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X Amendment
X New
___ Repeal

Rule(s) Revised (**ALL** chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please enter only **ONE** Rule Number/Rule Title per row)

Chapter Number	**Chapter Title**
0400-40-17	Certification of Qualified Hydrologic Professionals
Rule Number	**Rule Title**
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1200-04-07	Aquatic Resource Alteration
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(Place substance of rules and other info here. Statutory authority must be given for each rule change. For information on formatting rules go to http://state.tn.us/sos/rules/1360/1360.htm)

New Rules

Chapter 0400-40-17
Certification of Qualified Hydrologic Professionals

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0400-40-17-.01 Minimum Qualifications

(1) Persons seeking to be certified by the department as Tennessee qualified hydrologic professionals must hold, at a minimum, a bachelor's degree in biology, geology, ecology, engineering, or related sciences, must have a minimum of five years relevant experience, and must successfully complete the Tennessee Hydrologic Delineation Class offered or accredited by the department.

(2) Qualifying relevant experience is professional employment that includes regular, periodic fieldwork in biologic or hydrologic assessments of streams and wet weather conveyances. Every year of qualifying experience shall include at a minimum one wet weather conveyance determination.

0400-40-17-.02 Application for Certification

(1) Persons may take the test offered for the certification program for qualified hydrologic professionals without seeking the certification; provided however, that if someone passes the test before they have the required experience and later wishes to use the results from that test to obtain certification, the date of that test or the latest refresher test may not be more than three years prior to the date of application for certification.

(2) Persons seeking certification as a qualified hydrologic professional shall submit the following to the department's designee for the certification program prior to taking the test: a fully completed form developed by the department and signed under penalty of perjury that contains all information showing their qualifications, including the details of their educational degrees and professional experience including documentation or description of at least five hydrologic determinations.

(3) In determining years of experience, the work done to meet any requirement for a bachelors level degree program does not qualify toward the five years of professional experience required for certification. However, relevant work experience obtained on summer employment, work study, or other employment that is not a degree requirement does qualify for such purposes.

0400-40-17-.03 Maintenance and Revocation of Certification

(1) Certificates will be valid for three years from issuance. Once a person has been certified by the department as a qualified hydrologic professional, he or she must successfully complete a refresher course offered by the department every three years in order to maintain such certification. Evidence of successful completion of a refresher course shall be submitted by the hydrologic professional with the

application for renewal of a certificate at least 90 days before expiration of the certificate. A new certificate will not be issued without evidence of successful completion of a refresher course.

(2) During the term of a certificate, the department may revoke the certification of any qualified hydrologic professional if it is determined that there is cause. Cause for decertification includes, but is not limited to, failure to timely and successfully complete any required refresher courses, submission to the department of materially false information, or repeated submission of reports in support of hydrologic determinations that contain significant failures to exercise the skills of a certified hydrologic professional in accordance with these rules and the Guidance for Making Hydrologic Determinations (Guidance) which contains the instructions and examples for proper application of these rules to situations in the field that has been developed pursuant to §69-3-107(25). Such revocation shall be sent to the hydrologic professional by certified mail. An appeal of a revocation will be heard by the board as a contested case under the Uniform Administrative Procedures Act, Tenn. Code Ann. §§ 4-5-301 et seq. A revocation by the Commissioner or by an order of the board will not become effective until the applicable period for filing an appeal from such action has passed without the filing of an appeal.

(3) If a person's certification as a qualified hydrologic professional is revoked by the department, the person may appeal the revocation by filing a petition stating the reasons for disagreeing with the revocation with the board within 30 days of the date of receipt of the revocation.

(4) When a person's certification as a qualified hydrologic professional has been revoked, he or she must again successfully complete the Tennessee Hydrologic Delineation Class offered or accredited by the department. However, the de-certified person may not re-apply to take the class for a period of one year after the certification has been revoked.

0400-40-17-.04 Requirements for Wet Weather Conveyance Determination Reports

(1) A report regarding a wet weather conveyance determination submitted to the department by a person certified as a Qualified Hydrologic Professional (QHP) seeking to qualify for the treatment provided in §69-3-108(r) shall so state in bold print on the first page of the document and shall be sent to the appropriate field office of the department accompanied by the following documentation.

(a) A written and an electronic copy of the report. The report should include the name, address, and phone number of the current property owner(s), and the person or applicant who proposes to alter the watercourse (if different from the owner), and the name, affiliation, and certification identification number of the QHP submitting the report.

(b) A statement, signed by the certified QHP attesting that all submitted information is true, accurate and complete.

(c) An explanation of the purpose and context of the hydrologic determination report, including any proposed alterations to wet weather conveyances, streams, wetlands, or other aquatic resources.

(d) The identification of the starting and ending points along a watercourse of the areas determined to be a wet weather conveyance; such areas may not be larger than what is currently proposed to be altered by the proponent of project.

(e) A vicinity map, including the property boundaries or hydrologic determination review area (if different then property boundary). A color copy of the United States Geological Survey topographical map with an overlay of the property (development) boundary is preferred. On linear projects, start and terminus points are required. The map should clearly indicate the specific locations of all hydrologic features that are subjects of the provisions of §69-3-108(r) identified in the report. Specific latitude/longitude coordinates must either be included on the map or in the body of the hydrologic determination report.

(f) Color photographs of each of the hydrologic features to potentially be altered or otherwise identified in the report; including the date each photograph was taken, latitude and longitude, in decimal degrees of each photograph location and indicate the location and direction of each photographic view on the site map or plan. These photographs must be representative over the

overall reach of water feature evaluated. At a minimum, include a photograph of the area to potentially be altered, immediately up channel of the area to potentially be altered, and immediately down channel.

(g) TDEC Hydrologic Determination Field Data Sheets, completed in conformance with the current TDEC-WPC Guidance for Making Hydrologic Determinations and Streams. At least one data sheet must be submitted for each watercourse to potentially be altered or identified.

(h) Any previous assessments of hydrologic features on site known to the submitter.

(i) Any other information used in making the hydrologic determinations included in the report. Examples include NRCS Soil Maps, local geological data, recent and seasonal precipitation gauge records, benthic surveys, etc.

(j) Recommended, but not required information includes:

1. Site development (concept) plans and project name (separate sheet(s), if available);

2. Close-contour survey maps;

3. An aerial photo with an overlay of the property boundary;

4. Municipal jurisdiction of the project site; and

5. Location, dimensions, and type of sewage/septic system proposed if applicable.

(2) When a person desiring to alter a specific water of the state requests a determination from the commissioner that the watercourse is a wet weather conveyance and submits a report from a certified QHP conducted in accordance with all requirements of the rules and guidance adopted pursuant to §69-3-105(m) and §69-3-107(25), and containing all of the information required by paragraph (1) of this rule, then the determination made in the report shall be presumed to be correct, unless the department notifies such person in writing, or by electronic mail, within thirty (30) days of the submittal of the report, that the department has affirmatively determined that there is a significant question about whether the water of the state in question is a stream or wet weather conveyance and states the reason(s) for that determination.

(3) If the department has made such a determination that there is a significant question regarding such a submittal, then the department shall, within thirty (30) days following the date of such notification, determine whether the water of the state in question is a stream or wet weather conveyance, and notify such person in writing, or by electronic mail, of that decision and the reasons for that determination.

(4) If the department rejects the hydrologic determination submitted by a certified QHP on behalf of a person desiring to alter a specific water of the state who has requested a determination from the commissioner that the watercourse is a wet weather conveyance, that person may appeal the department's determination that the specific water is a stream by filing a petition for appeal with the board within thirty (30) days of receiving the department's rejection.

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

Chapter 1200-04-03
General Water Quality Criteria

Amendments in redline form

Rule 1200-04-03-.04 Definitions is amended by deleting it in its entirety and replacing it with the following so that, as amended, the rule shall read as follows:

1200-04-03-.04 Definitions

In addition to the meanings provided in the Water Quality Control Act (T.C.A. §69-3-103), terms used in these rules shall mean the following:

(1) Atypical consumers - Those persons in the vicinity of a stream or lake who due to physiological factors or previous exposure are more sensitive to specific pollutants than is the population in general. Examples of atypical consumers may include, but are not limited to: children; pregnant or nursing women; subsistence fishermen; frequent purchasers of commercially harvested fish; and agricultural, industrial, or military personnel who may have had previous occupational exposure to the contaminant of concern.

(2) Conventional Water Treatment - Conventional water treatment as referred to in the criteria denotes coagulation, sedimentation, filtration, and chlorination or disinfection.

(3) Degradation - The alteration of the properties of waters by the addition of pollutants or removal of habitat.

(4) De Minimis – Alterations, other than those resulting in the condition of pollution or new domestic wastewater discharges, that represent either a small magnitude or a short duration shall be considered a de minimis impact and will not be considered degradation for purposes of implementing the antidegradation policy. Discharges other than domestic wastewater will be considered de minimis if they are temporary or use less than five percent of the available assimilative capacity for the substance being discharged. Water withdrawals will be considered de minimis if less than five percent of the 7Q10 flow of the stream is removed (the calculations of the low flow shall take into account existing withdrawals). Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the division finds that the impacts are offset by a combination of impact minimization and/or insystem mitigation. If more than one activity has been authorized in a segment and the total of the impacts uses no more than ten percent of the assimilative capacity, available habitat, or 7Q10 low flow, they are presumed to be de minimis. Where total impacts use more than ten percent of the assimilative capacity, available habitat, or 7Q10 low flow they may be treated as de minimis provided that the division finds on a scientific basis that the additional degradation has an insignificant effect on the resource and that no single activity is allowed to consume more than five percent of the assimilative capacity, available habitat or 7Q10 low flow.

(5) Ecoregion - A relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

(6) Epilimnion – The upper layer of water in a thermally stratified lake or reservoir. This layer consists of the warmest water and has a fairly uniform (constant) temperature.

(7) Ground water – Water beneath the surface of the ground within the zone of saturation, whether or not flowing through known and definite channels.

(8) Ground water table – The upper surface of the zone of saturation by ground water.

(9) Hypolimnion - The lowest layer in a thermally stratified lake or reservoir. This layer consists of colder, more dense water, has a constant temperature and no mixing occurs. The hypolimnion of a eutrophic lake is usually low or lacking in oxygen.

(10) Interflow – The runoff infiltrating into the surface soil and moving toward streams as shallow, perched water above the main ground-water level.

(11) Mixing Zone - That section of a flowing stream or impounded waters in the immediate vicinity of an outfall where an effluent becomes dispersed and mixed.

(12) Multiple populations – Two or more individuals from each of two or more distinct taxa, in the context of obligate lotic aquatic organisms.

(13) Normal weather conditions – Those within one standard deviation of the cumulative monthly precipitation means for at least the three months prior to the hydrologic determination investigation, based on a 30-year average computed at the end of each decade. Precipitation date shall come from National Oceanographic and Atmospheric Agency's National Climatic Data Center, National Resources Conservation Service's National Climatic Data Center, Natural Resources Conservation Service's National Water and Climate Center, or other well-established weather station.

(14) Obligate lotic aquatic organisms - Organisms that require flowing water for all or almost all of the aquatic phase of their life cycles.

(15) Perched water – Water that accumulates above an aquitard that limits downward migration where there is an unsaturated interval below it, between the aquitard and the zone of saturation.

(16) Photic Zone - the region of water through which light penetrates and where photosynthetic organisms live.

(17) Reference condition - A parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

(18) Reference Site - Least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

(19) Stratification – The tendency in lakes and reservoirs for distinct layers of water to form as a result of vertical change in temperature and, therefore, in the density of water. During stratification, dissolved oxygen, nutrients, and other parameters of water chemistry do not mix well between layers, establishing chemical as well as thermal gradients.

(20) Stream - A surface water that is not a wet weather conveyance.

(21) Subecoregion - A smaller, more homogenous area that has been delineated within an ecoregion.

(22) Thermocline – The middle layer in a thermally stratified lake or reservoir. In this layer there is a rapid decrease in temperature with depth. Also called the metalimnion.

(23) Wadeable streams - Streams that can be sampled using a hand held, one meter square or smaller kick net without water and materials escaping over the top of the net.

(24) Watercourse - A man-made or natural hydrologic feature with a defined linear channel which discretely conveys flowing water, as opposed to sheet-flow.

(25) Wet weather conveyance - Man-made or natural watercourses, including natural watercourses that have been modified by channelization:

(a) That flow only in direct response to precipitation runoff in their immediate locality;

(b) Whose channels are at all times above the ground water table;

(c) That are not suitable for drinking water supplies; and

(d) In which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(26) Wet weather conveyance determination - The decision based on site specific information of whether a particular watercourse is a stream or a wet weather conveyance. It is synonymous with "stream determination" and "hydrologic determination."

(27) Zone of saturation – A subsurface zone below the ground water table in which all of the interconnected voids and pore spaces are filled with water.

Rule 1200-04-03-.05 Interpretation of Criteria is amended by adding a new paragraph so that the new paragraph (9) shall read as follows:

(9) Standard operating procedures for making stream and wet weather conveyance determinations (hydrologic determinations)

(a) General

1. Because a primary purpose of the Water Quality Control Act is to protect the waters of the state for the public, and since streams receive a higher level of protection than wet weather conveyances, anyone desiring to alter a watercourse who wishes to avoid unnecessary expense and delay, may request the department to process a permit application or issue an authorization under a general permit with the presumption that the watercourse is a stream. In that instance, a full hydrologic determination would not be performed under these rules. However, nothing shall preclude an applicant from subsequently seeking a wet weather conveyance determination.

2. The procedures detailed in this rule are intended to be used in situations where there is some question whether a watercourse is a stream or wet weather conveyance. In situations where it is obvious that a watercourse is a stream, such as named rivers or streams with watersheds larger than a square mile, or spring-fed streams with consistent flow greater than one cubic foot per second, it is not necessary to conduct a detailed hydrologic determination.

3. It is the purpose of this rule to set out the framework for making stream and wet weather conveyance determinations taking into consideration all relevant and necessary information on the biology, geology, geomorphology, precipitation, hydrology, and other scientifically based principles. Staff of the department and certified hydrologic professionals not employed by the department who are making a submission pursuant to §69-3-108(r) shall follow these rules and the Guidance for Making Hydrologic Determinations (Guidance) which contains the instructions and examples for proper application of these rules to situations in the field that has been developed pursuant to §69-3-107(25) in making these determinations.

