. The discharge points shall be monitored as specified in Part I B.1.a.;
c. from the land application area(s), agricultural storm water; and
d. because the Waste Load Allocation (WLA) for E. coli for process wastewater discharges is 0, there shall be no discharges of manure, litter or process wastewater from the facility's production area at times other than during a 25 year, 24 hour storm.

The NMP is enforceable through this permit.

17. **Monitoring Requirements:**

Storm water Monitoring:
Rationale: Required by: Storm water monitoring is required by the permittee by 9VAC25-151-70 Part I A. Visual monitoring of storm water shall be performed at each of the discharge points listed in 9. above per the following table. The permit contains several conditions under which the monitoring shall be performed, including:

a. All storm water discharge samples (except snowmelt samples) shall be collected from the secondary containment prior to releasing the storm water from the containment. All samples (except snowmelt samples) shall be collected when storm water resulting from a measurable storm event has concentrated in the containment.
b. The examination of the sample shall be performed at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December, shall be conducted in a well-lit area and shall document observations.
c. The sampling requirement can be waived if documentation is completed that demonstrates either that no storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, or that adverse weather conditions prevent the collection of samples, in which case a substitute sample may be taken during a qualifying storm event in the next monitoring period.

FEATURES TO BE MONITORED IN THE PRODUCTION AREA	MONITORING REQUIREMENTS	
	Frequency *	Sample Type **
Discharge points: • discharge points to surface waters*** (as indicated in the permit application)	Quarterly	Grab

Notes: * The visual inspection shall be made during daylight hours (e.g., normal working hours).
** No analytical tests are required to be performed on the samples.
*** Surface waters as defined in Part IV AA.

Best Management Practice(s) (BMPs) Monitoring:
Rationale: Required by: 9VAC25-31-200 E 1 f the requirements are to identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to surface waters of the state.

Visual monitoring of the BMPs (identified in the permit application and the Farm Operating Manual) that are associated with the the outfalls listed in 9. above per the following table. The permit contains several conditions under which the monitoring shall be performed, including:

a. The BMPs shall be observed at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December and the observations shall be documented.
b. The visual inspection of the BMP(s) shall be performed in conjunction with storm water discharge sample examination events as required in Part I B.1. a., and
c. may be waived if adverse weather conditions prevent the visual inspection of the BMP(s) and are appropriated documented.
The Permittee shall correct any deficiencies found as a result of the visual inspections and document any actions taken to correct deficiencies. Deficiencies include failures of the BMP(s) that increase the probability of the contamination of water due to the exposure of the pollutants managed within the production area.

FEATURE TO BE MONITORED AND INSPECTED IN THE PRODUCTION AREA	MONITORING REQUIREMENTS
	Inspection Frequency *
Best Management Practices **: • as indicated in the Farm Operating Manual	Quarterly
Notes: * The visual inspection shall be made during daylight hours (e.g., normal working hours). ** Best management practice as defined in Part IV AA.	

Monitoring of Other Features:
Rationale: Required by: 9VAC25-31-30 (40 CFR 412) The federal effluent limitation guidelines require the permittee to inspect items such as waste storage structures and water lines for leaks or failures.

Visual monitoring of other features (listed in the table below) for leaks or failures that will increase the probability of the contamination of water due to exposure of pollutants managed within the production area shall be performed as specified below. The Permittee shall correct any deficiencies found as a result of the visual inspections and document any actions taken to correct deficiencies. Deficiencies include leaks from or failures of the features that will increase the probability of the contamination of water due to the exposure of the pollutants managed within the production area.

FEATURE TO BE MONITORED AND INSPECTED IN THE PRODUCTION AREA	MONITORING REQUIREMENTS
	Inspection Frequency *
Water lines: including drinking and cooling water lines	Daily
All waste treatment or storage structures and the associated waste transfer system **	Weekly
Storm water devices/structures: (including) • storm water diversion devices and runoff diversion structures, and • devices which channel contaminated storm water to any wastewater or manure treatment or storage structure • storm water and runoff channels which lead to the discharge points	Weekly
Notes: * The visual inspection shall be made during daylight hours (e.g., normal working hours). ** The inspection shall record the level in liquid impoundments as indicated by a depth marker as required by Part II B.4.	

Waste Monitoring:
Rationale: § 62.1-44.17:1 E 4 and 9VAC25-192-70 and 9VAC25-31-200 E 1 The specific waste monitoring requirements are required by 9VAC25-192-70. Additionally, 9VAC25-31-200 E 1 requires the permittee to establish proper protocols to monitor waste.
Waste Monitoring shall be performed per the following table; additional waste monitoring may be required in the facility's approved Nutrient Management Plan, and analysis of the waste shall be according to methods specified in the facility's approved Nutrient Management Plan.

PARAMETERS	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			Frequency	Sample Type
Total Kjeldahl Nitrogen	NL	*	1/year	Composite
Ammonia Nitrogen	NL	*	1/year	Composite
Total Phosphorus	NL	*	1/year	Composite
Total Potassium	NL	*	1/year	Composite
Calcium	NL	*	1/year	Composite
Magnesium	NL	*	1/year	Composite
Moisture Content	NL	%	1/year	Composite
Notes: NL = No limit, this is a monitoring requirement only. * Parameters for waste may be reported as a percent, as lbs/ton or lbs/1000 gallons, or as ppm where appropriate.				

Soil Monitoring:
Rationale: § 62.1-44.17:1 E 4 and 9VAC25-192-70 and 9VAC25-31-200 E 1. The specific soils monitoring requirements are required by 9VAC25-192-70. Additionally, 9VAC25-31-200 E 1 requires the permittee to establish proper protocols to monitor soils.

Soil monitoring at the land application sites shall be performed per the following table; additional soils monitoring may be required in the facility's approved Nutrient Management Plan. Soil monitoring shall be conducted at a depth of between 0-6 inches, unless otherwise specified in the facility's approved Nutrient Management Plan, and analysis of soil shall be according to methods specified in the facility's approved Nutrient Management Plan.

PARAMETER	LIMITATIONS	UNITS	MONITORING REQUIREMENTS	
			Frequency	Sample Type
pH	NL	SU	1/3 years	Composite *
Phosphorus	NL	ppm or lbs/ac	1/3 years	Composite *
Potassium	NL	ppm or lbs/ac	1/3 years	Composite *
Calcium	NL	ppm or lbs/ac	1/3 years	Composite *
Magnesium	NL	ppm or lbs/ac	1/3 years	Composite *

Notes: NL = No limit, this is a monitoring requirement only.
SU = Standard Units
* Specific sampling requirements are found in the facility's approved Nutrient Management Plan.

Groundwater Monitoring:
Rationale: §§ 62.1-44.17:1 E 4 and 62.1-44.21 and 9VAC25-192-70 and 9VAC25-280-20 and 9VAC25-280-60. Specific ground water monitoring requirements are required by 9VAC25-192-70. For 9VAC25-280-20: Except where otherwise specified, ground water quality standards shall apply statewide and shall apply to all ground water occurring at and below the uppermost seasonal limits of the water table. In order to prevent the entry of pollutants into ground water occurring in any aquifer, a soil zone or alternate protective measure or device sufficient to preserve and protect present and anticipated uses of ground water shall be maintained at all times. 9VAC25-280-60 Ground water criteria, although not mandatory, also provide guidance in preventing ground water pollution. Also, State Water Control Law 62.1-44.21 authorizes the Board to request information needed to determinate the discharge's impact on State waters. Ground water monitoring for parameters of concern will indicate whether possible lagoon/pond seepage is resulting in violations to the State Water Control Board's Ground Water Standards.

18. **Effluent Limitations / Monitoring Rationale:**

These facilities are operated to be in compliance with a zero discharge from the production area, which includes the animal housing, waste handling, and waste storage areas as well as the secondary containments. Other non-production area discharges are addressed through the use of Best Management Practices (BMPs) as described in the permit application, permit and permit factsheet. The BMPs will perform to minimize discrete discharges from the non-production areas including the land application sites. Maintenance and operation of the BMPs will be addressed in the Farm Operating Manual and evaluated during DEQ inspections.

19. **Recordkeeping Requirements:**
Rationale: Required by: § 62.1-44.17:1 E 4 and 9VAC25-192-70 and 9VAC25-31-100 J 1 and 40 CFR 412.37 (b) and (c). The specific recordkeeping requirements are required by 9VAC25-192-70. The Permittee shall maintain the information used to complete the permit application and the information collected per the preceding requirements in 17. (above), as well as the following information:

a. Any additional waste, soils or groundwater monitoring data collected during the life of this permit;
b. Records identified in the approved Farm Operating Manual that will be maintained to document the implementation and management of the items in the Manual;
c. Land application records;
d. Records documenting the current design of any manure storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity;
e. The date, time, and estimated volume of any overflow from a manure or waste storage structure (In the event that an overflow occurs, the Permittee must report the overflow to the Department and report all occurrences in the annual report), and
f. Methods of mortality management and practices used to prevent the discharge of pollutants to surface water

The records listed above shall be retained at the facility for a period of five years from the date the records are created and made available to Department personnel upon request.

20. **Reporting Requirements**
Rationale: 9VAC25-31-200 E 4 The specific recordkeeping requirements are required by 9VAC25-31-200.