4. The format for documenting these determinations is provided in the Hydrologic Determination Field Data Sheet (Data Sheet) in the Guidance. All available field characteristics necessary to make an accurate determination shall be evaluated, and all evidence utilized in making a determination shall be documented using the Data Sheet or as an addendum. Applicants may choose to submit additional hydrological or geotechnical data not included in the standard procedure in support of a hydrologic determination. Any additional relevant information submitted to the department shall be considered by the division in its determination.

5. Any significant revision to the Data Sheet or Guidance shall be subject to a thirty-day public comment period prior to adoption. The department shall advertise its intent to modify the Data Sheet or Guidance by posting notice of proposed changes on the department's internet web site and by sending to the permit mailing list. Significant modifications include the addition or deletion or substantive modification of either the primary or secondary indicators or a change in the scoring system. The department shall

consider the need for modifications to the Data Sheet and Guidance periodically and whenever a significant comment is submitted in regard to them.

6. To be classified as a wet weather conveyance, a watercourse must meet all four elements of the definition in §69-3-103. Therefore, if it is determined that any one of the four elements does not apply to a watercourse, the watercourse is a stream.

7. Because natural variation and human activities can alter hydrologic conditions over time, hydrologic determination will only be considered valid for a maximum of five years or the term of a permit based on it.

8. Because there can be considerable variability within a given reach of a watercourse, wet weather conveyance determinations should not be made on a single point but must also investigate up and down channel and consider the watercourse's landscape context.

9. All of the indicators referred to in these rules and the Guidance are evidence relevant to the presence or absence of one or more of the four elements of the wet weather conveyance definition. The difference between the primary and secondary indicators is that each of the primary indicators is considered presumptive evidence alone regarding one or more of the four elements, and will allow for an immediate hydrologic determination to be made in most cases. Some of the primary indicators involve direct observations of the presence or absence of one or more of the elements. The primary indicators of wet weather conveyances are:

   (i) hydrologic feature exists solely due to a process discharge,

   (ii) defined bed and bank absent, watercourse dominated by upland vegetation/ grass,

   (iii) watercourse dry anytime during February through April 15th under normal precipitation/ ground water conditions, and

   (iv) daily flow and precipitation records showing feature only flows in direct response to rainfall.

10. Primary indicators of streams are:

   (i) presence of multiple populations of obligate lotic organisms with two months or longer aquatic phase,

   (ii) presence of fish (except Gambusia),

   (iii) presence of naturally occurring ground water table connection,

   (iv) flowing water in channel seven days or more since the last precipitation in the local watershed, and

   (v) evidence watercourse has been used as a supply of drinking water.

11. When primary indicators cannot be observed or documented, then the investigator must evaluate the watercourse using secondary indicators. The secondary indicators are an aggregate set of observations that in total are used to evaluate the presence or absence of one or more of the elements of a wet weather conveyance. Secondary indicators are:

   (i) continuous bed and bank,

   (ii) sinuous channel,

   (iii) in-channel structure, riffle-pool sequences,

(iv) sorting of soil textures or other substrate,

(v) active/relic floodplain,

(vi) depositional bars or benches,

(vii) braided channel,

(viii) recent alluvial deposits,

(ix) natural levees,

(x) headcuts,

(xi) grade controls,

(xii) natural valley draingeway,

(xiii) at least second order channel on United States Geological Survey or Natural Resources Conservation Service map,

(xiv) subsurface flow/discharge into channel,

(xv) water in channel more than forty-eight hours since rain,

(xvi) leaf litter in channel,

(xvii) sediment on plants or on debris,

(xviii) organic debris lines or piles (wrack lines),

(xix) hydric soils in channel bed or sides,

(xx) fibrous roots in channel,

(xxi) rooted plants in channel,

(xxii) crayfish in channel (exclude in floodplain),

(xxiii) bivalves/mussels,

(xxiv) amphibians,

(xxv) macrobenthos,

(xxvi) filamentous algae, periphyton,

(xxvii) iron-oxidizing bacteria/fungus, and

(xxviii) wetland plants in channel.

12. The secondary indicators shall be scored in accordance with the instructions in the Guidance. Hydrologic determinations will often be made on the basis of secondary indicators because none of the primary indicators is present at the time of investigation. Any of the primary indicators contained in these rules and the Guidance may be considered conclusive after consideration of appropriate background information including recent weather and precipitation, in the absence of any directly contradictory evidence. However, since hydrologic determinations are required to be made at all

times of year, secondary indicators of hydrologic status will be used, in accordance with the Guidance and these rules, as determinant evidence in the absence of primary indicators. The secondary indicators used in the Guidance shall be based on sound scientific principles.

13. Watercourses in which flow is solely a result of process or wastewater discharge or other non-natural sources shall not be regulated as streams even though they may exhibit characteristics of a stream rather than a wet weather conveyance.

(b) The specific procedures outlined herein are intended to consider each of the four elements necessary for a watercourse to be classified as a wet weather conveyance.

1. Because the duration of the flow in a watercourse is the central inquiry of hydrologic determinations, all of the primary and secondary indicators are relevant to evaluating it. Although other factors may also be relevant, at a minimum the following procedures shall be used to determine if a watercourse flows only in direct response to precipitation runoff in its immediate vicinity.

(i) Prior to conducting a field evaluation, the investigator should review recent precipitation patterns for the local area, the longer-term seasonal precipitation trends, and any other available information such as historic land use, regional geology and soil types, or previous hydrologic determinations near the site to be investigated.

(ii) The investigator must decide if the determination is being conducted under "normal weather conditions." The procedure for determining if weather conditions are normal, or either wetter or drier than normal, is contained in the Guidance. If conditions are either wetter or drier than normal the investigator must take this into consideration in making a hydrologic determination.

(iii) The vast majority of wet weather conveyances will generally cease to flow within 48 hours of almost all except some of the largest rain events. This is especially true in urbanized, impervious areas, or other areas with low infiltration rates, such as mowed lawns. The investigator shall document the presence or absence of flow within the watercourse. If in-stream surface flow is observed within the evaluated reach, and it has been at least seven days since the last rainfall event in the upstream watershed, the flow will not be considered a direct storm response, and the investigator shall conclude that the feature is a stream. The investigator shall document the source of the precipitation data. The source used shall be as close as feasible to the watercourse.

(iv) When subsurface water discharges such as seeps, interstitial flow, perched water, or interflow are observed and used as indicators of hydrology, investigators shall consider the influence of recent precipitation events and localized soil and geologic conditions on these features to determine if these features provide adequate hydrology such that the watercourse flows more than in direct response to precipitation. For example, since some such features have more flow when there has been significant recent precipitation, if they are flowing when there has not been much recent precipitation, it is more likely that they flow for sustained periods. In some instances, there may be observable outcroppings of a confining layer such as shale or clay that causes interstitial flow to discharge to a watercourse. In this situation, the capacity of up-gradient conditions such as the permeability and volume of the soils above the confining layer to sustain extended periods of surface flow should be considered. These types of sustained discharges should not be considered a direct response to rainfall. In other instances, such as in areas with a highly karst geology, observed seeps into a watercourse may be not be able to sustain extended periods of flow, and may be considered a more direct response to rainfall.

(v) Field investigations for hydrologic determinations should not be conducted if a one-inch precipitation event in 24 hours has occurred in the area of investigation within the previous 48 hours.

2. The following procedures are to determine if the channel is above the ground water table at all times. Under the definition of wet weather conveyance in T.C.A. §69-3-103, if there are any times that the channel is not above the ground water table, it is a stream.

(i) Since larger streams and rivers are frequently in contact with the ground water table, the investigator shall review topographic maps to determine if the watercourse is within the floodplain of, or within twenty feet in elevation of a larger stream or river known to carry perennial flow. Flow in such a watercourse should not be considered conclusive evidence of a ground water table connection, but is contributing evidence to be considered in the determination. Therefore further investigation into additional factors including those listed below is necessary to determine that the watercourse in question is in contact with the ground water table.

(ii) Since the presence of wetlands often indicates a shallow depth to the ground water table, the investigator shall search for the presence of wetlands in the immediate vicinity of the watercourse both on topographic maps and in the field. The presence of wetlands in the vicinity of the watercourse being examined should not be considered conclusive evidence of a ground water table connection, but is contributing evidence to be considered in the determination. Therefore further investigation into other factors including those listed below is necessary to determine that the watercourse in question is in contact with the ground water table.

(iii) The investigator shall review United States Department of Agriculture soil surveys. Their soil descriptions often contain information on depth to water table. For watercourses whose channels are at a depth that indicates contact with the ground water table for the soil type in which they are formed, the investigator can conclude that the watercourse is in contact with the water table, absent contradicting field information.

(iv) The investigator shall review site geological characteristics affecting the elevation of the ground water table with respect to the elevation of the channel, including the presence of karst bedrock features, erodibility of watershed soils, thickness of regolith and channel alluvium, depth to bedrock or laterally persistent silt or clay horizons, land-use disturbances, and other watershed conditions controlling or contributing to the presence or absence of channel base flow.

(v) If data are available from water wells within one mile of and in similar landscape position to a watercourse under investigation, and if the surface elevation of standing water in the well is at or above the elevation of the bottom of the channel of the watercourse, then the investigator can conclude that the watercourse is in contact with the ground water table.

(vi) The observed emergence of water from the ground is not necessarily water from the ground water table and should not be considered as conclusive for the purpose of this element. Therefore further investigation into factors including those listed above is necessary to determine the source of the emergent water.

3. The following procedures are to determine if a watercourse is suitable for drinking water supplies. The investigator should note spring boxes, water pipes to carry water from the watercourse to a residence, or other observable evidence the watercourse is being used as a household water supply upstream of or within the segment being evaluated. When these features are noted, the investigator can conclude that the watercourse is a stream absent contradicting information.

4. The following procedures are to determine if a watercourse, under normal weather conditions, due to naturally occurring ephemeral or low flow does not have sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(i) The presence of the requisite aquatic life is a primary indicator that the watercourse supports that aquatic life. In order to find that the requisite aquatic life is present, the investigator must document more than one individual of at least two qualifying taxa in the evaluated reach under normal weather conditions. Unhatched eggs or any other stage of a taxon's life cycle that could be found in a wet weather conveyance or lentic habitat (such as a deceased winged adult) should not be considered as a primary indicator that a watercourse is a stream. The specific taxa found should be noted on the Data Sheet. Representative individuals of the taxa used to make this determination should be collected for confirmation of identification. All aquatic life observed should be noted, even if some do not qualify as primary indicators. These organisms may also be relevant as secondary field indicators.

(ii) Indigenous members of taxa within the benthic macroinvertebrate groups listed below are obligate lotic aquatic organisms and thus are primary indicators that a watercourse is a stream when two or more specimens of two or more taxa are documented under normal weather conditions.

(I) Gastropoda: Pleuroceridae, Viviparidae, Valvatidae

(II) Bivalvia: Unionidae

(III) Coleoptera: Dryopidae, Elmidae, Psephenidae, Ptilodactylidae, Staphylinidae

(IV) Diptera: Athericidae, Blephariceridae, Chironomidae (except: Chironomini or red midges), Empididae, Ptychopteridae, Tanyderidae, and some Tipulidae (Antocha, Rhabdomastix, Dicranota, Hexatoma, Limnophila, Tipula)

(V) Ephemeroptera: all members, except: Siphlonuridae, and some Ephemeridae (Hexagenia)

(VI) Megaloptera: all members, except: Chauliodes

(VII) Odonata: Aeshnidae, Calopterygidae, Cordulegastridae, Gomphidae, some Coenagrionidae (Argia, Chromagrion, Amphiagrion), some Libellulidae (Perithemis) and some Corduliidae (Epitheca, Helocordulia, Neurocordulia)

(VIII) Plecoptera: all members

(IX) Trichoptera: all members, except: Molannidae, some Leptoceridae (Nectopsyche, Triaenodes), and some Limnephilidae (Ironoquia, Limnephilus, Hesperophylax)

(X) Oligochaetes: Branchiobdellidae, Lumbriculidae, Sparganophilidae, some Tubificidae (subfamily Naidinae, Ilyodrilus, Rhyacodrilus, Varichaetadrilus), and some Lumbricidae (Eiseniella tetraedra only).

(iii) The presence of any indigenous fish species, other than the Mosquitofish (*Gambusia*), documented under normal weather conditions, is also a primary

indicator that the watercourse is a stream, and constitutes support of the requisite aquatic life.

(iv) There are conditions in which a stream may be dry for a period of weeks or even months, but supports multiple populations of lotic aquatic organisms or fish at other times during a year. In such conditions, an investigator could appropriately determine that there is sufficient water on an annual basis to support such populations even though there were not any present on a particular date. In addition, manmade pollution or other water quality issues may preclude support of these organisms. Therefore, the absence of lotic aquatic organisms at the time of the investigation cannot be the sole basis for a determination that a watercourse meets the fourth element of the definition. When multiple populations of lotic aquatic organisms or fish cannot be documented to occur in a watercourse, then the investigator must consider the hydrologic and biologic factors referred to as secondary indicators in these rules and the Guidance to make a hydrologic determination.

(v) Under normal weather conditions, if the investigator documents the absence of water due to naturally occurring conditions in a watercourse between February 1 and April 15, then the investigator can conclude the watercourse is unable to support fish or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months and is therefore a wet weather conveyance.

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

Chapter 1200-04-05
Permits, Effluent Limitations and Standards

Amendments in redline form

Rule 1200-04-05-.02 Definitions is amended by deleting it in its entirety and replacing with the following so that, as amended, the rule shall read as follows:

1200-04-05-.02 Definitions

All terminology not specifically defined herein shall be defined in accordance with the Water Quality Control Act, Tennessee Code Annotated (T.C.A.) §§69-3-101 through 69-3-137. When used in Rules 1200-04-05-.01 through .14, the following terms have the meanings given below unless otherwise specified:

(1) "Act" means the Water Quality Control Act, T.C.A. §§69-3-101 et seq.

(2) "Administrator" means the administrator of the United States Environmental Protection Agency, or an authorized representative.

(3) "Ammonia (as N)" means ammonia reported as nitrogen.

(4) An "Animal Feeding Operation" (AFO) is a facility that (1) stables, confines and feeds or maintains animals (other than aquatic animals) for a total of 45 days or more in any 12-month period and (2) does not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season over any portion of the facility. 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.

(5) An "AFO 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.

(6) An "AFO production area" includes the animal confinement area, the manure storage area, the raw materials storage area and the waste containment areas.

(a) The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milk rooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways associated with barns or barnyards, and stables.

(b) 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. If an AFO stores manure in the field (i.e., manure or litter piled for more than several days before land application occurs), the field storage is considered to be a production area. Note that manure or litter stored uncovered for more than two weeks is not considered to be short-term or temporary storage, and is included in the definition of production area.

(c) The raw materials storage area includes but is not limited to feed silos, silage bunkers, and organic bedding materials.

(d) The waste containment area includes but is not limited to settling basins and areas within berms and diversions which separate uncontaminated storm water.

(e) The production area also includes any on-farm egg washing or egg processing facility, and any area used in the storage, handling, treatment, or on-farm disposal of mortalities.

(7) "Animal Waste Management System" means any system used for the collection, storage, treatment, handling, transport, distribution, land application, or disposal of agricultural wastes, animal waste/wastewater, waste product, and dead animals generated by an AFO that meets or exceeds NRCS

technical standards and guidelines.

(8) "Area-wide waste treatment management plan" means a plan that has been approved by the administrator pursuant to § 208 (33 U.S.C. § 1288) of the CWA, Public Law 92-500.

(9) The term "BATEA" (or "BAT") means the best available technology economically achievable as defined by EPA regulations. Effluent limitations established by this designation shall be effective in accordance with the requirements of Section 301(B)(2)(A), Federal Water Pollution Control Act, PL 92-500.

(10) The term "biological monitoring" shall mean the determination of the effects on aquatic life, including accumulation of pollutants in tissue, in receiving waters due to the discharge of pollutants (a) by techniques and procedures, including sampling of organisms representative of appropriate levels of the food chain appropriate to the volume and the physical, chemical, and biological characteristics of the effluent, and (b) at appropriate frequencies and locations.

(11) "Board" means the Water Quality Control Board.

(12) "BOD_5" means 5-day biochemical oxygen demand.

(13) The term "BPTCA" means the best practicable control technology currently available, as defined by EPA regulations.

(14) A "bypass" is defined as the intentional diversion of waste streams from any portion of a treatment facility.

(15) A "calendar day" is defined as the 24-hour period from midnight to midnight or any other 24-hour period that reasonably approximates the midnight to midnight time period.

(16) "$CBOD_5$" means 5-day carbonaceous biochemical oxygen demand.

(17) A "closure plan" is a description of the steps taken after a permittable activity has ceased to prevent contamination of surface waters from the inactive site.

(18) "Commencement of construction" is the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.

(19) "Commissioner" means the commissioner of the Department of Environment and Conservation or the commissioner's duly authorized representative and, in the event of the commissioner's absence or a vacancy in the office of commissioner, the deputy commissioner.

(20) A "composite sample" is a combination of not less than 8 influent or effluent portions, of at least 100 ml, collected over a 24-hour period. Under certain circumstances a lesser time period may be allowed, but in no case, less than 8 hours.

(21) A "Comprehensive Nutrient Management Plan (CNMP)" is a conservation plan that is unique to animal feeding operations. It is a grouping of conservation practices and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. Guidance for developing a CNMP is located in USDA-NRCS's National Planning Procedures Handbook.

(22) A "concentrated animal feeding operation" (CAFO) is an AFO that either meets the large (Class I) CAFO size criteria of Rule 1200-04-05-.14(3), the medium (Class II) criteria of Rule 1200-04-05-.14(4) or has otherwise been designated as a CAFO by the director.

(23) "Construction" means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

(24) The "daily maximum amount" is a limitation on the total amount of any pollutant in the discharge by weight during any calendar day.

(25) The "daily maximum concentration" is a limitation on the average concentration, in units of mass per volume, of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

(26) The meaning of "Degradation" shall be the same as defined in Rule 1200-04-03-.04.

(27) "Department" means the Department of Environment and Conservation.

(28) "Director" means the director of the Division of Water Pollution Control.

(29) "Discharge" or "discharge of a pollutant" refers to the addition of pollutants to waters from a source.

(30) "Division" means the Division of Water Pollution Control.

(31) A "dry weather overflow" is a type of sanitary sewer overflow and is defined as one day or any portion of a day in which unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall occurs and is not directly related to a rainfall event. Discharges from more than one point within a 24-hour period shall be counted as separate overflows.

(32) "Effluent limitation" means any restriction, established by the board or the commissioner, on quantities, rates or concentrations of chemical, physical, biological, or other constituents which are discharged into waters or adjacent to waters.

(33) "Fecal coliform" means fecal coliform bacteria, an indicator of pathogenic organisms.

(34) The "geometric mean" of any set of values is the n^{th} root of the product of the individual values where n is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero shall be considered to be one.

(35) A "grab sample" is a single influent or effluent sample collected at a particular time.

(36) "Hydrologic connection" means the interflow and exchange between surface impoundments or containment structures and groundwater or surface water through an underground corridor or pathway. In the context of this chapter, the purpose of prevention/reduction of hydrologic connection is to prevent/ reduce groundwater flow contact resulting in the transfer of pollutants into groundwater.

(37) "IC_{25}" refers to the inhibition concentration in which at least a 25% reduction in reproduction and/or growth in test organisms occurs.

(38) "Industrial user" means those industries identified in the standard industrial classification manual, Bureau of the Budget, 1987, as amended and supplemented, under the category "Division D - Manufacturing" and such other classes of significant waste producers as the board or commissioner deems appropriate.

(39) "Industrial wastes" means any liquid, solid, or gaseous substance, or combination thereof, or form of energy including heat, resulting from any process of industry, manufacture, trade, or business or from the development of any natural resource.

(40) The "instantaneous maximum concentration" is a limitation on the concentration, in units of mass per volume (where appropriate), of any pollutant contained in the wastewater discharge determined from a grab sample taken of the discharge at any point in time.

(41) The "instantaneous minimum concentration" is the minimum allowable concentration, in units of mass per volume (where appropriate), of a pollutant parameter contained in the wastewater discharge determined from a grab sample taken from the discharge at any point in time.

(42) "Land application area" means the land under the control of an AFO owner or operator to which manure, litter or process wastewater from the AFO production area is or may be applied.

(43) A "large CAFO" (Class I CAFO) is an AFO that confines greater than or equal to the number of animals specified in TABLE 1200-04-05-.14.1.

(44) "LC_{50}" refers to the concentration that causes at least 50 % lethality of the test organisms.

(45) "Major facility" refers to a municipal or domestic wastewater treatment plant with a design capacity of 1 million gallons per day or greater; or any other facility or activity classified as such by the commissioner.

(46) The term "manure" is defined to include manure, bedding, compost and raw materials or other materials comingled with manure or set aside for disposal.

(47) "Mature dairy cow" refers to a cow that has previously given birth to a calf.

(48) A "medium CAFO" (Class II CAFO) is an AFO that confines greater than or equal to the number of animals specified in TABLE 1200-04-05-.14.1 and also meets the criteria of Rule 1200-04-05-.14(4).

(49) "Minor facility" refers to any facility or activity that is not a major facility.

(50) The "monthly average amount", is the arithmetic mean of all the measured daily discharges by weight during the calendar month when the measurements were made.

(51) The "monthly average concentration", a limitation on the discharge concentration in units of mass per volume, of any pollutant, other than bacteria, is the arithmetic mean of all the composite or grab samples collected in a one calendar-month period.

(52) "Multi-year phosphorus application" means phosphorus applied to a field in excess of crop needs and/or crop removal rates when there is no soil test recommendation for phosphorus and the Tennessee Phosphorus Index indicates manure, litter or process wastewater should be applied at the crop phosphorus removal rate. Subsequent phosphorus application is prohibited until the applied phosphorus has been removed via harvest and/or crop removal or a subsequent soil test indicates phosphorus is required. Crop phosphorus removal rates are set by University of Tennessee Extension technical guidance documents for nutrient management.

(53) "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the federal CWA. The term includes an "approved program."

(54) A "natural riparian buffer" is a permanent strip of natural vegetation adjacent to a stream that contains dense vegetation made up of grass, shrubs and trees. The purpose of a natural riparian buffer is to maintain existing water quality by minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching adjacent surface waters and to further prevent negative water quality impacts by providing canopy over adjacent waters.

(55) The term "new source" means any building, structure, facility, area or installation from which there is or may be a "discharge of pollutants," the construction of which commenced after the publication of state or federal regulations prescribing a standard of performance.

(56) "Nitrate (as N)" means nitrate reported as nitrogen.

(57) "Non-contact cooling water" in general practice, refers to cooling water that does not contact raw materials, materials being produced, finished product, by-products or process wastewater. For some industrial categories, other, more specialized definitions related to non-contact cooling water may also apply.

(58) "Nonpoint source pollution" occurs when precipitation moves over and through the ground, picks up and

carries away pollutants and deposits them into waters of the state.

(59) "NRCS" means the Natural Resources Conservation Service, an agency within the U.S. Department of Agriculture.

(60) The term "1-hour average maximum" is a limitation on the concentration in units of mass per volume, of a composite consisting of any three equal volume grab samples collected consecutively at thirty minute intervals.

(61) A "one week period" (or "calendar-week") is defined as the period from Sunday through Saturday. For reporting purposes, a calendar-week that contains a change of month shall be considered part of the latter month.

(62) "Owner or operator" means any person who owns, leases, operates, controls or supervises a source.

(63) A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

(64) "Permit" means an authorization, license, or equivalent control document issued by the Division of Water Pollution Control which implements the requirements of the TWQCA. "Permit" includes an NPDES "general permit."

(65) "Permit action" refers to the issuance, reissuance, revocation, denial or modification of an individual permit.

(66) "Point source" refers to any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water discharges.

(67) "Person" means an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof.

(68) "Pollutant" means sewage, industrial wastes, or other wastes.

(69) "Pollution" means such alteration of the physical, chemical, biological, bacteriological, or radiological properties of the waters of this state including, but not limited to, changes in temperature, taste, color, turbidity, or odor of the waters that will:

(a) Result or will likely result in harm, potential harm or detriment of the public health, safety, or welfare;

(b) Result or will likely result in harm, potential harm or detriment to the health of animals, birds, fish, or aquatic life;

(c) Render or will likely render the waters substantially less useful for domestic, municipal, industrial, agricultural, recreational, or other reasonable uses; or

(d) Leave or likely leave the waters in such condition as to violate any standards of water quality established by the board.

(70) "Process wastewater" means water that comes in contact with a production process, its raw materials, products or byproducts. This includes spillage, wash-water, overflow from animal watering systems or contact-cooling water. In the case of AFOs, process water would include water that contacts manure, litter, feed, milk, eggs or bedding.

(71) A "rainfall event" is defined as any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each

other will be considered a single rainfall event. Ten -year, 24-hour rainfall event, 25-year, 24-hour rainfall event, and 100-year, 24-hour rainfall event are mean precipitation events with a probable recurrence interval of once in 10 years, or 25 years, or 100 years, respectively, 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.

(72) A "rationale" (or "fact sheet") is a document that is prepared when drafting an NPDES permit or permit action. It provides the technical, regulatory and administrative basis for an agency's permit decision.

(73) A "sanitary sewer overflow (SSO)" is defined as an unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall.

(74) "Schedules of compliance" means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, condition of a permit, other limitation, prohibition, standard, or regulation.

(75) "Setback" means a specified distance from surface waters or potential conduits to surface waters where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: open tile line intake structures, sinkholes, and wells.

(76) "Severe property damage" when used to consider the allowance of a bypass or SSO means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass or SSO. Severe property damage does not mean economic loss caused by delays in production.

(77) "Sewage" means water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, or other water as may be present.

(78) "Sewerage system" means the conduits, sewers, and all devices and appurtenances by means of which sewage and other waste is collected, pumped, treated, or disposed.

(79) "Source" means any activity, operation, construction, building, structure, facility, or installation from which there is or may be the discharge of pollutants.

(80) "Standard of performance" means a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the commissioner determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

(81) "Stream" means a surface water that is not a wet weather conveyance.

(82) "Total coliform" means all coliform bacteria.

(83) "Total dissolved solids (TDS)" means nonfilterable residue.

(84) "Toxic effluent limitation" means an effluent limitation on those pollutants or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of available information, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

(85) "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(86) "Variance" means an authorization issued to a person by the commissioner, which would allow that person to cause a water quality standard to be exceeded for a limited time period without changing the standard.

(87) "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.

(88) The term, "washout" is applicable to activated sludge plants and is defined as loss of mixed liquor suspended solids (MLSS) of 30.00% or more from the aeration basin(s).

(89) "Watercourse" means a man-made or natural hydrologic feature with a defined linear channel which discretely conveys flowing water, as opposed to sheet-flow.

(90) "Waters" means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

(91) The term "water quality limited segment" means any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the federal CWA.

(92) The "weekly average amount", is the arithmetic mean of all the measured daily discharges by weight during the calendar week when the measurements were made.

(93) The "weekly average concentration", a limitation on the discharge concentration in units of mass per volume of any pollutant, is the arithmetic mean of all the concentrations measured in a calendar week.

(94) "Wet weather conveyance" means, notwithstanding any other law or rule to the contrary, man-made or natural watercourses, including natural watercourses that have been modified by channelization:

(a) That flow only in direct response to precipitation runoff in their immediate locality;

(b) Whose channels are at all times above the groundwater table;

(c) That are not suitable for drinking water supplies; and

(d) In which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(95) A "wet weather overflow" is a type of sanitary sewer overflow and defined as an unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall that is directly related to a specific rainfall event. Discharges occurring from multiple locations within a single rainfall event are considered separate, wet-weather overflows.