The Permittee shall submit an annual report to the director by February 15 of each year for the previous calendar year or part thereof since covered by this permit. The annual report shall be submitted on a form provided by the Department or in a comparable format and include the following information:

a. The number and type of animals, whether in open confinement or housed under roof;
b. Estimated amount of total manure and process generated by the facility in the previous 12 months (tons/gallons);
c. Estimated amount of total manure and process wastewater transferred to other persons by the Permittee in the previous 12 months (tons/gallons);
d. Total number of acres for land application covered by the facility's approved Nutrient Management Plan;
e. Total number of acres under control of the Permittee that were used for land application of manure and process wastewater in the previous 12 months;
f. Summary of all manure and process wastewater discharges from the production area that entered or could have been expected to enter state waters in the previous 12 months, including date, time, and approximate volume; cause of discharge and corrective action taken or to be taken to address the cause of the discharge;
g. A statement indicating that the current version of the facility's Nutrient Management Plan was developed by a Department of Conservation and Recreation (DCR) certified Nutrient Management Planner and approved by the DCR;
h. Any other results of monitoring, land application or records generated as described in 18. (above)

21. Antibacksliding Statement: No effluent limits are contained in this permit; antibacksliding does not apply.
22. Compliance Schedules: None
23. **Special Conditions**
Waste Storage: The permittee is required to properly construct and operate the waste storage facilities.

Part II A	1	Design and Operation	**Rationale: Required by § 62.1-44.17:1.E1 and 9VAC25-192-70**
	2	New Storage	**Rationale: Required by § 62.1-44.17:1.E6 and 9VAC25-192-70**
	3	Earthen liquid waste storage	**Rationale: Required by § 62.1-44.17:1.E5 and 9VAC25-192-70**

Operation and Maintenance: The permittee is required to properly operate and maintain the facility.

Part II B	1	Production Area Operation	**Rationale: Required by 9VAC25-31-200 E 1 c**
	2	Chemical and other	**Rationale: Required by 9VAC25-31-200 E 1 e**

		contaminant handling	
	3	Confined Animals	**Rationale: Required by 9VAC25-31-200 E 1 d**
	4	Liquid waste level	**Rationale: Required by 9VAC25-192-70**
	5	Freeboard	**Rationale: Required by 9VAC25-192-70**
	6	Depth marker	**Rationale: Required by 9VAC25-31-30 (40CFR412 §412.47 (a) (2))**
	7	Mortality disposal	**Rationale: Required by 9VAC25-31-200 E 1 b and 40CFR412 (§412.47 (a) (4))**

Special Conditions:

Part II C	1	Water Quality Standards Reopener	**Rationale: Required by 9VAC25-31-220 D** requires effluent limitations to be established which will contribute to the attainment or maintenance of the water quality standards.
	2	Nutrient Enriched Waters Reopener	**Rationale: Required by 9VAC25-40-10** Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed, 9VAC25-40-10 allows reopening of permits to impose monitoring requirements for discharges into waters designated as nutrient enriched in the Water Quality Standards at 9VAC25-260-350 if total phosphorus and total nitrogen in a discharge potentially exceed specified concentrations. The policy also anticipates that future nutrient limits may be needed to control undesirable aquatic plant growth. *[NOTE: Currently, these nutrient enriched waters designations only apply to four free flowing non-Bay watersheds due to adoption of nutrient criteria for the Chesapeake Bay. In addition to the listing in 9VAC25-260-350, they are designated in the River Basin Section Tables special standards column as NEW-1, 4, 5 or 21.]*
	3	Farm Operating Manual	The permittee will develop and submit a farm operating manual. **Rationale: Required by** Code of Virginia **§ 62.1-44.16**; VPDES Permit Regulation, **9VAC25-31-190 E, and 40 CFR 122.41(e)**. These require proper operation and maintenance of the permitted facility. Compliance with an approved O&M manual ensures this. **40CFR412 (§412.47)**
	4	Changes to the facility	**Rationale: Required by: 9VAC25-31-200 E**
	5	Notification Prior to Use	**Rationale: Required by: § 62.1-44.17:1 E 9 and 9VAC25-192-70**
	6	Materials Handling and Storage	**Rationale: Required by: 9VAC25-31-50** A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia **§62.1-44.16 and §62.1-44.17** authorizes the Board to regulate the discharge of industrial waste or other waste.
	7	Storage Closure	**Rationale: Required by: 9VAC25-192-70**
	8	Training Requirement	**Rationale: Required by: § 62.1-44.17:1 E 10 and 9VAC25-192-70**
	9	Best Management Practices	**Rationale: Required by: 9VAC25-31-200 E 1 f**

Nutrient Management Requirements: The permittee is required to develop and implement a site specific nutrient management plan.

Part III A	1	Nutrient Management plan requirements and elements	**Rationale: Required by: § 62.1-44.17:1 E 2 and 9VAC25-31-200 E 1**
	2	Waste Application	**Rationale: Required by: 9VAC25-630-50 Part I B 4 e**
	3	Manure Transfer requirements	**Rationale: Required by: 9VAC25-31-200 E 3**

Land Application Requirements: The permittee is required to meet the land application requirements related to buffer zones. Additionally the installation of best management practices.

Part III B	1	Buffer Zones	**Rationale: Required by: § 62.1-44.17:1 E 3 and 9VAC25-31-**

Part IV	A-Z	Conditions Applicable to All VPDES Permits	**Rationale: Required by:** VPDES Permit Regulation, **9VAC25-31-190** requires all VPDES permits to contain or specifically cite the conditions listed.

24. Changes to Permit: N/A (issuance)

25. Variances/Alternate Limits or Conditions: None

26. Public Notice Information required by 9VAC25-31- B:

27. Publishing Newspaper: *Sussex-Surry Dispatch, Independent Messenger*
Publishing Dates:

All pertinent information is on file and may be inspected or copied by contacting Seth Mullins at:

Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
t: (804) 527-5132
f: (804) 527-5106
seth.mullins@deq.virginia.gov

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit. The public may review the draft permit and application at the DEQ office named above by appointment or may request copies of the documents from the contact person listed above.

Public Notice Comments: None

28. Additional Comments:

Previous Board Action: None

Planning Statement: The discharge is in conformance with the existing planning documents for the area.

Staff Comments:

a. Per the Closure Plans and Demonstration of Financial Capability Requirements Regulation (9 VAC 25-650-10 *et seq.*) select privately owned sewerage treatment works must demonstrate financial assurance. Financial assurance applies to private wastewater treatment facilities with a design flow of greater than 1,000 gpd and less than 40,000 gpd that treat sewage generated by private residences. Financial Assurance does not apply to this Privately Owned Wastewater Treatment Plant because its design flow is greater than 40,000 gpd.
b. This facility is not a member of the Virginia Environmental Excellence Program (VEEP).
c. The discharge is not controversial.
d. Reduced monitoring is not applicable to Part I A.1 due to the discontinuous nature of the permitted storm water discharge.

e. In accordance with §62.1-44.15:01.A.2 , 9VAC25-31-290.G.2 and GM11-005, a copy of the public notice for this permit was mailed to the Executive Director of the Crater Planning District Commissions, the Sussex County Administration and the Chairman of the Sussex County Board of Supervisors on XXX.

Other Agency Comments:

VDH Comments:
Attachment 1

EPA comments:

29. 303(d) Listed Segments (TMDL):
Outfall 14-001 was addressed in the Assamoosick Swamp and Tributaries Bacterial TMDL under their previous VPA permit VPA00573. The TMDL was approved by the EPA on 6/3/2010 and by the SWCB on 9/30/2010. Murphy Brown received an E. coli wasteload allocation of 0 cfu/year to recognize that the facility did not have a direct discharge in their permit and that any bacteria load is accounted for in the load allocation. Airfield Pond UT - The Fish Consumption Use was impaired due to a VDH advisory for mercury, the Recreation Use was impaired due to E. coli exceedances, and the Aquatic Life Use was impaired due to low dissolved oxygen. The Wildlife Use was not assessed. Seacock Swamp UT - The Fish Consumption Use was impaired due to a VDH advisory for mercury, the Recreation Use was impaired due to E. elevated fecal coliform, and the Aquatic Life Use was impaired due to low dissolved oxygen. The Wildlife Use was not assessed. These facilities are operated to be in compliance with a zero discharge from the production area, which includes the animal housing, waste handling, and waste storage areas as well as the secondary containments.

30. Fact Sheet Attachments:

Attachment 1 – Agency Comments
Attachment 2 – Site Inspection Report/Memorandum
Attachment 3 – Discharge Location / Topographic Map
Attachment 4 – Schematic / Site Map / Wastewater Balanc
Attachment 5 – Discharge / Outfall Description
Attachment 6 – Receiving Waters Info. / Tier Determination / Storet Data / Stream Modeling / 303(d) Listed Segments
Attachment 7 – Chronology Sheet
Attachment 8 – Correlation to the 9 Elements (Excerpt of 9VAC2531-200.E. of VPDES Reg.)
Attachment 9 – Definition of Terms

Attachment 1

RECEIVED PRO
JUL 07 2014

COMMONWEALTH of VIRGINIA

Marissa J. Levine, MD, MPH, FAAFP
State Health Commissioner

John J. Aulbach II, PE
Director, Office of Drinking Water

DEPARTMENT OF HEALTH
OFFICE OF DRINKING WATER
Southeast Virginia Field Office

830 Southampton Avenue
Suite 2058
Norfolk, VA 23510
Phone (757) 683-2000
Fax (757) 683-2007

MEMORANDUM

TO: Mr. Seth Mullins
Department of Environmental Quality
Piedmont Regional Office

DATE: JUL 0 2 2014

FROM: Daniel B. Horne, PE
Engineering Field Director DBH

CITY/COUNTY: SUSSEX COUNTY

PROJECT TYPE: ☑ New ☐ Renewal or Revision

☑ VPDES ☐ VPA ☐ VWPP ☐ JPA ☐ Other_____

☑ Numbers: VA0C40002, VA0C40003, VA0C40006, and VA0C40004

OWNER/APPLICANT: Murphy-Brown, LLC / Mr. Kraig Westerbeek, Asst. VP of Env., Health and Safety

PROJECT: Murphy Brown Farms 12 - 13 - 14, 18 - 29 - 20 and 15

☑ There are no public water supply raw water intakes located within 15 miles downstream or within one tidal cycle upstream of the discharge.