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

Rule 1200-04-05-.14 Animal Feeding Operations is amended by deleting it in its entirety and replacing with the following so that, as amended the rule shall read as follows:

(1) In addition to the applicable provisions of Rules 1200-04-05-.01 through 1200-04-05-.13, CAFOs are also subject to the provisions of this Rule.

(2) All operations defined as CAFOs must seek permit coverage as follows:

(a) CAFOs meeting or exceeding the size thresholds in column 2 of TABLE 1200-04-05-.14.1 that have discharged or are designed, constructed, operated or maintained such that a discharge will occur must obtain coverage under an NPDES permit.

(b) All other CAFOs must obtain coverage under a State Operating Permit.

(3) AFOs meeting or exceeding the size thresholds in column 2 of TABLE 1200-04-05-.14.1 are considered large (Class I) CAFOs.

(4) AFOs within the range given in column 3 of TABLE 1200-04-05-.14.1 are considered medium (Class II) CAFOs if any of the following conditions are met:

(a) pollutants are discharged through a discrete, discernable conveyance to waters of the state; or

(b) pollutants are discharged to waters of the state that come into direct contact with the animals confined in the operation; or

(c) the AFO is located on a waterbody that has been identified by the department as being impaired for nutrients or pathogens; or

(d) the AFO began operation on or after May 1, 1999; or

(e) the AFO expanded its operation so that it falls within the range given in column 3 of TABLE 1200-04-05-.14.1 on or after July 21, 2004.

TABLE 1200-04-05-.14.1

Mature Animal Type	Class I (Large CAFO	Class II Medium CAFO
Dairy Cows	700+	200 – 699
Cattle	1,000+	300 – 999
Swine	2,500+ (≥ 55 lbs) 10,000+ < 55 lbs	750 – 2,499 (≥ 55 lbs) 3,000 – 9,999 < 55 lbs
Chickens (liquid waste management)	30,000+	9,000 – 29,999
Chickens (dry waste management*)	125,000+ (non-layers) 82,000+ (layers)	37,500 -124,999 (non-layers) 25,000 – 81,999 (layers)
Horses	500+	150 – 499
Sheep/lambs	10,000+	3,000 – 9,999
Turkeys	55,000+	16,500 – 54,999
Ducks	5,000+ (liquid waste management) 30,000+ (dry waste Management*)	1,500 – 4,999 (liquid waste management) 10,000 – 29,999 (dry waste management)

* dry waste management refers to systems where continuously overflowing watering systems are not used and birds are raised in an enclosed building with earthen or concrete floors spread with layer of sawdust, wood shavings, rice hulls, or chopped straw

(5) Other AFOs may be designated as CAFOs at the discretion of the director. Factors to be considered in this determination include the AFO's size, the amount of waste reaching waters of the state, the location of the AFO and the means of waste conveyance to waters of the state.

(6) All CAFOs must submit application information in accordance with Rule 1200-04-05-.05(2).

(a) All CAFOs must submit application information to the Tennessee Department of Agriculture and the Department of Environment and Conservation.

(b) In addition to the application requirements of Rule 1200-04-05-.05(2), CAFOs must submit, at the time of application:

1. A closure/ rehabilitation plan for the waste system storage/treatment structure(s) that meets or exceeds NRCS technical standards and guidelines, and at a minimum, addresses maintenance of the facility until proper closure is completed and includes a proposed schedule for closure not to exceed 360 days; and

2. A nutrient management plan as outlined in Rule 1200-04-05-.14(10)(a).

(7) The following deadlines apply for AFOs defined as CAFOs:

(a) Operations that were defined as CAFOs prior to April 14, 2003, must have sought coverage under a permit, as of April 14, 2003.

(b) Existing operations defined as CAFOs only as of April 14, 2003, or existing operations defined as CAFOs as of July 21, 2004, must have sought coverage under a permit no later than February 13, 2006.

(c) CAFOs constructed after April 14, 2003, that are not subject to new source performance standards must have sought coverage under a permit no later than 180 days prior to the time that the CAFO commences operation. CAFOs seeking coverage under a general permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(d) AFOs that make changes after April 14, 2003, to their operations that result in becoming defined as CAFOs for the first time, yet are not subject to new source performance standards must seek coverage under a permit no later than 90 days after becoming defined as a CAFO. CAFPs seeking coverage under a general permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(e) New sources must seek to obtain coverage under a permit at least 180 days prior to the time that the CAFO commences operation. CAFOs seeking coverage under a general permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(f) AFOs designated as CAFOs by the director must seek to obtain coverage under a permit no later than 90 days after receiving notice of the designation.

(8) CAFOs must comply with the permit reissuance requirements of Rule 1200-04-05-.05(4) and must maintain permit coverage until such time as the CAFO demonstrates to the satisfaction of the director that it no longer meets the definitions set forth in Rule 1200-04-05-.14(3), (4) and (5) and there no longer remains the potential for a discharge of manure, litter or associated process wastewater, other than agricultural stormwater from land application areas.

(9) CAFOs must have a nutrient management plan developed, approved and have all measures, structures, etc., in place to fully implement upon the date of permit coverage.

(10) Any permit issued to a CAFO must include:

(a) For all CAFOs, a requirement to develop, submit for state approval, implement and keep on site a site-specific nutrient management plan that:

1. Includes best management practices and procedures necessary to implement applicable effluent limitations and standards;

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

3. Ensures proper management of mortalities (i.e., dead animals) so 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 as outlined in NRCS Conservation Practice Standard 316, October 2002 (or most recent) and/or the NRCS Animal Waste Handbook;

4. Ensures that clean water is diverted, as appropriate, from the production area;

5. Prevents direct contact of confined animals with waters of the state;

6. Ensures that chemicals and other contaminants handled on-site are not disposed of in any manure, litter, process wastewater, or storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants;

7. Identifies appropriate site specific conservation practices to be implemented, including as appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the state (these practices must meet minimum standards set in the NRCS Field Office Practice Standard and/or the NRCS Animal Waste Handbook);

8. Identifies protocols for appropriate testing of manure, litter, process wastewater, and soil that are approved by the University of Tennessee testing lab for Tennessee conditions;

9. Establishes 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 (dairy, cattle, swine, poultry and veal CAFOs that land apply manure, litter, or process wastewater must also comply with the provisions of Rule 1200-04-05-.14(11));

10. Identifies specific records that will be maintained to document the implementation and management of the minimum elements described in parts 1 through 9 of this subparagraph; and

11. Incorporates the requirements of Rule 1200-04-05-.14(11)(a).

(b) A requirement that the permittee must create, maintain for five years, and make available to the director, upon request, the following records:

1. All applicable records identified in part (b)10 of this paragraph;

2. A copy of the CAFO's site-specific nutrient management plan;

3. Records documenting the following visual inspections:

   (i) Weekly inspections of all storm water diversion devices, runoff diversion structures and devices channeling contaminated storm water to the wastewater and manure storage and containment structure;

   (ii) Daily inspections of water lines, including drinking or cooling water lines; and

   (iii) Weekly inspections of the manure, litter, and process wastewater impoundments noting the liquid level in the impoundments;

4. Weekly records of the depth of the manure and process wastewater in any open surface liquid impoundment as indicated by the required depth marker which indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. In the case of swine or poultry CAFOS that are new sources the depth marker must indicate minimum capacity necessary to contain the runoff and direct precipitation associated with the design storm used for sizing the impoundment;

5. Records documenting any corrective actions taken (if deficiencies are not corrected

within 30 days of notice of deficiency, the records must include an explanation of the factors preventing immediate correction);

6. Records of mortalities management and practices used to comply with the nutrient management plan;

7. Records documenting the current design of any manure or litter storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity;

8. Records of the date, time, and estimated volume of any overflow;

9. Expected and actual crop yields;

10. The date(s) manure, litter, or process waste water is applied to each field;

11. Weather conditions at time of application and for 24 hours prior to and following application;

12 Test methods used to sample and analyze manure, litter, process waste water, and soil;

13. Results from manure, litter, process waste water, and soil sampling;

14. Explanation of the basis for determining manure application rates, as provided in the technical standards established by the NRCS or as otherwise approved by the director or the Tennessee Department of Agriculture and consistent with applicable state and federal rules;

15. Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than manure, litter, or process wastewater;

16. Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied;

17. The method used to apply the manure, litter, or process wastewater; and

18. Date(s) of manure application equipment inspection and calibration;

(c) A requirement that prior to transferring manure, litter or process wastewater to a 3" party, CAFOs must provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis (consistent with 40 CFR § 412), and ensure that the 3'1 party signs the Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO using the form in Appendix A of paragraph (16) of this Rule;

1. Large CAFOs must provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis (consistent with 40 CFR Part 412 and approved by the University of Tennessee Extension), and ensure that the 3rd party signs the Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO using the form in Appendix A of paragraph (16) of this Rule;

2. All other CAFOs must provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis (consistent with 40 CFR Part 412 and approved by the University of Tennessee Extension), and ensure that the 3rd party signs the Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO using the form in Appendix A of paragraph (16) of this Rule only if the CAFO is transferring more than 100 tons of manure, litter or process wastewater to a 3rd party;

(d) A requirement to retain records of the date, recipient name and address, and approximate amount of manure, litter or process wastewater transferred to a 3'1 party using the form in

Appendix B of paragraph (16) of this Rule;

1. Large CAFOs must retain for five years records of the date, recipient name and address, and approximate amount of manure, litter or process wastewater transferred to a 3rd party using the form in Appendix B of paragraph (16) of this Rule;

2. All other CAFOs must retain for five years records of the date, recipient name and address, and approximate amount of manure, litter or process wastewater transferred to a 3rd party receiving more than 100 tons of manure, litter or process wastewater using the form in Appendix B of paragraph (16) of this Rule;

(e) A requirement that CAFOs submit to TDEC, an annual report between January 1 and February 15 that includes:

1. The number and type of animals on site whether in open confinement or housed under roof;

2. Estimated amount of total manure, litter and process wastewater generated by the CAFO in the previous calendar year (tons/gallons);

3. Estimated amount of total manure, litter and process wastewater transferred to a 3" party by the CAFO in the previous calendar year (tons/ gallons);

4. Total number of acres for land application covered by the nutrient management plan;

5. Total number of acres under control of the CAFO that were used for land application of manure, litter and process wastewater in the previous calendar year;

6. A summary of all manure, litter and process wastewater discharges to waters of the state from the production area that have occurred in the previous calendar year, including date, time, and approximate volume;

7. A statement indicating whether the current version of the CAFO's nutrient management plan was developed or approved by a certified nutrient management planner:

8. The actual crop(s) planted and actual yield(s) for each field;

9. The actual nitrogen and phosphorus content of the manure, litter and process wastewater;

10. The results of calculations to determine the maximum amount of manure, litter and process wastewater to be land applied and the data used in the calculations;

11. The actual amount of manure, litter and process wastewater applied during the previous 12 months;

12. The results of any soil tests for nitrogen and phosphorus conducted in the previous 12 months; and

13. The amount of any supplemental fertilizer applied during the previous 12 months.

(f) Provisions that require compliance with the terms of the CAFO's site-specific nutrient management plan such that the plan is enforceable through the permit. The terms of the nutrient management plan are the information, protocols, best management practices, and other conditions in the nutrient management plan determined by the director to be necessary to implement the nutrient management plan. For NPDES permits, the terms of the nutrient management plan, with respect to protocols that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater, must include the fields available for land application; field-specific rates of application properly developed, through either the linear

approach or the narrative approach; and any timing limitations identified in the nutrient management plan concerning land application on the fields available for land application.

1. Linear approach. An approach that expresses rates of application as pounds of nitrogen and phosphorus, according to the following specifications:

   (i) The terms include:

      (I) Maximum application rates from manure, litter, and process wastewater for each year of permit coverage, for each crop identified in the nutrient management plan, in terms of total nitrogen and phosphorus, in pounds per acre, per year, for each field to be used for land application;

      (II) The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field as described in Rule 1200-04-05-.14(11)(a)1;

      (III) The crops to be planted in each field or any other uses of a field such as pasture or fallow fields; the realistic yield goal for each crop or use identified for each field;

      (IV) The nitrogen and phosphorus recommendations as recommended by the University of Tennessee Extension for each crop or use identified for each field;

      (V) Credits for all residual nitrogen in the field that will be plant available as recommended by the University of Tennessee Extension;

      (VI) Consideration of multi-year phosphorus application in accordance with Rule 1200-04-05-.14(11)(a)2;

      (VII) An accounting of all other additions of plant available nitrogen and phosphorus to the field;

      (VIII) The form and source of manure, litter, and process wastewater to be land-applied;

      (IX) The timing and method of land application; and

      (X) The methodology by which the nutrient management plan accounts for the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied as described in Rule 1200-04-05-.14(10)(a)8 and Rule 1200-04-05-.14(11)(b).

   (ii) Large CAFOs that use this approach must calculate the maximum amount of manure, litter, and process wastewater to be land applied at least once each year using the results of the most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application.

2. Narrative rate approach. An approach that expresses rates of application as a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied, according to the following specifications:

   (i) The terms include:

      (I) Maximum amounts of nitrogen and phosphorus derived from all sources of nutrients, for each crop identified in the nutrient management plan, in

terms of total nitrogen and phosphorus, in pounds per acre, for each field, and certain factors necessary to determine such amounts.

(II) The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field as described in Rule 1200-04-05-.14(11)(a)1;

(III) The crops to be planted in each field or any other uses such as pasture or fallow fields (including alternative crops identified in subpart (iii) of this part;

(IV) The realistic yield goal for each crop or use identified for each field; and

(V) The nitrogen and phosphorus recommendations as recommended by the University of Tennessee Extension for each crop or use identified for each field for each crop or use identified for each field.

(ii) The terms include the methodology by which the nutrient management plan accounts for the following factors when calculating the amounts of manure, litter, and process wastewater to be land applied:

(I) Results of soil tests conducted in accordance with protocols identified in part (a)8 of this paragraph;

(II) Credits for all residual nitrogen in the field that will be plant available as recommended by the University of Tennessee;

(III) The amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied;

(IV) Consideration of multi-year phosphorus application in accordance with Rule 1200-04-05-.14(11)(a)2;

(V) Accounting for all other additions of plant available nitrogen and phosphorus to the field;

(VI) The form and source of manure, litter, and process wastewater;

(VII) The timing, except as described in subpart (f)2(iv) of this paragraph and method of land application; and

(VIII) Volatilization of nitrogen and mineralization of organic nitrogen.