☐ The raw water intake for the _____ waterworks is located _____ miles [downstream/upstream] of the discharge. This should be a sufficient distance to minimize the impacts of the discharge. We recommend a minimum Reliability Class of ____ for this facility.

☐ The raw water intake for the _____ waterworks is located _____ miles [downstream/upstream (within one tidal cycle)] of the discharge.

☐ Please forward a copy of the Draft Permit for our review and comment.

☐ Comments: The existing VPAs are being converted to VPDES Permits under this application.

Prepared by: Ernest G. Johnson, Jr., PE
District Engineer

pc: V.D.H. - Office of Drinking Water, Field Services Engineer

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Mullins, Seth (DEQ)

From: Ewing, Amy (DGIF)
Sent: Wednesday, September 17, 2014 12:35 PM
To: Mullins, Seth (DEQ)
Subject: RE: ESSLog# 35017_CAFO VPDES Biosolids Application_Murphy Brown sites

No. We would recommend the same protections for anything that nutrient-heavy.

Thanks and let me know if you want to further discuss.

Amy

Amy Ewing ☯ Environmental Services Biologist/FWIS Manager ☯ VA Dept. of Game and Inland Fisheries ☯ 4010 West Broad St. Richmond, VA 23230 ☯ 804-367-2211 ☯ www.dgif.virginia.gov

Think before you print.

From: Mullins, Seth (DEQ)
Sent: Wednesday, September 17, 2014 11:39 AM
To: Ewing, Amy (DGIF)
Subject: RE: ESSLog# 35017_CAFO VPDES Biosolids Application_Murphy Brown sites

Amy,
I notice below that biosolids are mentioned. These permits are not related to biosolids. They address the land application of swine manure only. Would that change the comments below?

Seth

Seth Mullins
Virginia Department of Environmental Quality
Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060
804-527-5132
804-356-4569 (c)

From: Ewing, Amy (DGIF)
Sent: Friday, September 12, 2014 3:02 PM
To: Mullins, Seth (DEQ)
Cc: Cason, Gladys (DGIF); Pinder, Mike (DGIF); Watson, Brian (DGIF); Kleopfer, John (DGIF); Living, Stephen (DGIF); Aschenbach, Ernie (DGIF)
Subject: ESSLog# 35017_CAFO VPDES Biosolids Application_Murphy Brown sites

Seth,
We have reviewed the subject project that proposes to apply biosolids to a number of fields located in Sussex and Surry counties.

According to our records, we document state Threatened barking treefrogs, state Threatened Mabee's salamanders, state Endangered blackbanded sunfish, state Endangered Rafinesque's eastern big-eared bats, state Endangered red-cockaded woodpeckers, bald eagles, great blue heron colonies, and Threatened and Endangered Species Waters from the project areas. To best protect these species and resources, we recommend the following:

To best protect state Threatened barking treefrogs, state Threatened Mabee's salamanders, both of which require ponded areas within forested habitat for breeding while moving into the adjacent uplands during the remainder of their life cycle, we recommend no application of biosolids within wetlands or in uplands within 900 feet of wetlands. If the applicant cannot adhere to this recommendation, we recommend further coordination with us regarding protection of these species and their habitats associated with this project.

Coppahaunk Swamp, and Joseph Swamp have been designated Threatened and Endangered Species Waters due to the presence of state Endangered blackbanded sunfish. To best protect blackbanded sunfish, we recommend no application of biosolids within 300 feet of Coppahaunk Swamp and Joseph Swamp or within 200 feet of their tributaries.

The Nottoway River has been designated a Threatened and Endangered Species Water due to the presence of federal Endangered dwarf wedgemussels, federal Endangered Roanoke logperch, and state Threatened Atlantic pigtoes. To best protect the listed species associated with the Nottoway River, we recommend no application of biosolids within 300 feet of this river or within 200 feet of its tributaries.

State Endangered Rafinesque's eastern big-eared bats, state Endangered red-cockaded woodpeckers, bald eagles, and great blue heron colonies have been documented from the project area. Based on the location of the proposed work and assuming no tree removal is necessary to apply the biosolids in the proposed areas, we do not anticipate this project to result in adverse impacts upon these species.

It appears as though field #13 is located immediately adjacent to DGIF's Big Woods Wildlife Management Area. We recommend coordination with Steve Living, DGIFs Region I Land and Facilities Manager, at Stephen.Living@dgif.virginia.gov or 804-829-6580, to ensure avoidance of conflicts with management actions or visitor access on the WMA.

We also recommend coordination with the USFWS regarding possible impacts upon federally-listed species known from the area.

In addition to the recommended buffers above, we recommend adherence to "minimum buffer zone requirements" laid out by DEQ.

This project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species. Therefore, we recommend coordination with VDCR-DNH regarding the protection of these resources.

Thanks, Amy

Amy Ewing ☯ Environmental Services Biologist/FWIS Manager ☯ VA Dept. of Game and Inland Fisheries ☯ 4010 West Broad St. Richmond, VA 23230 ☯ 804-367-2211 ☯ www.dgif.virginia.gov

Think before you print.

VaFWIS Search Report Compiled on 8/5/2014, 9:53:02 AM

Help

Known or likely to occur within a **3 mile radius around point 36,56,19.5 -77,02,03.0**
in **175 Southampton County, 183 Sussex County, VA**

View Map of Site Location

439 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 35) (35 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name
010214	FESE	I	Logperch, Roanoke	Percina rex
040228	FESE	I	Woodpecker, red-cockaded	Picoides borealis
010032	FESE	II	Sturgeon, Atlantic	Acipenser oxyrinchus
010347	SE	I	Sunfish, blackbanded	Enneacanthus chaetodon
040110	SE	I	Rail, black	Laterallus jamaicensis
050034	SE	I	Bat, Rafinesque's eastern big-eared	Corynorhinus rafinesquii macrotis
030013	SE	II	Rattlesnake, canebrake	Crotalus horridus
040129	ST	I	Sandpiper, upland	Bartramia longicauda
040293	ST	I	Shrike, loggerhead	Lanius ludovicianus
040385	ST	I	Sparrow, Bachman's	Aimophila aestivalis
040379	ST	I	Sparrow, Henslow's	Ammodramus henslowii
020044	ST	II	Salamander, Mabee's	Ambystoma mabeei
020002	ST	II	Treefrog, barking	Hyla gratiosa
050008	ST	IV	Shrew, Dismal Swamp southeastern	Sorex longirostris fisheri
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans
040144	FP	IV	Knot, red	Calidris canutus rufa
050022	FP		Bat, northern long-eared	Myotis septentrionalis
010038	FC	IV	Alewife	Alosa pseudoharengus
010045	FC		Herring, blueback	Alosa aestivalis
040093	FS	II	Eagle, bald	Haliaeetus leucocephalus
070105	FS	III	Crayfish, Chowanoke	Orconectes virginiensis
030063	CC	III	Turtle, spotted	Clemmys guttata
010077		I	Shiner, bridle	Notropis bifrenatus
040225		I	Sapsucker, yellow-bellied	Sphyrapicus varius
040319		I	Warbler, black-throated green	Dendroica virens
010174		II	Bass, Roanoke	Ambloplites cavifrons
020063		II	Toad, oak	Anaxyrus quercicus
040038		II	Bittern, American	Botaurus lentiginosus

040052		II	Duck, American black	Anas rubripes
040029		II	Heron, little blue	Egretta caerulea caerulea
040036		II	Night-heron, yellow-crowned	Nyctanassa violacea violacea
040105		II	Rail, king	Rallus elegans
040320		II	Warbler, cerulean	Dendroica cerulea
040304		II	Warbler, Swainson's	Limnothlypis swainsonii
040266		II	Wren, winter	Troglodytes troglodytes

To view **All 439 species** View 439

* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; FS=Federal Species of Concern; CC=Collection Concern

** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage (5 records)

View Map of All Fish Impediments

ID	Name	River	View Map
263	AIRFIELD DAM	WILLIS BRANCH	Yes
265	BRITTLES DAM	TR-SEACOCK SWAMP	Yes
289	CARROLL DAM	SEACOCK SWAMP	Yes
288	JENKINS DAM	TR-SEACOCK SWAMP	Yes
282	PARKER NO.-2 DAM	TR-SEACOCK SWAMP	Yes

Threatened and Endangered Waters (1 Reach)

View Map of All Threatened and Endangered Waters

Stream Name	T&E Waters Species		View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name	
Unnamed trib. of Coppahaunk Swamp (03010202)	SE	010347 || SE || I || Sunfish, blackbanded || Enneacanthus chaetodon	Yes

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Habitat Predicted for Aquatic WAP Tier I & II Species (5 Reaches)

View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species

Stream Name	Tier Species		View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name	
Seacorrie Swamp (03010201)	FESE	010214 FESE I Logperch, Roanoke Percina rex	Yes
(03010202)	SE	010347 SE I Sunfish, blackbanded Enneacanthus chaetodon	Yes
Seacock Swamp (03010202)	SE	010347 SE I Sunfish, blackbanded Enneacanthus chaetodon	Yes
Unnamed trib. of Coppahaunk Swamp (03010202)	SE	010347 SE I Sunfish, blackbanded Enneacanthus chaetodon	Yes
Wildcat Swamp (03010202)	SE	010347 SE I Sunfish, blackbanded Enneacanthus chaetodon	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species (2 Species)

View Map of Combined Terrestrial Habitat Predicted for 2 WAP Tier I & II Species Listed Below

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
020044	ST	II	Salamander, Mabee's	Ambystoma mabeei	Yes
020063		II	Toad, oak	Anaxyrus quercicus	Yes

View Map of All Query

Results
Virginia Breeding Bird Atlas Blocks

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE *	Highest Tier **	
54044	Manry, CE	1	FESE	I	Yes
54043	Manry, CW	2	FESE	I	Yes
54042	Manry, NE	1	FESE	I	Yes
54041	Manry, NW	3	FESE	I	Yes
54046	Manry, SE	79		IV	Yes

Public Holdings:

N/A

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
175	Southampton	402	FESE	I
183	Sussex	391	FESE	I

USGS 7.5' Quadrangles:
Manry
Ivor

USGS NRCS Watersheds in Virginia:

N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
CU45	Seacorrie Swamp	69	FESE	I
CU57	Blackwater River-Coppahaunk Swamp	83	FESE	I
CU63	Seacock Swamp-Reddy Hole Branch	82	FESE	I
CU64	Brantley Swamp	66	FSSE	I

Compiled on 8/5/2014, 9:53:03 AM V574316.0 report=V searchType= R dist= 4827 poi= 36,56,19.5 -77,02,03.0

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

Joe Elton
Deputy Director of Operations

Rochelle Altholz
Deputy Director of Administration
and Finance

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

600 East Main Street, 24th Floor
Richmond, Virginia 23219
(804)786-6124

August 28, 2014

Seth Mullins
DEQ-PRO
4949-A Cox Road
Glen Allen, VA 23060

Re: VA0C40003, MB USA Swine Facilities 13, 14

Dear Mr. Mullins:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, the Manry Sinkhole Ponds Conservation Site is adjacent to the project area. Conservation sites are tools for representing key areas of the landscape that warrant further review for possible conservation action because of the natural heritage resources and habitat they support. Conservation sites are polygons built around one or more rare plant, animal, or natural community designed to include the element and, where possible, its associated habitat, and buffer or other adjacent land thought necessary for the element's conservation. Conservation sites are given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain; on a scale of 1-5, 1 being most significant. Manry Sinkhole Ponds Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resource of concern at this site is:

Coastal Plain Seasonal Pond (Swamp Tupelo-Overcup Oak Type) G1G2/S1S2/NL/NL

The Coastal Plain Seasonal Pond is a depression wetland that is endemic to relatively deep, seasonal ponds in the Coastal Plain of Virginia and Maryland. The habitat is typically flooded up to 100 cm deep for a substantial part of the year. The community naturally occurs in small, isolated patches, but may occasionally occur in complexes with many ponds totaling up to 25 acres in aggregate. The vegetation is an open forest or woodland dominated by swamp tupelo (*Nyssa biflora*), often in association with sweetgum (*Liquidambar styraciflua*) and red maple (*Acer rubrum*). Overcup oak (*Quercus lyrata*) is a dominant or co-dominant tree in about half of the known occurrences. Shrubs such as fetterbush (*Leucothoe racemosa*), high-bush blueberries (*Vaccinium* spp.), and buttonbush (*Cephalanthus occidentalis*), are usually restricted to the tree-base hummocks or higher areas around the edges of the depressions. The herb layer is usually sparse, consisting of scattered cypress swamp sedge (*Carex joorii*) and quick growing annuals such as warty panic grass (*Panicum verrucosum*) that are adapted to

seasonally inundated soils.

The greatest threats to this rare community are ditching, draining, damage from timber harvests, ATV incursions, and adjacent agriculture with insufficient buffers to protect from pesticide and fertilizer use. Since this community depends on groundwater hydrology, depletion of the water table is a serious threat in developed areas.

DCR supports the development and implementation of a nutrient management plan (NMP) as part of the permit including the maintenance of buffer zones from sensitive areas and other site-specific conservation practices. To minimize adverse impacts to the aquatic ecosystem in the event of a discharge from the waste storage facilitates, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. In addition to the permittee notifying DEQ of an unusual and extraordinary discharge within 24 hours (VPDES General Permit for CAFO -General Conditions-Monitoring -H), DCR recommends notification of resource agencies if resources have been documented in the receiving body of water.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

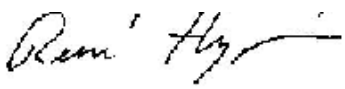
There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Gladys Cason (804-367-0909 or Gladys.Cason@dgif.virginia.gov). The project areas are located within 2 miles of documented occurrences of federally and state listed animals. In addition, according to the information currently in our files, Unnamed Tributary to Coppahaunck Swamp, which has been designated by the Virginia Department of Game and Inland Fisheries (VDGIF) as a "Threatened and Endangered Species Water" for the Blackbanded sunfish is within 2 miles of the project area. Therefore, DCR recommends coordination with United States Fish and Wildlife Service and Virginia's regulatory authority for the management and protection of these species, the VDGIF, to ensure compliance with the Virginia Endangered Species Act **(**VA ST §§ 29.1-563 – 570).

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,



S. René Hypes
Project Review Coordinator

Cc: Ernie Aschenbach, VDGIF
Troy Andersen, VDGIF

Literature Cited

NatureServe. 2010. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: July 12, 2011)

Mullins, Seth (DEQ)

From: Bowles, Betsy (DEQ)
Sent: Monday, January 12, 2015 9:58 AM
To: Hillman, Brett
Cc: Mullins, Seth (DEQ)
Subject: RE: Murphy-Brown LLC VPDES Permits in Surry and Sussex County - USFWS Comments
Attachments: FW: Murphy-Brown LLC VPDES Permits in Surry and Sussex County - USFWS Comments

Hi Brett,

Please find below my responses to your comments for the Murphy Brown Farms VA0C40001 - Farms 9, 10, & 21; VA0C40002 - Farm 12; VA0C40003 - Farms 13 & 14; VA0C40004 - Farm 15; VA0C40005 - Farms 16 & 17; VA0C40006 - Farms 18, 19, & 20.

There are three specific issues on which we would like to comment. They are as follows:

1) Storm events and the land application of wastewater

We did not see anything in the permits regarding whether or not wastewater will be land applied during or after storm events or before forecasted storm events. We recommend that wastewater not be land applied in these instances and that such language be included in the permits. This will decrease the potential for contaminants to run off into adjacent surface waters.

DEQ response to comment #1:

I have asked the Permittee to describe their standard operating procedure for response to this comment. The Permittee responded as follows: They do not land apply waste during a precipitation event. The Permittee documents the weather conditions at the time of the land application and for 24 hours prior to and following applications. They cease land application within four hours of the time that the National Weather Service issues a Hurricane Warning, Tropical Storm Warning or a Flood Watch associated with a tropical system including a hurricane, tropical storm or tropical depression for the County in which the permitted facility is located.

Also, the Permittee has agreed to add language describing the operating procedures to the Farm Operating Manual which will address this issue. Additionally, the Manual will be approved by DEQ staff.

Additionally, the weather condition recordkeeping requirement is included Part I C 5 j of the draft permit.

2) Issues found during visual inspection of stormwater discharges

The steps required to address any problems discovered during the visual inspections of stormwater discharges are not clear. We recommend that, 1) samples that fail the visual inspection be chemically analyzed for

contaminants to better understand any issues, and 2)corrective action be required.

DEQ response to comment #2:

The permit and the DEQ approved Farm Operating Manual will address the permittee's corrective actions when the storm water samples fail the visual inspection. The storm water will be held in secondary containment until such time that the visual inspection is complete. So long as the sample(s) pass the visual inspection, the water will be released using a gate valve. If the sample fails the visual inspection the water will be pumped back into the animal waste storage.

3) Site inspection reports

We noticed that the fact sheets for these permits did not include site inspection reports, presumably because they haven't been conducted yet. Once they have been conducted and reports have been written, we request that they be sent to us. We are making this request because we would like confirmation that stormwater BMPs are being followed so that contaminated stormwater can not enter the receiving streams.

DEQ response to comment #3:

Please find attached the inspection reports that you requested. The secondary containment is the storm water BMP. The storm water will be held in secondary containment until such time that the visual inspection is complete. So long as the sample(s) pass the visual inspection, the water will be released using a gate valve. If the sample fails the visual inspection the water will be pumped back into the animal waste storage.

Please do not hesitate to contact me if you have further questions or comments.

Thank you,

Betsy

Betsy K. Bowles
Animal Feeding Operations Program Coordinator
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 23219
804-698-4059 direct line
804-698-4032 fax

betsy.bowles@deq.virginia.gov

Mailing Address:
P.O. Box 1105
Richmond, VA 23218

Program Websites:
http://www.deq.state.va.us/Programs/Water/LandApplicationBeneficialReuse/LivestockPoultry.aspx
http://www.deq.state.va.us/Programs/Water/LandApplicationBeneficialReuse/LivestockPoultry/VirginiaPoultryWastenbspManagementRequirement.aspx
http://www.deq.state.va.us/Programs/Water/LandApplicationBeneficialReuse/Agriculture.aspx

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From: Hillman, Brett [mailto:brett_hillman@fws.gov]
Sent: Tuesday, September 23, 2014 11:29 AM
To: Mullins, Seth (DEQ)
Cc: ProjectReview (DGIF); nhreview (DCR)
Subject: Murphy-Brown LLC VPDES Permits in Surry and Sussex County - USFWS Comments

Dear Seth,

Thanks for providing us with the opportunity to comment on the permits referenced in the subject line of this email. Comments regarding the issuance of six Murphy-Brown VPDES permits are included below. These permits are as follows:

VA0C40001 - Farms 9, 10, & 21
VA0C40002 - Farm 12
VA0C40003 - Farms 13 & 14
VA0C40004 - Farm 15
VA0C40005 - Farms 16 & 17
VA0C40006 - Farms 18, 19, & 20

The federally listed endangered Roanoke logperch (*Percina rex*) as well as the yellow lance (*Elliptio lanceolata*), a species of mussel that is of federal concern, are known to occur downstream of the discharge covered under permit number VA0C40006. The yellow lance and the Chowanoke crayfish (*Orconectes virginiensis*), also a federal species of concern, are known to occur downstream of the discharge covered under permit number VA0C40002. No federally listed species or species of concern are known to occur downstream of the discharges covered by the four other permits listed above, although they may potentially be present.