(iii) The terms of the nutrient management plan include alternative crops identified in the CAFO's nutrient management plan that are not in the planned crop rotation. Where a CAFO includes alternative crops in its nutrient management plan, the crops must be listed by field, in addition to the crops identified in the planned crop rotation for that field, and the nutrient management plan must include realistic crop yield goals and the nitrogen and phosphorus recommendations as recommended by the University of Tennessee for each crop. Maximum amounts of nitrogen and phosphorus from all sources of nutrients and the amounts of manure, litter, and process wastewater to be applied must be determined in accordance with the methodology described in items (ii)(I) through (VIII) of this part.

(iv) For CAFOs using this approach, the following projections must be included in the nutrient management plan submitted to the director, but are not terms of the nutrient management plan: The CAFO's planned crop rotations for each field for the period of permit coverage; the projected amount of manure, litter, or process

wastewater to be applied; projected credits for all nitrogen in the field that will be plant available; consideration of multi-year phosphorus application; accounting for all other additions of plant available nitrogen and phosphorus to the field; and the predicted form, source, and method of application of manure, litter, and process wastewater for each crop. Timing of application for each field, insofar as it concerns the calculation of rates of application, is not a term of the nutrient management plan.

(v) CAFOs that use this approach must calculate maximum amounts of manure, litter, and process wastewater to be land applied at least once each year using the methodology required in subpart (ii) of this part before land applying manure, litter and process wastewater and must rely on the following data:

(I) A field-specific determination of soil levels of nitrogen and phosphorus, including, for nitrogen, a concurrent determination of nitrogen that will be plant available consistent with the methodology required by subpart (ii) of this part, and for phosphorus, the results of the most recent soil test conducted in accordance with soil testing requirements approved by the commissioner; and

(II) The results of most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application, in order to determine the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.

(g) Changes to a nutrient management plan.

1. Any NPDES permit issued to a CAFO must require the following procedures when a CAFO owner or operator makes changes to the CAFO's nutrient management plan previously submitted to the director:

(i) The CAFO owner or operator must provide the director with the most current version of the CAFO's nutrient management plan and identify changes from the previous version, except that the results of calculations made in accordance with the requirements of subparts (f)1(ii) and (f)2(v) of this paragraph are not considered to be changes to the nutrient management plan subject to the requirements of this paragraph.

(ii) The director must review the revised nutrient management plan to ensure that it meets the requirements of this paragraph and applicable effluent limitations and standards and must determine whether the changes to the nutrient management plan include revision to the terms of the nutrient management plan as set forth in subparagraph (f) of this paragraph. If the terms of the nutrient management plan are not revised, the director must notify the CAFO owner or operator and upon such notification the CAFO may implement the revised nutrient management plan. If the terms of the nutrient management plan are revised, the director must determine whether such changes are substantial changes as described in part 2 of this subparagraph.

(iii) If the director determines that the changes to the terms of the nutrient management plan are not substantial, the director must make the revised nutrient management plan publicly available and include it in the permit record, and inform the public of any changes to the terms of the nutrient management plan.

(iv) If the director determines that the changes to the terms of the nutrient management plan are substantial, the director must notify the public and make the proposed changes and the information submitted by the CAFO owner or operator available for public review and comment. The process for public notice

and participation must follow the procedures applicable to draft permits set forth in Rule 1200-04-05-.06. The director must consider all significant comments received during the comment period and require the CAFO owner or operator to further revise the nutrient management plan if necessary. Once the director approves the revised terms of the nutrient management plan, the director must issue a notice of determination that addresses all comments received and notifies the owner or operator and the public of the final decision concerning revisions to the nutrient management plan.

2. Substantial changes to the terms of a nutrient management plan incorporated as terms and conditions of a permit include, but are not limited to:

(i) Addition of new land application areas not previously included in the CAFO's nutrient management plan or in the terms of a nutrient management plan incorporated into an existing NPDES permit. If the CAFO owner or operator applies manure, litter, or process wastewater on the newly added land application area in accordance with existing field-specific permit terms applicable to the newly added land application area, such addition of new land would be a change to the new CAFO owner or operator's nutrient management plan but not a substantial change for purposes of this paragraph;

(ii) Any changes to the field-specific maximum annual rates for land application set in accordance with the linear approach or to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop set in accordance with the narrative approach;

(iii) Addition of any crop or other uses not included in the terms of the CAFO's nutrient management plan and corresponding field-specific rates of application; and

(iv) Changes to site-specific components of the CAFO's nutrient management plan, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the state.

3. CAFOs covered by state operating permits are subject to the following procedures when the CAFO owner or operator makes changes to the CAFO's nutrient management plan previously submitted to the director:

(i) The CAFO owner or operator must provide the director with the most current version of the CAFO's nutrient management plan and identify changes from the previous version, except that the results of calculations made in accordance with the requirements of subparts (f)1(ii) and (f)2(v) of this paragraph are not considered to be changes to the nutrient management plan subject to the requirements of this paragraph.

(ii) The director must review the revised nutrient management plan to ensure that it meets the requirements of this paragraph and applicable effluent limitations and standards and must determine whether the changes to the nutrient management plan include revision to the terms of the nutrient management plan as set forth in subparagraph (f) of this paragraph. The director must advise the CAFO owner or operator whether or not the changes meet the requirements of this paragraph and applicable effluent limitations and standards and upon such notification the CAFO must either make further revisions to the nutrient management plan or implement the revised nutrient management plan.

(11) All CAFOs that land apply manure, litter, or process wastewater, must do so in accordance with the following best management practices (BMPs) that are implemented through a nutrient management plan that incorporates a field-specific assessment of the potential for nitrogen and phosphorus transport from

the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters:

(a) Application rates for manure, litter, and other process wastewater applied to land under the ownership or operational control of the CAFO must minimize phosphorus and nitrogen transport from the field to surface waters in compliance with technical standards for nutrient management that:

1. Include a field-specific assessment of the potential for nitrogen and phosphorus transport from the field to surface waters, and 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 movement to surface waters, that employs the Tennessee Phosphorus Index (a tool developed by the University of Tennessee Extension Service and the NRCS to assess the risk of phosphorus movement from the application area to waters of the state); and

2. Include appropriate flexibilities for any CAFO to implement nutrient management practices to comply with the technical standards, including consideration of multi-year phosphorus application on fields that do not have a high potential for phosphorus runoff to surface water, phased implementation of phosphorus-based nutrient management, and other components, as determined appropriate by the director;

(b) Annual manure analysis for nitrogen and phosphorus content, using procedures outlined in NRCS Conservation Practice Standard 590, and soil analysis at a minimum of once every five years for phosphorus content (the results of these analyses are to be used in determining application rates for manure, litter, and other process wastewater);

(c) Periodic inspection of equipment used for land application of manure, litter and other process wastewater;

(d) Application of manure, litter, and process wastewater that:

1. Is applied no closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters unless,

(i) The CAFO substitutes the 100-foot setback with a 35-foot wide vegetated buffer or by leaving in place a 60-foot natural riparian buffer, where applications of manure, litter, or process wastewater are prohibited; or

(ii) The CAFO demonstrates that a setback or buffer is not necessary because implementation of alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent to or better than the reductions that would be achieved by the 100-foot setback;

2. Is applied no closer than 100 feet for any potable well, public or private or as recommended by the University of Tennessee Extension; and

(e) For new CAFOs that are located adjacent to exceptional Tennessee waters and outstanding national resource waters (as identified by the department), leave in place a minimum 60-foot natural riparian buffer between the stream and the land application area.

(12) For CAFOs with applicable federal effluent guidelines, technology-based effluent limitations and standards in accordance with those guidelines shall be applied.

(13) For CAFOs that are not subject to applicable federal effluent guidelines, the following standards shall be applied:

(a) For CAFOs that either discharge or are designed, constructed, operated or maintained such that a discharge could occur, the production area must be designed, constructed, operated and maintained to contain all manure, litter, and process wastewater including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event.

(b) For all other CAFOs not subject to applicable federal effluent guidelines, the production area must be designed, constructed, operated and maintained so that no discharge will occur.

(14) No CAFO liquid waste management system shall be constructed, modified, repaired, or placed into operation after April 13, 2006 unless it is designed, constructed, operated, and maintained in accordance with final design plans and specifications which meet or exceed standards in the NRCS Field Office Technical Guide and other guidelines as accepted by the Departments of Environment and Conservation, or Agriculture. Specifically, plans must contain the following:

(a) Any new or additional confinement buildings, waste/wastewater handling system, waste/wastewater transport structures, waste/wastewater treatment structures, settling basins, lagoons, holding ponds, sumps, or pits, and other agricultural waste containment/treatment structures constructed after April 13, 2006 shall be located in accordance with NRCS Conservation Practice Standard 313.

(b) Information to be used in the design of the open manure storage structure including, but not limited to, minimum storage for rainy seasons, minimum capacity for chronic rainfall events, the prohibition of land application to frozen, saturated, or snow-covered ground, the dewatering schedules set in the CAFO's Nutrient Management Plan, additional storage capacity for any manure intended to be transferred to another recipient at a later time, and any other factors that would affect the sizing of the open manure storage structure.

(c) The design of the open manure storage structure as determined by the most recent version of the National Resource Conservation Service's Animal Waste Management (AWM) software. CAFOs may use equivalent design software or procedures as approved by the Director.

(d) All inputs used in the open manure storage structure design including actual climate data for the previous 30 years consisting of historical average monthly precipitation and evaporation values, the number and types of animals, anticipated animal sizes or weights, any added water and bedding, any other process wastewater, and the size and condition of outside areas exposed to rainfall and contributing runoff to the open manure storage structure.

(e) The planning minimum period of storage in months including, but not limited to, the factors for designing an open manure storage structure listed in subparagraph (b) of this paragraph. Alternatively the CAFO may determine the minimum period of storage by specifying times the storage pond will be emptied consistent with the CAFO's Nutrient Management Plan.

(f) A subsurface investigation for earthen holding pond, pit, sump, treatment lagoon, or other earthen storage/ containment structure suitability and liner requirements shall be a component of the system design. The subsurface investigation will include a detailed soils investigation with special attention to the water table depth and seepage potential. The investigation must evaluate soils to a depth of two feet below the planned bottom grade of the storage structure. Deeper investigations may be required in karst regions. A soils/geologic investigation shall be performed by a soil scientist (as described in Rule 1200-01-06-.18) and qualified geologist. A qualified geologist is defined as an individual who is a Registered Professional Geologist licensed by the State of Tennessee or an individual who meets the requirements for the title of Certified Professional Geologist, as defined by the American Institute of Professional Geologists. Unless relevant information is available to the contrary, compliance with this provision during design and construction of the facility will normally demonstrate that the hydrologic connection does not exceed a maximum allowable specific discharge of 0.0028 ft/day (1×10^{-6} cm/sec).

(15) A CAFO's coverage under an SOP that does not allow discharge will serve as proof of a No Discharge Certification provided that in addition to being in compliance with all the terms and conditions of the permit, which must include the requirements of paragraphs (9) and (10) of Rule 1200-04-05-.14, the

facility meets the requirements of subparagraphs (a) and (b) of this paragraph:

(a) The owner of operator of a CAFO must document, based on an objective assessment of the conditions at the CAFO, that the CAFO is designed, constructed, operated, and maintained in a manner such that the CAFO will not discharge as follows:

1. There are no open manure storage structures; and

2. All parts of a CAFO's production area are designed, constructed, operated, and maintained such that there will be no discharge of manure, litter, or process wastewater.

(b) In order to receive coverage under a SOP that does not allow discharges, a CAFO owner or operator must submit the following information:

1. A statement that describes the basis for the CAFO's certification that it satisfies the eligibility requirements identified in subparagraph (a) of this paragraph; and

2. The following certification statement, signed in accordance with the signatory requirements of paragraph (6) of Rule 1200-04-05-.05:

"I certify under penalty of law that I am the owner or operator of a concentrated animal feeding operation (CAFO), identified as [insert: name of CAFO], and that said CAFO meets the requirements of 40 CFR 122.23(i). I have read and understand the eligibility requirements of 40 CFR 122.23(i)(2) for certifying that a CAFO does not discharge or propose to discharge and further certify that this CAFO satisfies the eligibility requirements. As part of this certification, I am including the information required by 40 CFR 122.23(i)(3). I also understand the conditions set forth in 40 CFR 122.23(i)(4), (5) and (6) regarding loss and withdrawal of certification. I certify under penalty of law that this document and all other documents required for this certification were prepared under my direction or supervision and that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons directly involved in gathering and evaluating the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(c) A certification will become effective upon the effective date of a facility's permit coverage. Certification will remain in effect for the entire time the facility is covered by this permit and in compliance with the no discharge requirement. A certification is no longer valid when a discharge has occurred or when the CAFO ceases to meet the requirements of subparagraph (a) of this paragraph.

(d) If certification becomes invalid due to an unpermitted discharge in accordance with subparagraph (c) of this paragraph, the CAFO must withdraw its certification within three days of the date on which the CAFO becomes aware that the certification is invalid. A CAFO must withdraw its certification by submitting written notification to the division. Once a CAFO's certification is no longer valid, the CAFO is subject to the requirements of parts 1 and 2 of this subparagraph:

1. The owner/operator of a CAFO meeting the size criteria of column 1 of TABLE 1200-04-05-.14-1, that has had an unpermitted discharge or a change such that the CAFO is now designed, constructed, operated or maintained such that a discharge could occur must seek NPDES Permit coverage pursuant to subparagraph (2)(a) of this rule; and

2. For all other CAFOs that have had an unpermitted discharge or a change such that the CAFO is now designed, constructed, operated or maintained such that a discharge could occur the owner/operator of the CAFO must seek coverage under an SOP that allow discharge.

Appendix A

Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO

The conditions listed below help to protect water quality. These conditions apply to litter, manure and/or process wastewater removed from an AFO. The material covered by this agreement was removed on _____ from the facility owned by _____ located at _____.