There are three specific issues on which we would like to comment. They are as follows:

1) Storm events and the land application of wastewater

We did not see anything in the permits regarding whether or not wastewater will be land applied during or after storm events or before forecasted storm events. We recommend that wastewater not be land applied in these instances and that such language be included in the permits. This will decrease the potential for contaminants to run off into adjacent surface waters.

2) Issues found during visual inspection of stormwater discharges

The steps required to address any problems discovered during the visual inspections of stormwater discharges are not clear. We recommend that, 1)

samples that fail the visual inspection be chemically analyzed for contaminants to better understand any issues, and 2)corrective action be required.

3) Site inspection reports

We noticed that the fact sheets for these permits did not include site inspection reports, presumably because they haven't been conducted yet. Once they have been conducted and reports have been written, we request that they be sent to us. We are making this request because we would like confirmation that stormwater BMPs are being followed so that contaminated stormwater can not enter the receiving streams.

Summary

As long as the three points discussed above are adequately addressed in the permit, we do not anticipate any adverse effects to either the Roanoke logperch, yellow lance, or Chowanoke crayfish. Please don't hesitate if you have any questions.

Best regards,
Brett

Brett Hillman
Fish and Wildlife Biologist
U.S. Fish & Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, VA 23061

Phone: 804-824-2420
Fax: 804-693-9032
Email: brett_hillman@fws.gov

Attachment 2

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020 Fax (804) 527-5106
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

March 19, 2014

Mr. R.O. Britt
434 East Main Street
Waverly, VA 23890

Re: Confined Animal Feeding Operation Annual Inspection (FY13), Permit VPA00573, VPA00574, VPA00575, VPA00576, VPA00577, VPA00578 Murphy-Brown LLC., Sussex & Surry Counties.

Dear Mr. Britt:

Thank you for your time during the annual inspection of your farm, on September 24, 2013, it was nice seeing you. Note, this report is in a narrative format. I did not do the more extensive analysis of application records that is normally the case. If you have questions about an item not addressed here, please feel free to contact me at (804) 527-5132.

Sincerely,

Seth Mullins
Environmental Inspector

Enclosure: Inspection Form

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Animal Feeding Operation Compliance Inspection Form

(9/12/00, rev. 9/26/00, rev. 10/23/12)

Permit Number: VPA00573, VPA00574, VPA00575, VPA00576, VPA00577, VPA00578 (if applicable)

Facility Name: Murphy-Brown LLC. Owner/ Operator: Murphy-Brown LLC.

Address/ Description: Address: 434 East Main Street, Waverly, VA 23890

County: Sussex, Surry Phone:

Type of Operation/ Animals: Swine

Inspection Date/Time: 9/24/2013 Inspector: Seth Mullins Date Report Completed: 03/18/2014

Scheduled: ☒ yes ☐ no Announced: ☒ yes ☐ no Photos: ☒ yes ☐ no Samples: ☐ yes ☒ no

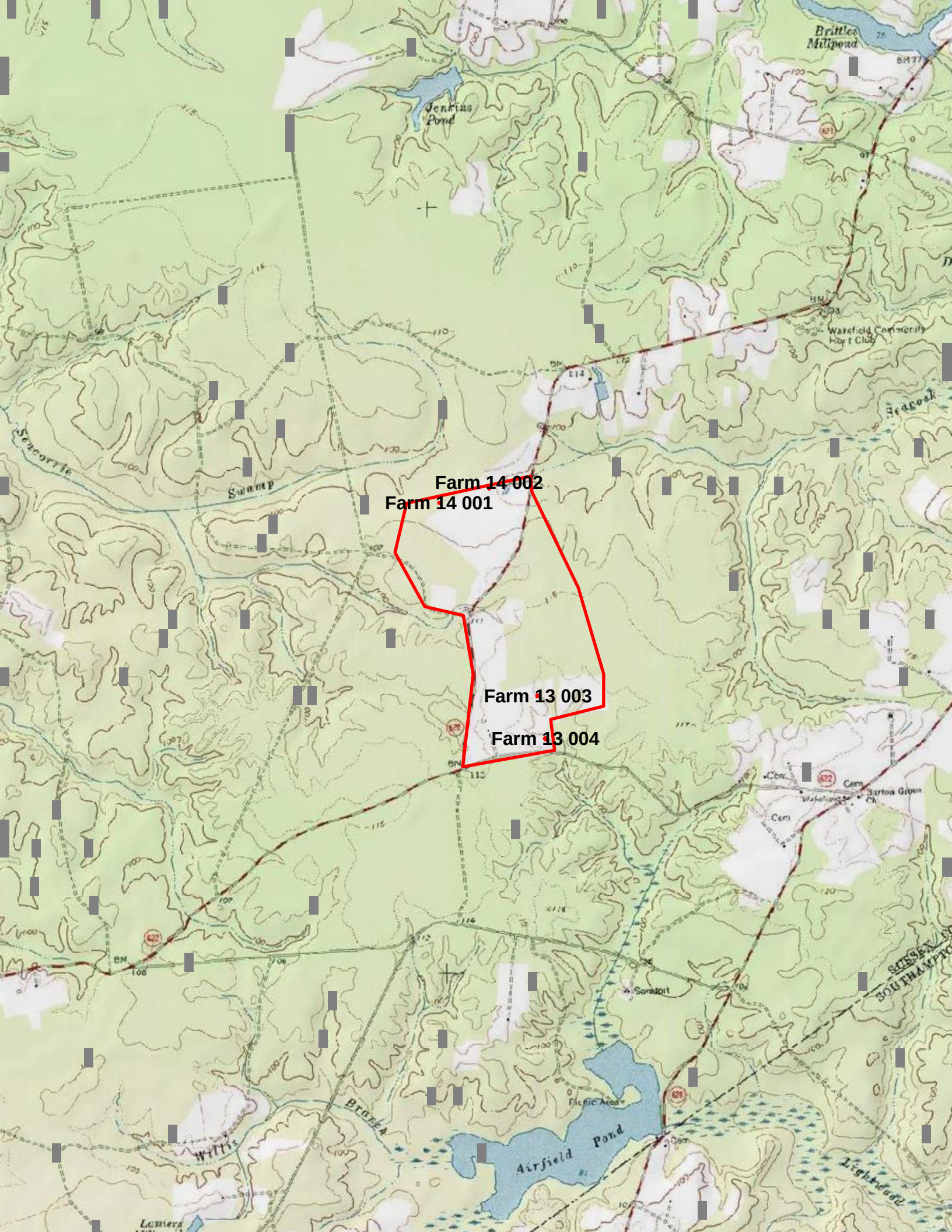
Others Present: R.O. Britt

Reason(s) for Inspection: Routine inspection for existing VPA permits as well as site review for VPDES permit applications in progress.

Observations/ Comments: Production areas at all sites were clean with no issues or areas of concern identified. Nutrient Management Plans for all permits were up to date, as were waste application records. The new lagoon at Farm 15 had been constructed but not put into use at the time of inspection. Land application fields appeared to be well managed, again no apparent issues or areas of concern.

Corrective Actions Needed: None. As a reminder, allow ample time for NMP review and approval to prevent a scenario where a farm is without and NMP.

Attachment 3


Farm 14 002
Farm 14 001
Farm 13 003
Farm 13 004
Brittles Millpond
Jenkins Pond
Wakefield Community Hunt Club
Seacoak
Sencorrie
Swamp
Cem
Burton Grove Ch
Sandpit
Picnic Area
Airfield Pond
Willis
Branch
Lightwood
Laniers

Murphy-Brown LLC
Farm 13
Secondary Containment Diagram

Key

Secondary Containment Location		Intermittent Stream	
Containment Valve			
Inlet & Direction of Surface Water Flow			

Murphy-Brown LLC
Farm 14
Secondary Containment Diagram

Key

Secondary Containment Location		Intermittent Stream	
Containment Valve			
Inlet & Direction of Surface Water Flow			

Attachment 4

Farm 14 002
Farm 14 001
Farm 13 003
Farm 13 004

Attachment 5

ATTACHMENT 5
Discharge Location Descriptions

OUTFALL NUMBER	Est. FLOW	DISCHARGE SOURCE	TREATMENT*	ADDITIONAL BEST MANAGEMENT PRACTICES
001	.004	Farm 13 Prod Fac	Secondary Containment	Nutrient Management Plan, Buffers, Setbacks and Conservation Tillage,
002		Farm 13 Prod Fac	Secondary Containment	
003	.003	Farm 14 Prod Fac	Secondary Containment	
004	.004	Farm 14 Prod Fac	Secondary Containment	

.011 MGD estimated total flow from outfalls 001, 002, 003, and 004 (see calculations next page)

*BMP Description-Secondary Containment: Consists of a grass covered earthen containment structure that collects runoff from the production area. The structure has a manually operated valve that is maintained as normally closed. The BMP is inspected daily by the farm production staff. Once water collects in the structure, it is visually inspected to ensure it does not contain any contaminants and then released.

Sanitary wastes from the employees are directed to a separate drain field.

Murphy Brown Farm 13 and 14 Stormwater Outfall
Flow Calculations

Annual average rainfall (44.64") for the Waverly, Va area is an average of 0.122 inches per day….Converted to feet is **0.0101 feet of rainfall**

Runoff Coefficients of **0.5 for pervious surfaces** and 0.9 for impervious surfaces were obtained from "Design and Construction of Sanitary and Storm Sewers**"**

Coefficient to convert cu. ft. to MGD is 7.48e-6

Outfalls **001 & 002** est. 149,589 sq ft pervious surface x 0.5 = 74,795 sq. ft.
No impervious service Total Area = 81,456 sq. ft.
Total Runoff Volume 0.0101 ft rain X 74,795 = 755.4 cu ft. x 7.48e-6 **= 0.0043 MGD**

Outfall **003** est. 146,944 sq ft pervious surface x 0.5 = 73,472 sq. ft.
No impervious service Total Area = 73,472 sq. ft.
Total Runoff Volume 0.0101 ft rain X 73,472 = 742.1 cu ft. x 7.48e-6 **= 0.0042 MGD**

Outfall **004** est. 99,923 sq ft pervious surface x 0.5 = 49,961 sq. ft.
No impervious service Total Area = 49,961 sq. ft.
Total Runoff Volume 0.0101 ft rain X 49,961 = 504.6 cu ft. x 7.48e-6 **= 0.0029 MGD**

Estimated Total Storm water flow from <u>all Farm 13 and 14 outfalls is 0.011 MGD</u>

Attachment 6

Chowan River and Dismal Swamp Basins

Cause Group Code: **K35R-03-BAC** **UT Seacock Swamp**

Location: This cause encompasses the UT to Seacock Swamp, from Headwaters to confluence with Seacock Swamp mainstem. PRO CAFO special study.

City / County: Surry Co.

Use(s): Recreation

Cause(s) / VA Category: Fecal Coliform / 5A

The Recreational Use is impaired based on data over 5 years old. No Ecoli data was collected for the 2008 Assessment however the impaired status was retained from Fecal Coliform data.

UT Seacock Swamp **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:			**1.03**

Sources:

Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: **K35R-03-DO** **UT Seacock Swamp**

Location: This cause encompasses the UT to Seacock Swamp, from Headwaters to confluence with Seacock Swamp mainstem. PRO CAFO special study.

City / County: Surry Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

The Aquatic Life Use is impaired based on the depressed DO concentrations, impairment continued from 2004 IR. Class VII DO criteria is not defined for this Assessment.

UT Seacock Swamp **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**1.03**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

Chowan River and Dismal Swamp Basins

Cause Group Code: **K35R-05-BAC** **UT Airfield Pond - Upper**

Location: This cause encompasses the UT (Willis Branch) to Airfield Pond from Headwaters to half-way between Rt 622 and Rt 729 (approx. RM 1.23) at confluence with UT. PRO CAFO special study.

City / County: Sussex Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli / 5A

The Recreation Use impairment is retained. Station 5AXDZ001.73 for E.coli with 2 viol / 4 obs. 2010 Ecoli data 4 viol/ 6 obs.

UT Airfield Pond - Upper **Recreation**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli - Total Impaired Size by Water Type:			**0.68**

Sources:

Animal Feeding Operations (NPS)	Source Unknown

Chowan River and Dismal Swamp Basins

Cause Group Code: **K35R-05-DO** **UT Airfield Pond - Upper**

Location: This cause encompasses the UT (Willis Branch) to Airfield Pond from Headwaters to half-way between Rt 622 and Rt 729 (approx. RM 1.23) at confluence with UT. PRO CAFO special study.

City / County: Sussex Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Oxygen, Dissolved / 5C

The Aquatic Life Use is impaired based on depressed DO concentrations, impairment continued from 2004 IR (segment Class change from III to VII).

UT Airfield Pond - Upper **Aquatic Life**	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Oxygen, Dissolved - Total Impaired Size by Water Type:			**0.68**

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

2012 Fact Sheets for 303(d) Waters

RIVER BASIN: Chowan River and Dismal Swamp Basins **HYDROLOGIC UNIT:** 03010202

STREAM NAME: **Blackwater River Basin**

TMDL ID: **K32R-13-HG** **2012 IMPAIRED AREA ID:** VAP-K32R-13

ASSESSMENT CATEGORY: 5A **TMDL DUE DATE:** 2018

IMPAIRED SIZE: 669.55 - Miles **Watershed:** VAP-K32R

INITIAL LISTING: 2006

UPSTREAM LIMIT: Headwaters

DOWNSTREAM LIMIT: VA state line

Blackwater River and tributaries from its headwaters to the VA-State Line

CLEAN WATER ACT GOAL AND USE SUPPORT:

Fish Consumption Use - Not Supporting

IMPAIRMENT: Mercury

During the 2006 cycle, the Blackwater River from Route 31 near Dendron downstream to the Virginia-North Carolina state line was assessed as impaired of the Fish Consumption Use due to a VDH fish consumption advisory for mercury.

During the 2008 cycle, the advisory was expanded on 8/31/2007 to include the Blackwater River to its headwaters, including all of its tributaries. The advisory currently recommends consuming no more than two meals/month of largemouth bass, sunfish species, bowfin, chain pickerel, white catfish, redhorse sucker and longnose gar.

The advisory is based on the results of DEQ's fish tissue monitoring program, which show mercury exceedances at multiple stations throughout the watershed, including 5ABKR003.68, 5ABKR002.33, 5AWKS013.53, 5ASEC005.39, 5ABLW074.66, 5ACPP004.04, 5ACPP007.86, 5AJCH000.73.

IMPAIRMENT SOURCE: Unknown, Atmospheric deposition

Source is unknown, but atmospheric deposition into high acid waters is suspected.

RECOMMENDATION: Problem Characterization

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office

4949-A Cox Road, Glen Allen, VA 23060-6296 **804/527-5020**

SUBJECT: **Flow Frequency Analysis and 303(d) Status Request**

TO: **Jennifer V. Palmore**

FROM: **Seth Mullins**

DATE: **12/12/2014**

Please provide the flow frequencies and applicable TMDL status for the outfall locations listed below. I have attached the following:

a. A copy of the previous Flow Frequency Determination (if applicable).
b. A copy of a topo map showing the location of each existing outfall & any new or proposed outfalls.

Facility Name: _MB Farms 13 & 14_____ Permit Number: ___VA0C40003_____

Permit Type: (circle all that apply)

Major Minor Industrial Municipal Other: ___X_____

Permit Action: Issuance ___X__ Reissuance _____ Modification _____

Current Expiration Date: _____

Topo Map: _____

Outfall Description:

OUTFALL NUMBER	Latitude	Longitude	Name of Nearest Potential Receiving Stream
001	36°56'32.41" N	77°2'27.43"W	UT to Airfield Pond
002	36°56'34.95" N	77°2'15.25"W	UT to Airfield Pond
003	36°55'53.98" N	77°2'04.87"W	UT to Seacorrie Sw
004	36°55'45.65" N	77°2'03.30"W	UT to Seacorrie Sw

Comments:

_____

_____

_____

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Piedmont Regional Office
4949-A Cox Road Glen Allen, Virginia 23060

SUBJECT: Flow Frequency Determination / 303(d) Status
Murphy Brown, LLC Farms 13 and 14 - VA0C40003

TO: Seth Mullins

FROM: Jennifer Palmore, P.G.

DATE: March 23, 2015

COPIES: File

Murphy Brown Farm 13 discharges to an unnamed tributary of Airfield Pond in Sussex County. Farm 14 outfall 001 flows to an unnamed tributary of Seacorrie Swamp and outfall 002 discharges to an unnamed tributary of Seacock Swamp. Flow frequencies have been requested for use in the VPDES permit.

The receiving streams are shown as ephemeral and intermittent on the USGS Manry 7 ½' Quadrangle topographic map. The flow frequencies for dry ditches and intermittent streams are shown below.

Unnamed tributaries at discharge points:

1Q30 = 0.0 cfs	High Flow 1Q10 = 0.0 cfs
1Q10 = 0.0 cfs	High Flow 7Q10 = 0.0 cfs
7Q10 = 0.0 cfs	High Flow 30Q10 = 0.0 cfs
30Q10 = 0.0 cfs	HM = 0.0 cfs
30Q5 = 0.0 cfs	

During the 2012 305(b)/303(d) Integrated Water Quality Assessment Report, Airfield Pond UT was considered Category 5A waters ("A Water Quality Standard is not attained. The water is impaired or threatened for one or more designated uses by a pollutant(s) and requires a TMDL (303d list).") The applicable fact sheets are attached. The Fish Consumption Use was impaired due to a VDH advisory for mercury, the Recreation Use was impaired due to E. coli exceedances, and the Aquatic Life Use was impaired due to low dissolved oxygen. The Wildlife Use was not assessed.

Seacorrie Swamp UT was not assessed for any Designated Use; therefore, it is considered a Category 3A water.

Seacock Swamp UT was also considered a Category 5A water. The Fish Consumption Use was impaired due to a VDH advisory for mercury, the Recreation Use was impaired due to E. elevated fecal coliform, and the Aquatic Life Use was impaired due to low dissolved oxygen. The Wildlife Use was not assessed.

Dry ditches and intermittent streams are considered Tier 1 waters. The Airfield Pond watershed is considered Class III waters. The Seacorrie- and Seacock Swamp watersheds are classified as Class VII swampwater.