A. The litter, manure and/or process wastewater must be managed to ensure there is no discharge of litter, manure and/or process wastewater to surface or groundwater.

B. When removed from the facility, litter, manure and/or process wastewater should be applied directly to the field or stockpiled and covered with plastic or stored in a building.

C. Litter, manure and/or process wastewater must not be stockpiled near streams, sinkholes, wetlands or wells.

D. Fields receiving litter, manure and/or process wastewater should be soil tested at least every two or three years.

E. A litter, manure and/or process wastewater nutrient analysis should be used to determine application rates for various crops.

F. Calibrate spreading equipment and apply litter, manure and/or process wastewater uniformly.

G. Apply no more nitrogen or phosphorus than can be used by the crop (i.e., agronomic rates).

H. A buffer zone is recommended between the application sites and adjacent streams, lakes, ponds, sinkholes and wells.

I. Do not apply litter, manure and/or process wastewater when the ground is frozen or on steep slopes subject to flooding, erosion or rapid runoff.

J. Cover vehicles hauling litter, manure and/or process wastewater on public roads.

K. Keep records of locations where litter, manure and/or process wastewater will be used as a fertilizer.

I, _____ am the person receiving litter and do understand the
(name)
conditions listed above.

_____ _____
(signature) (date)

_____ _____
(address) (phone)

Appendix B

Names of Persons and/or Firms That Remove Litter, Manure and/or Process Wastewater from an AFO

____

(name of AFO)

Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________	Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________
Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________	Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________
Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________	Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________
Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________	Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________
Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________	Name: ____________ Address: ____________ ____________ Phone No.: ____________ Tons Removed: ____________ Date: ____________

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

Chapter 1200-04-07
Aquatic Resource Alteration

Amendments

Rule 1200-04-07-.03 Definitions is amended by deleting it in its entirety and replacing it with the following so that, as amended, the rule shall read as follows:

1200-04-07-.03 Definitions

As used in this rule chapter and in any ARAP permit issued, including General Permits, the following terms have these meanings:

(1) "Act" means The Tennessee Water Quality Control Act of 1977, as amended, T.C.A. §69-3-101 et seq.

(2) "Activity" means any and all work or acts associated with the performance, or carrying out of a project or a plan, or construction of a structure.

(3) "Adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the State by man-made dikes or barriers, natural river berms and the like are "adjacent wetlands".

(4) "Aquatic Resource Alteration Permit" means a permit pursuant to §69-3-108 of the Tennessee Water Quality Control Act of 1977, which authorizes the alteration of properties of waters of the State which result from activities other than discharges of wastewater through a pipe, ditch or other conveyance. Such a permit shall impose conditions, including standards and terms of periodic review, as are necessary to accomplish the purposes of the Act.

(5) "Background Conditions" means the biological (plant and animal species), chemical and physical conditions of the wetland or water body prior to the proposed activity. If the water body is disturbed, it may be necessary to use the biological, chemical and physical conditions of a similar water body as a reference condition.

(6) "Best Management Practices" means a schedule of activities, prohibition of practices, maintenance procedures and other management practices to prevent or reduce the pollution of waters of the State. BMP's include methods, measures, practices, and design and performance standards.

(7) "Certification" means an Aquatic Resource Alteration Permit under the Tennessee Water Quality Control Act of 1977, as required by §401 of the Federal Water Pollution Control Act, which certifies, either unconditionally or through imposition of terms under which the activity must be carried out, that the activity will comply with applicable provisions of §§301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act and Chapter 1200-4-1 of the Rules of the Water Quality Control Board and the Department of Environment and Conservation and the Act.

(8) "Channelization" means the alteration of stream channels including but not limited to straightening, widening, or enlarging.

(9) "Cofferdam" means an enclosure from which water can be pumped to expose the bottom of a body of water or a barrier constructed to divert the flow of water to allow construction work.

(10) "Commence Construction" means the physical initiation of on-site structural or earthmoving work.

(11) "Constructed Wetland" means intentionally designed, built and operated on previously nonwetland sites for the primary purpose of wastewater treatment or stormwater retention; such wetlands are not created to provide mitigation for adverse impacts or other wetlands.

(12) "Clearing and Grubbing" means the removal of vegetation by cutting and digging up roots and stumps.

(13) "Cumulative Impacts" means the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. A cumulative impact to a wetland can be the loss of the variety of the natural wetland types, wetland acreage, functions and classified uses.

(14) "Debris" means woody materials, trash, flotsam, dislodged vegetation, and other potentially mobile materials which may, when located within a stream channel, contribute to flow blockage. This does not include gravel, sand, soil or its constituents such as silt, clay or other sediments.

(15) "Ditch" means a man-made excavation for the purpose of conveying water. Ditches do not include streams, modified streams or canals.

(16) "Dredging" (sand and gravel dredging) means the removal of sand, gravel and similar sediments or deposits from a stream, river, or lake bed or wetland by any method.

(17) "Earthmoving" means any construction or other activity, which disturbs the surface of the land including, but not limited to, excavation, embankment, fill, and cut of soil, rock, or earth.

(18) "Emergency" means a situation where life or substantive improvements to real property is in immediate danger.

(19) "Erosion" means the process by which the land surface is worn away by the action of water, wind, gravity, chemicals, or a combination thereof.

(20) "Excavation" (a) means a cavity formed by digging, quarrying, uncovering, displacing, or relocating soil or rock; or, (b) means to dig or remove soil, rocks, or other materials resulting in a change in all or part of the elevation of a site.

(21) "General Permit" means a permit issued under the Act and this Rule authorizing an alteration to state waters within the state for a specified category of activities that are substantially similar in nature.

(22) "Ground water" means water beneath the surface of the ground within the zone of saturation, whether or not flowing through known and definite channels.

(23) "Ground water table" means the upper surface of the zone of saturation by ground water.

(24) "Hydrogeomorphic System" means a classification system for wetlands based on geomorphic setting, water source, and hydrodynamics; used to identify and group functionally similar wetlands.

(25) "Individual Permit" means a permit issued by the Division of Water Pollution Control to a specified person to conduct specified activities at a specified location. This type of permit does not authorize an activity by a class of persons or the public in general.

(26) "Interflow" means the runoff infiltrating into the surface soil and moving toward streams as shallow, perched water above the main ground water level.

(27) "In the Dry" means in such a manner that no equipment or dredged material is in contact with the stream or wetland and that the soil water boundary is not disturbed by equipment or that no infiltration is pumped to the stream from the dredge site.

(28) "Minimal Impacts" means an activity for which the scope is very limited in area, the impact is very short in duration, and has no impact to waters just downstream of the location of the activity. Examples of activities with 'minimal impacts' include, but are not limited to, (1) minor channel changes associated with bank stabilization; and (2) an activity typically authorized by General Permit, but which requires an Individual Permit because the project falls under one of the listed exclusions.

(29) "Minor Road Crossing" is a bridged or culverted roadway fill across a stream or river which results in the alteration of 200 linear feet or less of stream bed or shoreline.

(30) "Mitigation" means compensating for impacts in regulated areas as provided by Rule 1200-04-07-.04(7).

(31) "Multiple populations" means two or more individuals from each of two or more distinct taxa, in the context of obligate lotic aquatic organisms.

(32) Normal weather conditions – Those within one standard deviation of the cumulative monthly precipitation means for at least the three months prior to the hydrologic determination investigation, based on a 30-year average computed at the end of each decade. Precipitation date shall come from National Oceanographic and Atmospheric Agency's National Climatic Data Center, National Resources Conservation Service's National Climatic Data Center, Natural Resources Conservation Service's National Water and Climate Center, or other well-established weather station.

(33) "Obligate lotic aquatic organisms" means organisms that require flowing water for all or almost all of the aquatic phase of their life cycles.

(34) "Perched water" means water that accumulates above an aquitard that limits downward migration where there is an unsaturated interval below it, between the aquitard and the zone of saturation.

(35) "Practicable alternative" is an alternative that is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

(36) "Resource Values" are the benefits provided by the water resource. These benefits include, but are not limited to, the ability of the water resource to:

(a) filter, settle and/or eliminate pollutants;

(b) prevent the entry of pollutants into downstream waters;

(c) assist in flood prevention;

(d) provide habitat for fish, aquatic life, livestock and water fowl;

(e) provide drinking water for wildlife and water fowl;

(f) provide and support recreational uses; and

(g) provide both safe and adequate quality and quantity of drinking water.

(37) "Sediment" means soil or its constituents that has been deposited in water, is in suspension in water, is being transported, or has otherwise been removed or disturbed from its site of origin.

(38) "Sedimentation or Siltation" means the process by which sediment is deposited in or by the waters of the State.

(39) "Settling Basin" means a prepared storage area constructed to trap and store sediment from erodible areas in order to protect any streams below the construction areas from excessive siltation; an impoundment that accumulates transported sediment and has provisions for a principal spillway; a reservoir which retains high flows sufficiently to cause deposition of transported sediment.

(40) "Stabilize" means the proper placing, grading, and/or covering of soil, rock, or earth to insure their resistance to erosion, sliding or other movement.

(41) "Stream" means a surface water that is not a wet weather conveyance.

(42) "Structure" means any building, pier, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, mooring structure, moored floating vessel, piling, aid to navigation, bridge, culvert or any other obstacle or obstruction.

(43) "Utility Line" means any pipe or pipeline for the transportation of any gaseous, liquid, liquefiable or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone and telegraph messages, and radio and television communication.

(44) "Watercourse" means a manmade or natural hydrologic feature with a defined linear channel which discretely conveys flowing water, as opposed to sheet-flow.

(45) "Water Dependent" describes an activity that requires location in or adjacent to surface waters or wetlands in order to fulfill its basic purpose.

(46) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(47) "Wetland Dependent" means that the location of a project or conducting an activity in a wetland is essential to fulfill the purpose of the project. Examples of such projects are fish and wildlife management, nature trails, wildlife observation points, etc.

(48) "Wet Weather Conveyances" are man-made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation runoff in their immediate locality, whose channels are at all times above the ground water table, that are not suitable for drinking water supplies, and in which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(49) "Wet weather conveyance determination" means the decision based on site specific information of whether a particular conveyance is a stream or a wet weather conveyance. It is synonymous with "stream determination" and "hydrologic determination."

(50) "Zone of saturation" – A subsurface zone below the ground water table in which all of the interconnected voids and pore spaces are filled with water.

(51) Terminology not specifically defined herein shall be defined in accordance with the Tennessee Water Quality Control Act of 1977, T.C.A. §69-3-101 et seq., and the rules adopted thereunder.

Rule 1200-04-07-.04 Permits is amended by adding the following new paragraph so that the new paragraph (10) shall read as follows:

(10) Alteration of wet weather conveyances

(a) The alteration of wet weather conveyances, as defined in §69-3-103, by any activity is permitted by this subsection and shall require no notice to or approval by the department, provided it is done in accordance with the following conditions:

1. The activity may not result in the discharge of waste or other substances that may be harmful to humans or wildlife;

2. Material may not be placed in a location or manner so as to impair surface water flow into or out of any wetland area; and

3. Sediment shall be prevented from entering other waters of the state.

(i) Erosion and sediment controls shall be designed according to the size and slope of disturbed or drainage areas to detain runoff and trap sediment and shall be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices.

(ii) Erosion and sediment control measures shall be in place and functional before earthmoving operations begin, and shall be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the work day, but shall be replaced at the end of the work day.

(iii) Checkdams shall be utilized where runoff is concentrated. Clean rock, log, sandbag or straw bale checkdams shall be properly constructed to detain runoff and trap sediment. Checkdams or other erosion control devices are not to be constructed in stream. Clean rock can be of various type and size depending on the application. Clean rock shall not contain fines or other wastes or contaminants.

4. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the state, All spills shall be reported to the appropriate emergency management agency and to the department. In the event of a spill, measures shall be taken immediately to prevent pollution of waters of the state, including ground water.

5. There shall be no additional conditions upon a person's activity within a wet weather conveyance. This provision does not apply to National Pollutant Discharge Elimination System Permits.

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

* If a roll-call vote was necessary, the vote by the Agency on these rulemaking hearing rules was as follows:

Board Member	Aye	No	Abstain	Absent	Signature (if required)
Elaine Boyd	X				
James Cameron	X				
Larry Clark				X	
Jill Davis	X				
Geneil Dillehay	X				
C. Monty Halcomb	X				
John McClurkan	X				
Frank McGinley	X				
D. Anthony Robinson	X				
Robert Taylor	X				

I certify that this is an accurate and complete copy of rulemaking hearing rules, lawfully promulgated and adopted by the Tennessee Water Pollution Control Board on 10/19/2010, and is in compliance with the provisions of TCA 4-5-222.

I further certify the following:

Notice of Rulemaking Hearing filed with the Department of State on: 09/24/09

Rulemaking Hearing(s) Conducted on: (add more dates). 11/16/09, 11/17/09 and 11/19/09

Date: October 19, 2010

Signature: C- Monty Halcomb

Name of Officer: Chair - C. MONTY HALCOMB

Title of Officer: Chairman

WANDA POWERS STATE OF TENNESSEE NOTARY PUBLIC DAVIDSON COUNTY, TENN.
My Commission Expires NOV. 7, 2012

Subscribed and sworn to before me on: October 19 2010

Notary Public Signature: Wanda Powers

My commission expires on: 11/7/2010

All rulemaking hearing rules provided for herein have been examined by the Attorney General and Reporter of the State of Tennessee and are approved as to legality pursuant to the provisions of the Administrative Procedures Act, Tennessee Code Annotated, Title 4, Chapter 5.

Robert E. Cooper, Jr.
Attorney General and Reporter

2-3-11
Date

Department of State Use Only

Filed with the Department of State on: 3/2/11

Effective on: 5/31/11

Tre Hargett by John Hall, POA

Tre Hargett
Secretary of State

Public Hearing Comments

One copy of a document containing responses to comments made at the public hearing must accompany the filing pursuant to T.C.A. §4-5-222. Agencies shall include only their responses to public hearing comments, which can be summarized. No letters of inquiry from parties questioning the rule will be accepted. When no comments are received at the public hearing, the agency need only draft a memorandum stating such and include it with the Rulemaking Hearing Rule filing. Minutes of the meeting will not be accepted. Transcripts are not acceptable.