Outfall 14-001 was addressed in the Assamoosick Swamp and Tributaries Bacterial TMDL under their previous VPA permit VPA00573. The TMDL was approved by the EPA on 6/3/2010 and by the SWCB on 9/30/2010. Murphy Brown received an E. coli wasteload allocation of 0 cfu/year to recognize that the facility did not have a direct discharge in their permit and that any bacteria load is accounted for in the load allocation.

The remaining outfalls were not addressed in any currently-approved TMDL.

If you have any questions, please let me know.

Attachment 7

VPDES PERMIT PROGRAM

CHRONOLOGY OF EVENTS
ATTACHMENT 7

APPLICATION RECEIVED	APPLICATION RETURNED	ADDITIONAL INFO REQUESTED	APPLICATION/ADD INFO DUE BACK IN RO	APPLICATION/ADD. INFO RECEIVED
6/10/2013		5/1/2014		
5/12/2014 (revised applic)				5/12/2014
		9/12/2014		9/26/2014
APPLICATION TO VDH: 6/3/2014 VDH COMMENTS RECEIVED: 7/12/2014				
APPLICATION ADMIN. COMPLETE: 9/26/2014 APPLICATION TECH. COMPLETE: 9/26/2014				

Date	**DESCRIPTIVE STATEMENT [CHRONOLOGY OF EVENTS] (Meetings, telephone calls, letters, memos, hearings, etc. affecting permit from application to issuance)**
5/12/2014	Revised application received
8/7/2014	Application sent to VADGIF, VADCR NH for comment
9/19/2014	Application sent to USFWS for comment
12/12/2014	Sent to Planning for Tier determination
12/12/14	Revised Draft CAFO Permit, VPDES CAFO Fact Sheet and Definition of Terms Received from OLAP
1/7/2014	Fact sheet submitted for preliminary review
	Planning comments/tier determination received
	TMDL information received from planning;(forwarded to OLAP with TRO recommendation & soliciting their input)
	DP/FS finalized and sent to EPA/OLAP/owner

Attachment 8

Excerpt of 9VAC25-31-200.E.: (VPDES regulation)

E. Concentrated Animal Feeding Operations (CAFOs). The activities of the CAFO shall not contravene the Water Quality Standards, as amended and adopted by the board, or any provision of the State Water Control Law. There shall be no point source discharge of manure, litter or process wastewater to surface waters of the state except in the case of an overflow caused by a storm event greater than the 25-year, 24-hour storm. Agricultural storm water discharges as defined in subdivision C 3 of 9VAC25-31-130 are permitted. Domestic sewage or industrial waste shall not be managed under the Virginia Pollutant Discharge Elimination System General Permit for CAFOs (9VAC25-191). Any permit issued to a CAFO shall include:

1. Requirements to develop, implement and comply with a nutrient management plan. At a minimum, a nutrient management plan shall include best management practices and procedures necessary to implement applicable effluent limitations and standards. Permitted CAFOs must have their nutrient management plans developed and implemented and be in compliance with the nutrient management plan as a requirement of the permit. The nutrient management plan must, to the extent applicable:

a. Ensure adequate storage of manure, litter, and process wastewater, including procedures to ensure proper operation and maintenance of the storage facilities;

b. Ensure proper management of mortalities (i.e., dead animals) to ensure that they are not disposed of in a liquid manure, storm water, or process wastewater storage or treatment system that is not specifically designed to treat animal mortalities;

c. Ensure that clean water is diverted, as appropriate, from the production area;

d. Prevent direct contact of confined animals with surface waters of the state;

e. Ensure that chemicals and other contaminants handled on site are not disposed of in any manure, litter, process wastewater, or stormwater storage or treatment system unless specifically designed to treat such chemicals and other contaminants;

f. Identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to surface waters of the state;

g. Identify protocols for appropriate testing of manure, litter, process wastewater and soil;

h. Establish protocols to land apply manure, litter or process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater; and

i. Identify specific records that will be maintained to document the implementation and management of the minimum elements described above.

Correlation of nine elements to the specific parts of the permit:

Element a: Permit Part I B. 2 & 3, Permit Part II A 1, Permit Part II B 4, 5, & 6, Permit Part III A (NMP requirements), Permit Part II C 3 (Farm Operating Manual)

Waste Monitoring:
Rationale: § 62.1-44.17:1 E 4 and 9VAC25-192-70 and 9VAC25-31-200 E 1 The specific waste monitoring requirements are required by 9VAC25-192-70. Additionally, 9VAC25-31-200 E 1 requires the permittee to establish proper protocols to monitor waste.
Soil Monitoring:
Rationale: § 62.1-44.17:1 E 4 and 9VAC25-192-70 and 9VAC25-31-200 E 1. The specific soils monitoring requirements are required by 9VAC25-192-70. Additionally, 9VAC25-31-200 E 1 requires the permittee to establish proper protocols to monitor soils.
A. WASTE STORAGE

1. **Design and Operation:**
   a. Any liquid manure collection and storage facility shall be designed and operated to:
      (1) prevent point source discharges of pollutants to state waters except in the case of a storm event greater than the 25-year, 24-hour storm; and
      (2) provide adequate waste storage capacity to accommodate periods when the ground is frozen or saturated, periods when land application of nutrients should not occur due to limited or nonexistent crop nutrient uptake, and periods when physical limitations prohibit the land application of waste.
   b. If after the effective date of this permit, a waste storage facility is planned for construction, the the plans and specifications for the proposed waste storage facility must be submitted to the DEQ Regional Office for approval prior to construction.

B4. **Liquid Waste Level:** At earthen liquid waste storage facilities constructed below the seasonal high water table, the top surface of the waste shall be maintained at a level of at least two feet above the water table.
B5. **All liquid waste treatment or waste storage facilities** must maintain one foot of freeboard at all times, up to and including a 25-year, 24-hour.
B6. **All open surface liquid impoundments** shall have a depth marker which clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour storm event.

A. NUTRIENT MANAGEMENT

1. **Nutrient Management Plan (NMP) Requirements and Elements:** All CAFO owners or operators shall implement and retain on site a Nutrient Management Plan developed by a certified Nutrient Management Planner in accordance with §10.1-104.2 of the Code of Virginia and approved by the Department of Conservation and Recreation. The NMP shall be made available to Department personnel upon request. The NMP shall address the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus loss to ground or surface waters. The NMP shall be enforceable through this permit. The NMP shall contain at a minimum the following information:
   a. Site map indicating the location of the waste storage facilities and the fields where waste will be applied, unless the fields are exempted in Part I C.6.;
   b. Site evaluation and assessment of soil types and potential productivities;
   c. Nutrient management sampling including soil and waste monitoring;
   d. Storage and land area requirements;

e. Calculation of waste application rates;
f. Waste application schedules; and
g. A plan for waste utilization in the event the facility is discontinued.

Element b: Application Addendum and Permit Part II B. 7. **Mortality Disposal at Liquid Waste Facilities:** Mortalities shall not be disposed of in any liquid manure or process wastewater system, unless alternative technologies are designed to handle mortalities and approved by the Department and must be handled in such a way as to prevent the discharge of pollutants to surface water. The Permittee shall record methods of mortality management and practices as required by Part I C.9.

Element c: Permit Part II B. 1. **Production Area Operation:** Water which has not come in contact with the pollutants from the production area must be diverted from the production area unless the waste storage facility is specifically designed to store or treat the water.

Element d: Permit Part II B. 3. **Confined Animals:** Prevent direct contact of confined animals with surface waters of the state.

Element e: Application Addendum and Permit Part II B. 2. **Chemicals and other contaminants handled at the facility** must not be disposed of in any manure, process wastewater, or storm water storage or treatment system unless such systems are specifically designed to treat such chemicals and other contaminants.

Element f: Permit Part I B 1. b. and Permit Part III B 1 & 2.
Best Management Practice(s) (BMPs) Monitoring:
Rationale: Required by: 9VAC25-31-200 E 1 f the requirements are to identify appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to surface waters of the state.

Permit Part III B 1 & 2. **LAND APPLICATION REQUIREMENTS**
1. **Buffer Zones:** Manure and process wastewater shall not be land applied within buffer zones.
a. Buffer zones at land application sites shall, at a minimum, be maintained as stated in the table below.
b. The buffer zone distance to maintain may be reduced for certain site features indicated in the table below if the following conditions are met:
(1) BMP(s) that when implemented will provide pollutant reductions equivalent or better than the reductions that would be achieved by a 100-foot wide buffer, or a 35-foot wide vegetated; and
(2) the BMP(s) has been approved by the Department.
2. **Best Management Practices (BMP):** If a BMP or BMPs are utilized, installed or constructed at the facility for water quality protection or in compliance with 40 CFR Part 412, the BMP or BMPs must be maintained onsite for the term of this permit or the life of the practice, whichever is shorter. Details regarding the purpose and maintenance of the BMP shall be included in the facility's Farm Operating Manual.

Element g: Permit Part II C 3 g The Farm Operating Manual shall include at a minimum the following information:
g. practices, procedures and methods which will be followed to monitor and analyze waste; and

Element h: Permit Part III A 1 (NMP)

A. NUTRIENT MANAGEMENT

1. **Nutrient Management Plan (NMP) Requirements and Elements:** All CAFO owners or operators shall implement and retain on site a Nutrient Management Plan developed by a certified Nutrient Management Planner in accordance with §10.1-104.2 of the Code of Virginia and approved by the Department of Conservation and Recreation. The NMP shall be made available to Department personnel upon request. The NMP shall address the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus loss to ground or surface waters. The NMP shall be enforceable through this permit. The NMP shall contain at a minimum the following information:

a. Site map indicating the location of the waste storage facilities and the fields where waste will be applied, unless the fields are exempted in Part I C.6.;
b. Site evaluation and assessment of soil types and potential productivities;
c. Nutrient management sampling including soil and waste monitoring;
d. Storage and land area requirements;
e. Calculation of waste application rates;
f. Waste application schedules; and
g. A plan for waste utilization in the event the facility is discontinued.