The Tennessee General Assembly amended the Tennessee Water Quality Control Act of 1977 on June 1, 2009, with the passage of Public Chapter 464 (PC 464 or the Act). Significant provisions of the Act are to establish a new definition of wet weather conveyances, to direct the department to develop rules and guidance for hydrologic determinations and for a new certification program for hydrologic professionals. To accomplish the requirements of the Act, the department drafted amendments to Chapter 1200-04-03 General Water Quality Criteria, Chapter 1200-04-07 Aquatic Resource Alteration, and has proposed a new Chapter 0400-40-17 Certification of Qualified Hydrologic Professionals. A Notice of Rulemaking Hearings was filed with the Secretary of State in September, 2009, and six hearings were conducted between November 16 and November 19, 2009. The department also invited written comments on both the proposed rules and draft Guidance for Making Hydrologic Determinations (Guidance). Both the draft rules and Guidance have also been posted on the department's web site with an invitation for public comment. The following is a response to the comments received during the public participation process.

Wet Weather Conveyance Determinations

Comment: Several commenters had concerns about matters governed by PC 464 such as asserting that the 90 days for development of rules is not long enough.

Response: Both the substance of, and the procedure followed for, the rules have to be consistent with the law, including PC 464.

Comment: All key terms used in the definition of wet weather conveyance must be defined and developed with reference either to the Act itself or existing regulations of the Water Quality Control Board to the extent consistent with the Act.

Response: We agree and believe it is true of our proposed rule.

Comment: The rules do not contain a proper standard operating procedure for hydrologic determinations. The law requires that the rules contain a standard procedure for making stream and wet weather conveyance determinations that take into consideration biology, geology, geomorphology, precipitation, hydrology, and other scientifically based principles. They should be redrafted and additional opportunity for public comment should be provided prior to being presented to the Water Quality Control Board.

Response: The rules have been revised to expand the standard operating procedure section. As is the standard practice of the department, we are proposing changes in response to comments and, for the reasons stated in the next response, it is not required to go back for additional public comment.

Comment: The proposed rules do not meet the intent of the Act and are not ready to be presented to the Water Quality Control Board (board) for consideration. The division should revise the rules and go back through the Rulemaking Hearing process.

Response: We believe the rulemaking process has worked as intended. The division has received and processed comments on the draft rules and has revised the rules in response to many of the comments and explained its reasons for not making other changes. The revisions are both within the scope of the originally proposed draft rule and a logical outgrowth of it. Therefore, it is appropriate for the board to consider the revised rules.

Comment: A submitted series of slides entitled "A Protocol for Studying Wet Weather Impacts and Urbanization Patterns" should be considered in the development of rules and guidance.

Response: The submitted slides were more about the development of methods to study impacts of urbanization on watersheds than how to differentiate wet weather conveyances from streams.

Comment: Would like to see a 12-month study, or one based on a minimum of three seasons, for all situations regarding proposed alterations of WWCs.

Response: The division has never had such a requirement and there is nothing in PC 464 that indicates such a study is needed. Such a study for all proposed WWC alterations would be impractical within a regulatory framework. However, the rules have been revised to allow such a study to be an option.

Comment: The rules and guidance should be protective of water quality.

Response: It is the job of the division to administer the laws passed by the General Assembly. One of the purposes of the Water Quality Control Act is to protect water quality. The proposed rules are a response to Public Chapter 464 and represent an effort to provide clarity in determining the regulatory status of watercourses. The division's proposed rule is intended to be consistent with the law, and also reflects the application of science and the years of experience the division has in making these calls.

Comment: Rule 1200-04-03-.05(9)(b)1 – add a new paragraph: "Photo documentation (time and date stamped) of the watercourse under determination is required during any site visit.

Response: This requirement is addressed in Rule 0400-40-17-.04(1)(f). It does not require that photographs be time and date stamped, but that the person making the submittal state the date photographs were taken.

Comment: If a watercourse has been disrupted so as to make the hydrologic determination uncertain, the submittal should also be disqualified. Watercourses that once were streams that have been altered by changes in land use patterns and now appear to be WWCs should still be streams.

Response: Generally, the division makes determinations based on the circumstances present when the determination is made. There are a few exceptions noted in the rules and guidance (such as for WWCs that have a process discharge). Where watercourses have been disturbed from past (historical) land uses, they must be evaluated as they are at present. If a watercourse has been recently altered, then the division will evaluate the regulatory status of the watercourse as it existed prior to the recent alteration. If the division determines that it is a stream and if permits were not obtained for its alteration, then the unpermitted alteration would be subject to enforcement action. The procedures for hydrologic determinations are intended to be applied to a watercourse in its present condition. The evaluation process considers the current hydrologic regime in normal weather conditions to classify a watercourse.

Comment: A watercourse with no fish or aquatic life must be considered carefully before concluding it is a WWC. Pollution or other temporary conditions may be the cause rather than normal weather.

Response: The division agrees for the reasons stated and others. A number of provisions in the rules and guidance address this.

Comment: Rule 1200-04-03-.05(9)(a)5 proposes that hydrologic determinations will only be considered valid for a maximum of three years. Commenter suggests adding language to allow for "the proposed work to be completed." If the work is not performed within this time period, then the conveyance determination will need to be completed again. Another comment asserts there is no logical or rational basis for a blanket three-year limit on a hydrologic determination. This could be a hardship on the regulated community. Once a party enters into a transaction or an activity in reliance upon a determination, then the department should be bound by the determination.

Response: We have changed the term of a hydrologic determination to five years or the term of any permit issued based on a determination. This corresponds with the maximum term of a permit and is consistent with the practice of the Corps of Engineers in such matters.

Comment: In karst areas or areas where rock has been fractured (either naturally occurring or as a result of human activity) there may be periods of no or very little flow on the surface.

Response: The division agrees and has attempted to state in the rules and guidance how watercourses in such areas should be classified.

Comment: It is necessary to view small watercourses along an entire property and adjoining properties because they sometimes will have flow in some segments and not in others.

Response: The division agrees. See the rule and guidance.

Comment: The presence of hydrophilic vegetation should be a weighted indicator in dry stream beds to promote stream determination. However, its absence would not necessarily be an indicator that a waterway is not a stream.

Response: The presence of hydrophilic plants in the channel is included in the rules, guidance and field data sheet as a secondary field indicator.

Comment: In cases where the biology of a stream is critical to the determination, an aquatic biologist or ecologist must be involved in processing aquatic insects or hydrophilic plants if a wet weather conveyance determination is made.

Response: The training and qualification process for hydrologic determinations will address the biological component of the determination process. Individuals certified to make determinations will be required to demonstrate competency. The division will have the ability to review and verify determinations if there is any uncertainty.

Comment: In stream determinations, it may be reasonable to allow order-level aquatic insect identifications, however in wet weather conveyance determinations organisms should be processed to at least the family level and preferably processed in a lab. Any field identifications of aquatic insect should be accomplished by an aquatic expert with several (three or more) years of experience. In addition, benthic samples processed in the field to the family or genus level should include a quality control sample of at least 10%.

Response: The rule and guidelines require differing levels of taxonomic identification for different groups of aquatic organisms, based on the homogeneity of the members within each particular group in conforming to the definitions specified in Public Chapter 464. The guidelines also require collecting holding representative specimens for at least 90 days. We believe these measures as well as the ability to conduct an independent field review of a watercourse in question are sufficient.

Comment: We note that the sediment control provisions of the statute are simplified and far less than state of the art. We suggest that it be made clear that the functional result of zero sediment discharge is still required under all laws and permits and that compliance with the statutorily described sediment controls will not prevent enforcement actions against sediment releases.

Response: The language in the rule is exactly as stated in the Act. Rule 1200-04-07-.04(10)(a)3 states: "sediment shall be prevented from entering other waters of the state." We believe this addresses the concern, although we recognize that science of erosion prevention and sediment control continues to develop.

Comment: It is important to consider the interaction of a proposed wet weather conveyance determination (report) with the Construction General Stormwater Permit (especially the riparian zone protection requirements). Likewise, the wet weather conveyance report device must not conflict with or undercut the MS-4 Phase II permit requirements and particularly the forthcoming revisions to this

permit which, we are told, will emphasize low impact development. Moreover, the relationship between a wet weather conveyance report and the requirements of Sections 401 and 404 or the Clean Water Act should be addressed.

Response: We agree that there is necessarily interaction among the programs the commenter references. However, we do not believe it is useful or necessary address the interrelationship as a matter of rule.

Comment: The environmental community believes that the public should have access to all wet weather conveyance determinations at least 20 days prior to the determination becoming effective. Posting such information online and establishing a notification process is an acceptable start to this process.

Response: There is no such requirement in the Act, and the division is concerned that such an approach would be unduly time-consuming. While the posting or other notification of all WWC determinations would not be feasible, any such submittals are a matter of public record and are subject to review upon request.

Comment: The rule does not address the process of public notice or appeal of hydrologic determinations other than the one-sided appeal provided for by the applicant. It is unclear how other interested parties might be given notice of a decision, much less given the right of appeal. In Rule 0400-40-17-.04 – Add a new paragraph. "Any party can appeal the determination within thirty days after it has been made and/or approved by the department pursuant to TCA §69-3-111."

Response: The Act does not establish a right of appeal by third parties. Persons wishing to intervene in a particular determination could petition the Water Quality Control Board to hear a challenge to a determination.

Comment: The statute leaves wet weather conveyances unprotected and not subject to an Aquatic Resource Alteration Permit or conditions on such a permit ("There shall be no additional conditions upon a person's activity within a wet weather conveyance.") This section may conflict with the Clean Water Act (CWA) if the lack of regulation results in conditions of pollution to waters of the state and of the United States. Given the current uncertainty of the jurisdictional coverage under the CWA and the ongoing consideration of revisions to the CWA to restore the formerly broader scope of water to be protected, we urge TDEC to be extremely cautious in allowing sites and waters heretofore inspected and regulated to be left bereft of protection under this statue and regulations.

Response: We believe the intent of the Act and the rule is to clarify the process of hydrologic determinations rather than to change the scope of what waters are regulated. If a conflict with federal jurisdiction arises, that would be a circumstance to be addressed by the appropriate federal agencies.

Comment: The rule does not specifically address documentation of the information required to determine that a watercourse is a wet weather conveyance. It is impossible to determine that flow only occurs in direct response to precipitation runoff without long-term monitoring of local rainfall. Groundwater levels cannot be determined without an on-site well or boring. Anecdotal information will not suffice.

Response: While long-term hydrological data and geotechnical information would be ideal in the process of hydrologic determinations, the procedure must also be practical and reasonably capable of being implemented by those doing the determinations. It is not practical to collect such long-term data in the hundreds of determinations that must be made every year. We believe the proposed rules and guidance will provide accurate determinations of a watercourse's hydrologic regime.

Comment: Concern is expressed that the language in Rule 1200-04-03-.05(9)(a)4 of the original proposed rule could be interpreted in such a way that some watercourses known as "zero flow" streams (their 7Q10 flow is effectively zero) lose their regulatory protection as "streams." Recommend revising this language as follows: "watercourses in which flow is solely a result of process or wastewater discharge or other manmade sources shall be considered wet weather conveyances

provided that any field determinations made according to the standard procedures outlined in [subparagraph] (b) [of this paragraph] would indicate that the watercourse is not otherwise a stream."

Response: The purpose of this provision, now found in Rule 1200-04-03-.05(9)(a)9(i), is to make clear that the cessation of a permitted discharge that provides 100% of the flow in a wet weather conveyance is not causing pollution (despite the fact that aquatic life are found in the conveyance) and therefore prohibited by the act. The proposed language would not accomplish that purpose, so we decline to recommend it.

Comment: Language in Rule 1200-04-07-.04(10)(a)4 should be revised to clarify that waters within wet weather conveyances are waters of the state. At present, it reads "...are prevented from entering waters of the state" and "...prevent pollution of waters of the state." The division may correct this by adding the word "other" in front of "waters" in both instances to read "other waters of the state." Alternatively, the phrase "waters of the state" in both places could be removed and replaced with "streams or other watercourses."

Response: We agree with the substance of the comment and believe that is the intent of the rule and the Act. However the language in the rule is exactly that in the Act and it is our intent to carefully follow the Act in the development and adoption of the rules.

Comment: Municipalities are concerned that allowing work in wet weather conveyances without notice or a way to determine that the required pollution prevention measures have been properly undertaken may present problems for local communities. Siltation in receiving streams resulting from ineffective controls in wet weather conveyances could result in additional water treatment costs.

Response: We agree that this is a concern as it is with any land disturbance, whether or not the alteration of a watercourse is involved. The department will address the problem of sediment in waters through work with local governments and through implementation of our water quality protection programs. The department cannot regulate beyond the scope of the legislation.

Comment: Rule 1200-04-07-.04(10)(a)3 says "sediment shall be prevented from entering other waters of the state" and then goes on to specify measures typically employed for sediment and erosion control in surface runoff. The commenter is concerned that many watercourses in Tennessee are in karst terrain with direct connections to subsurface waters, streams and springs and that normal and specified pollution protection measures may not be adequate to prevent adverse impacts to subsurface waters. Suggest changing wording to "sediment shall be prevented from entering other waters of the state, including groundwaters." It is additionally suggested that warnings about the need for erosion control measures to mitigate stormwater infiltration to the subsurface in watersheds underlain by carbonate rock be added both to the regulations and the stream determination guidance document.

Response: The limits of protection of waters of the state in the course of alteration of wet weather conveyances have been established in statute. The rules must be consistent with the legislation. Some of the commenter's concerns are addressed through the National Pollutant Discharge Elimination permits required for many construction projects and through the Underground Injection Control Permit program.

Comment: Regarding proposed "Primary Indicator #3" which states "Flow absent any time during February, through April, under normal precipitation/groundwater conditions." Flow could be absent in a stream at the end of an unusually dry month during this period, but this month would not be taken into account for the normal precipitation assessment of the previous six months. Another commenter points out the language in the rule and Guidance are inconsistent on this indicator. A caveat should be added to this assessment that the precipitation in the month in which the determination is performed also be on track with normal trends. This indicator should also be reduced to a one-month window. The three-month window greatly increases the probability that a stream will be falsely identified as a WWC. The one-month window should run all of March, or run from 3/15 to 4/15.