Element i: Permit Part I C. 4. **Farm Operating Manual:** The Permittee shall identify, in the approved Farm Operating Manual, the specific records that will be maintained to document the implementation and management of the items in the Manual. These records shall be retained for a minimum of five years after the effective date of the permit and made available to Department personnel upon request.

Additionally, the requirements outlined in the Farm Operating Manual are to address any conditions that are not specified by the EPA CAFO Rule.

Permit Part II C 3

3. **Farm Operating Manual:** The Permittee shall develop and submit a Farm Operating Manual for approval by the Department within 90 days of the effective date of this permit. The Farm Operating Manual shall include at a minimum the following information:

a. identification of land features or structures where storm water will likely leave the production area(s) and enter surface waters of the state;
b. identification of land features or structures in the land application area(s) which will increase the risk of nitrogen and phosphorus transport to surface waters of the state; land features or structures include tile lines, pipes or ditches;
c. practices and procedures which will be followed to ensure that the waste storage facilities are designed and operated in accordance with Parts II A. and B. of this permit;
d. practices, procedures and applicable BMPs which will be utilized to ensure compliance with the requirements of this permit (including those BMPs listed in Table 2 of Part I B.1.b. and those required by Part III B.2.) including but not limited to the following:

(1) if applicable, identification of the location of BMP(s) that are installed or will be installed at the CAFO facility, for BMP(s) that will be installed include the expected timeframe for installation;
(2) specification of appropriate maintenance that will be performed for each BMP(s);
(3) specification of the steps that will be taken in the event that a BMP(s) is found deficient,

(a) as a result of the visual inspections as required by Part I B.1.b., or

(b) as a result of other routine inspections, as prescribed by the Farm Operating Manual, of BMP(s) utilized or installed in accordance with Part III B.2.

The steps shall include any actions that will be taken to correct deficiencies in accordance with Part I C.2.b.

e. practices and procedures which will be followed to ensure that all equipment needed for the proper operation of the permitted facilities is maintained in good working order, including but not limited to the following:

(1) retention of the equipment manufacturer's operation and maintenance manuals or other reference source to allow for timely maintenance and prompt repair of equipment when appropriate; and

(2) specification of the frequencies of inspections in order to detect leaks on equipment used for liquid manure handling and land application; and

f. an emergency plan which includes appropriate procedures for employees to follow in case of an emergency such as; an unauthorized discharge of manure, from the production area or catastrophic animal mortality. The emergency plan must include appropriate information for assistance with the particular emergency and must include contact information for local, state and federal agencies required to be notified in the case of any of the above mentioned events;

g. practices, procedures and methods which will be followed to monitor and analyze waste;

h. practices, procedures and methods which will be used to manage solids in the waste storage or treatment facilities; and

i. practices, procedures and methods which will be followed to ensure that chemicals and other contaminants handled at the facility are not disposed of in any manure, process wastewater, or storm water storage or treatment system unless such systems are specifically designed to treat such chemicals and other contaminants.

The Permittee shall operate the CAFO facility in accordance with the approved Farm Operating Manual which becomes an enforceable part of the permit. Any changes in those practices and procedures shall be documented and submitted to the Department for staff approval within 90 days of the effective date of the changes. The existing manual shall continue to be implemented until the revised manual is approved by the Department. Upon approval of submitted manual changes, the revised manual becomes an enforceable part of the permit. Noncompliance with the approved manual shall be deemed a violation of the permit.

Attachment 9

DEFINITION OF TERMS

Adverse Weather Conditions: means weather conditions that are dangerous or create inaccessibility for personnel, and may include such things as local flooding, high winds, electrical storms, or situations that otherwise make sampling impracticable, such as drought or extended frozen conditions.

Animal Feeding Operation (AFO): means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

(i) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and

(ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Agricultural storm water: means storm water that is not the sole result of land application of manure, litter or process wastewater. Where manure, litter or process wastewater has been applied in accordance with a nutrient management plan approved by the Virginia Department of Conservation and Recreation and in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater, a precipitation-related discharge of manure, litter, or process wastewater from land areas under the control of an animal feeding operation is an agricultural storm water discharge.

Best Management Practice (BMP): means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to surface waters. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Concentrated Animal Feeding Operation (CAFO): means an AFO that is defined as a Large CAFO or as a Medium CAFO or that is designated as a Medium CAFO or a Small CAFO. Any AFO may be designated as a CAFO by the director in accordance with the provisions of 9VAC25-31-130B. (see table below) {Two or more AFOs under common ownership are considered to be a single AFO for the purposes of determining the number of animals at an operation, if they adjoin each other or if they use a common area or system for the disposal of wastes.}

Animal Type	**Number of Animals** (stabled or confined as indicated below)		
	Large	**Medium** [1]	**Small** [1,2]
Mature Dairy Cattle	700 or more	200 to 699	Less than 200
Cattle (other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs)	1,000 or more	300 to 999	Less than 300
Veal calves	1,000 or more	300 to 999	Less than 300
Swine (weighing over 55 pounds)	2,500 or more	750 to 2,499	Less than 750
Swine (weighing less than 55 pounds)	10,000 or more	3,000 to 9,999	Less than 3,000
Turkeys	55,000 or more	16,500 to 54,999	Less than 16,500
Laying hens or broilers (liquid manure (manure as defined in Part IV AA.) handling systems)	30,000 or more	9,000 to 29,999	Less than 9,000
Chickens other than laying hens (other than a liquid manure (manure as defined in Part IV AA.) handling systems)	125,000 or more	37,500 to 124,999	Less than 37,500
Laying hens (other than a liquid manure (manure as defined in Part IV AA.) handling systems)	82,000 or more	25,000 to 81,999	Less than 25,000
Horses	500 or more	150 to 499	Less than 150
Sheep or Lambs	10,000 or more	3,000 to 9,999	Less than 3,000
Ducks (other than a liquid manure (manure as defined in Part IV AA.) handling systems)	30,000 or more	10,000 to 29,999	Less than 10,000
Ducks (liquid manure (manure as defined in Part IV AA.) handling systems)	5,000 or more	1,500 to 4,999	Less than 1,500

1 Either one of the following conditions are met:

(A) Pollutants are discharged into surface waters (surface waters as defined in Part IV AA.) of the State through a man-made ditch, flushing system, or other similar man-made device; or

(B) Pollutants are discharged directly into surface waters (surface waters as defined in Part IV AA.) of the State which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the animals confined in the operation.

2 Must be designated by the Department as a significant contributor of pollutants to surface waters (surface waters as defined in Part IV AA.).

Fact Sheet: means the document that details the requirements regarding utilization, storage, and management of poultry waste by poultry waste end-users and poultry waste brokers. The fact sheet is approved by the Department, in consultation with the Department of Conservation and Recreation.

Land application area: means land under the control of an AFO owner or operator, that is owned, rented, or leased to which manure, litter or process wastewater from the production area may be applied.

Manure: means manure bedding, compost and raw materials or other materials commingled with manure or set aside for disposal.

Measurable Storm Event: means a storm event that results in an actual discharge from the site.

Overflow: means the discharge of manure or process wastewater resulting from the filling of wastewater or manure storage structures beyond the point at which no more manure, process wastewater, or storm water can be contained by the structure.

Poultry Waste Broker or Broker: means a person who possesses or controls poultry waste that is not generated on an animal feeding operation under his operational control and who transfers or hauls poultry waste to other persons. If the entity is defined as a broker they cannot be defined as a hauler for the purposes of this regulation.

Poultry Waste End-User or End-User: means any recipient of transferred poultry waste who stores or who utilizes the waste as fertilizer, fuel, feedstock, livestock feed, or other beneficial end use for an operation under his control.

Poultry Waste Hauler or Hauler: means a person who provides transportation of transferred poultry waste from one entity to another, and is not otherwise involved in the transfer or transaction of the waste, nor responsible for determining the recipient of the waste. The responsibility of the recordkeeping and reporting remains with the entities to which the service was provided: grower, broker, and end-user.

Poultry Waste: means dry poultry litter and composted dead poultry.

Process Wastewater: Process wastewater from an AFO means water directly or indirectly used in the operation of the AFO for any of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing, or spray cooling of the (confined) animals; or dust control. Process wastewater from an AFO also includes any water that comes into contact with any raw materials, products, or byproducts including manure, litter, feed, milk, eggs or bedding.

Production Area: means that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage areas include but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins, and areas within berms and diversions that separate uncontaminated storm water. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

Runoff Diversion Structures: see Storm Water Diversion Device.

(Storm Event) - 25-year, 24-hour Storm: means precipitation events with a probable recurrence interval of once in twenty five years as defined by the National Weather Service in Technical Paper No. 40, “Rainfall Frequency Atlas of the United States,” May, 1961, or equivalent regional or State rainfall probability information developed from this source. In Virginia, the rainfall from a 25-year, 24-hour storm event ranges from four to seven inches depending upon your location in the State.

Storm Water: means storm water run-off, snow melt run-off, and surface run-off and drainage.

Storm Water Diversion Device: means a device or a structure used to change the path of storm water.

Surface Waters: means

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
   a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;

b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
c. Which are used or could be used for industrial purposes by industries in interstate commerce.

4. All impoundments of waters otherwise defined as surface waters under this definition;
5. Tributaries of waters identified in subdivisions 1 through 4 of this definition;
6. The territorial sea; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in subdivisions 1 through 6 of this definition.

Vegetated Buffer: means a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

Waste: means manure, poultry waste and process wastewater, for the purposes of this permit.