Response: The procedure and guidance call for consideration of long term as well as recent precipitation information. This indicator also has a provision that the investigator should consider any "compelling conflicting data." We believe it is important to consider all of these factors, and if properly considered, there will be few if any incorrect determinations based on this indicator. We have also amended the language of both the rule and the Guidance to eliminate the inconsistency. The new language clarifies that the channel must be dry during the specified time frame and weather conditions to be identified as a wet weather conveyance.

Comment: Neither the rules nor the guidance should establish as a presumptive indicator an arbitrary number of days on which flow is observed in a channel following precipitation events. Rather, the rules and guidance should explain and clarify that the presence of flow in a channel following precipitation depends on the amount of precipitation, duration and history of precipitation, geology, soils, and watershed size and location.

Response: We agree, at least in part. There is a tension between the calls for simple, clear criteria for hydrologic determinations and the complexity and diversity of situations that are represented on the landscape. This is why it is necessary to add qualifying phrases like "in the absence of any directly contradictory evidence" even when discussing primary indicators that might state a normally unambiguous criterion such as number of days since the last significant precipitation event.

Comment: The rules and the guidance should recognize that precipitation runoff is not only surface water runoff, but also interflow and interstitial flow. These terms should be defined with reference to USGS definitions and should be distinguished from perched water, springs and seeps.

Response: We recognize that precipitation runoff occurs both above and below the surface of the ground. We have added definitions for some of the referenced terms. The definition of "interflow" we have added is from a U.S. Geological Survey publication. The definition does not, however, distinguish interflow from perched water, springs and seeps as suggested. We understand that it is important to clarify that water observed flowing from beneath the ground into a watercourse does not necessarily mean that the watercourse is in contact with the groundwater table and is therefore a stream based on that element of the definition. The critical factor to be determined is how long water from any natural source, either individually or in combination with others, sustains flow in a particular watercourse. If a single water source or a combination of sources sustains continuous flow in a watercourse for sufficient duration (sixty consecutive days or more) in a normal year, then the watercourse should be identified as a stream in accordance with the Act.

Comment: The guidance should require that precipitation data be obtained and recorded from a recognized source as near as practically possible to the watercourse in question and that documentation be provided showing the recorded rainfall on the day of the inspection and each of the previous thirty days.

Response: The rules, guidance, and field data sheet require documentation and consideration of recent precipitation in a variety of ways. We do not believe that it is necessary to require the detailed extent of documentation in every case. These records are available for review in the event that they become relevant.

Comment: The rules and guidance should require the person making the determination to provide a hydrologic explanation of the presence of flowing water where the source is not the groundwater table.

Response: The rule and associated guidance require consideration of numerous factors observable in the field as well as other available information. The majority of the factors required to be considered go directly to, or are indicative of, duration of flow in a given watercourse. We believe proper documentation of the primary and/or secondary indicators constitutes sufficient hydrologic consideration without requiring the investigator to speculate about subsurface conditions when there may not be sufficient data readily available to reliably characterize the source of flow.

Comment: The rule should state clearly that the hydrological analysis is still required even if the number of target biological organisms is present. The Act requires that the watercourse must be capable of supporting and does support the target number of biological life. The hydrological analysis is necessary to determine if the watercourse can sustain the necessary flow. The biological analysis demonstrates that the populations of target organisms are present.

Response: A full-scale hydrological analysis would not be a reasonable requirement for every hydrologic determination. As stated previously, many of the indicators used in hydrologic determinations are to determine the likely duration of flow in a watercourse. Language has been added to disallow the use of eggs or other life stages of indicator organisms, such as winged forms, that are not indicative of flow duration in a watercourse under investigation. The Act does not require that a watercourse actually does support the referenced aquatic life before it can be determined to be a stream. Some streams are devoid of aquatic life for reasons not related to flow. Also, determinations may be made at a time of year other than the period in which healthy intermittent streams support the requisite aquatic life.

Comment: The proposed Rule 1200-04-03-.05(9)(a)3 provides that "...during certain times of the year, the absence of lotic aquatic organisms may not be used as the sole basis for a determination." As stated, the department is proposing that the determination be made without the presence of any such required organisms. This is clearly contrary to the Act. It appears the department intended to say that under abnormal conditions, such as drought, there may be an absence of such organisms. However to allow determinations to be made on absence of either hydrological or biological life during "certain times of the year" is simply contrary to the statute.

Response: The commenter's interpretation of the language of the Act would mean that only perennial streams, those that flow continuously throughout a normal precipitation year, can be determined to be streams rather than wet weather conveyances. We disagree that this is what the Act means.

Comment: The department proposes that hydrologic determinations be made without the documented presence of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months if other indicators are used to determine that the necessary flow would be present during another part of the year in a year with normal precipitation. The commenter states that this is inconsistent with the statute and should be allowed only in an unusually dry year.

Response: Many watercourses that meet the criteria to be identified as streams do not contain flow during certain parts of a normal year. Division staff and consultants to the regulated community must make hydrologic determinations at any time of year. For a watercourse to be identified as a stream, the Act does not require that it contain the indicator organisms at the time of the investigation.

Comment: The biological definition of obligate lotic means that the organism's entire life cycle is in flowing water. The Act's definition that states that the organism must have water at least for two months does not change the biological term. Thus species listed in the rules must adhere to the accepted biological term, and upon identification in the field must be demonstrated to be capable of surviving at least two months as noted by late instar stages of development. This interpretation is necessary because some obligate organisms can lay eggs in a non-lotic or a lentic environment such as roadside ditch, but would not survive to a late instar stage. In addition certain obligate organisms are diapausing and could be found in non-lotic environments but not be able to survive.

Response: We believe it is important to adhere to the language of the Act, especially where the Act has provides specific definitions of terms. We have also added language to clarify the eggs or terrestrial adult forms of indicator organism cannot be used as primary indicators that a watercourse is a stream.

Comment: The rules should describe key measures for evaluating hydrology. The hydrological analysis must include a finding relative to the groundwater table. Intermittent and perennial streams are not wet weather conveyances so no additional analysis is necessary. However, ephemeral streams meet

the "above the groundwater table" test and are wet weather conveyances unless one of the other tests is applicable. The following items should be identified and described as to significance: (1) watershed size, (2) location of watercourse in relation to the top of the watershed, (3) types of soils, (4) geology, (5) frequency of rainfall, and (6) surrounding land cover.

Response: We believe the proposed rules and guidance address all of these factors. If a watercourse flows more than in direct response to precipitation, it is not a wet weather conveyance even if it is above the ground water table. Perched water or interflow can provide the hydrology for this.

Comment: Geomorphology as a hydrologic indicator must identify whether the watercourse has a defined bed and bank and an ordinary high water mark. A watercourse that does not contain such a feature does not provide necessary hydrology, and even if target biological organisms are present, the test is not met.

Response: We have included bed and bank and other in-channel geomorphic features as secondary indicators, but do not agree that the lack of such features means that a watercourse is not a stream. There are many situations in which the watercourse has been historically or recently altered so that the natural channel characteristics are no longer present. If it is documented that other distinguishing criteria are met an altered watercourse could still be determined to be a stream absent a defined bed and bank.

Comment: The rules and guidance should require that evaluation of geomorphologic features is only for the purpose of determining the required hydrology. The rules should restrict the use of geomorphologic factors to only those that are relevant to the hydrological analysis and provide the reasons for relevancy. The use of ambiguous indicators such as sediment "sorting" or "sinuosity" should be avoided and, if used, should be expressly supported as a condition exclusively indicative of frequent flow.

Response: The referenced geomorphologic features are included as secondary indicators for the purpose of ascertaining hydrology at time when direct observation is not possible. The guidance document provides rationale and more detailed explanation of how to evaluate these variables.

Comment: The rules should specify the type and level of reconnaissance required to make the biological determination, when field calls will be acceptable as opposed to laboratory analysis, and should specifically identify the target organisms by genus and preferably species. The target organisms should also be restricted to late instar stages.

Another related comment said for stream determinations it may be reasonable to allow order level aquatic insect identifications, however in wet weather conveyance determinations organisms should be processed to at least the family level and preferably processed in a lab. Any field identifications of aquatic insects should be accomplished by an aquatic expert with several (three or more) years of experience. In additions, benthic samples processed in the field to the family or genus level should include a quality control sample of at least ten percent.

Response: The rule and guidelines require differing levels of taxonomic identification for differing groups of aquatic organisms, based on the homogeneity of the members within each particular group in conforming to the definitions specified in Public Chapter 464. The level of taxonomic identification required for a particular group of organisms and the investigator's degree of taxonomic skill will inform whether field or laboratory analysis is required. The guidelines also require collecting and holding representative specimens for at least ninety days. The division also has a rigorous SOP and QA/QC regime covering macroinvertebrate identification, which includes a 10% sample verification process. We believe these measures as well as the ability to conduct an independent field review of a watercourse in question are sufficient to ensure taxonomic identifications are accurate. Restricting target organisms to late instar stages would also unnecessarily restrict the time frame available for accurately conducting stream determination.

Comment: The worksheet should be revised so that it expressly describes each of the four characteristics and the items that are necessary to make a determination under each characteristic.

Response: The rule has been rewritten to adopt this structure, but since a single variable observed in the investigation may inform the determination of more than one of the distinguishing wet weather conveyance characteristics, it is not practical revise the worksheet in the suggested manner.

Comment: The rules must identify the primary and secondary indicators. The guidance can be used to assist in interpreting them.

Response: We have revised the rule to include a listing of both the primary and secondary indicators.

Comment: The field data sheet should be made a part of the rules rather than just guidance.

Response: The field data sheet represents a combination of material from both the rules and the guidance document. We have added additional information contained on the field data sheet to the rule, but not the entire data sheet. We believe it will be necessary to revise the guidance and field form as additional experience is gained in the application of these relatively new methods. The rulemaking process is very time-consuming and cumbersome. We do believe that interested parties should have an opportunity for review and comment when revisions are proposed. Therefore, we have included in the rule a provision that any modification of the guidance or the field form would be subject to a thirty-day public notice and comment period.

Comment: The field data sheet in the proposed guidance was developed prior to the current law and is inaccurate in many respects. Some of the primary indicators used on the data sheet, such as presence of lotic benthic organisms are contrary to the Act. Furthermore, the statute does not allow consideration of secondary characteristics. If scoring is to be used, it can only be used to score those items related to a specific primary characteristic.

Response: We disagree that the Act disallows the use of secondary indicators. Secondary indicators are used to provide insight into the hydrologic characteristics of the watercourse under investigation. It is not possible to make consistent and accurate determinations at any time of year without the use of secondary indicators.

Comment: No secondary indicators should be a part of hydrologic determinations unless they are promulgated as rule. Another commenter states that there should be no use of secondary indicators.

Response: We do not agree that no secondary indicators can be used. We have revised the rule to include a listing of both the primary and secondary indicators. Since hydrologic determinations must be made at all times of year and in a wide variety of circumstances, it is imperative that secondary indicators be used when direct hydrologic observation is not possible. We have revised the rule to require public notice of any proposed significant modifications to the Hydrologic Determination Field Data Sheet, which contains all of the indicators and instructions and examples for proper application of the indicators.

Comment: The rules and guidance relating to the biological analysis should not include unrelated or "secondary" indicators of biological life such as plants, other aquatic organisms, algae, or fungi.

Response: Where these indicators are included, it is to provide additional insight on the hydrology of the watercourse under investigation rather than to determine if it passes the biological test established in the Act. This is similar to the approach long established by the federal government in the delineation of wetlands. Certain aspects of the biota of a site under investigation are used to inform the judgment on the site's hydrology.

Comment: All procedures and accompanying definitions and guidance should be derived from the express language of the Act. Neither the rules nor the guidance should contain procedures not directly related to and not relevant to finding one of the four elements of the wet weather conveyance. For example, the identification of crayfish or other aquatic organisms, other than as expressly set out in the Act, is not relevant to any of the four key elements, and the procedures and guidance should not address this factor.

Response: We believe that all of the variables considered in the procedures and guidance are either derived directly from the Act or are relevant in making hydrologic determinations. We agree crayfish are not obligate lotic organisms, but they are a secondary indicator of hydrology.

Comment: The rules should describe procedures for reviewing geology indicative of areas that are recharging and the impact of the formation on the ability to provide consistent flow. The procedures should also discuss interflow and interstitial flow as those terms relate to rainfall events.

Response: Language addressing these items has been added to the revised rule.

Comment: The rules should specify that the size of the watershed should be calculated for each wet weather conveyance. The standard procedure should state that the smaller the watershed the less likely the possibility that the watercourse is a stream.

Response: We agree that watershed size is related to the likelihood of a watercourse being a stream and have included it among the information recorded on the field data sheet and considered by an investigator in a determination. However, analysis of TDEC data and other studies have shown that while there is a correlation between watershed size and stream status and origins, there is a wide enough range of variability to make a "cutoff" drainage size impractical. In addition, the existence of karst geology, perched springs, and groundwater pathways that may not correspond to the overlying watershed drainage topography further complicate direct correlation of watershed size and watercourse status.

Comment: The presence of only one Primary Indicator Taxon, instead of at least two, should be sufficient to prove that a watercourse is a stream. A number of factors unrelated to the presence of flow can affect the number of taxa that can be found in a watercourse.

Response: We agree that factors unrelated to flow can affect the variety and abundance of organisms found in a watercourse. The Act requires that a watercourse have sufficient flow to support "multiple populations" of certain aquatic organisms in order to meet the biological test for a stream. Even if no aquatic life is found watercourse, it could still be determined to be a stream based on other criteria.

Comment: Primary indicator #4 is vague and will result in misapplication.

Response: We have revised the description of this primary indicator in the rule and the Guidance to more clearly specify the information required for its application.

Comment: Regarding Primary Indicator #8, water flowing in a channel three days after a storm event should adequately demonstrate that the channel carries non-stormwater flow. Using seven days is excessive.

Response: As a primary indicator, we believe seven days is a more definitive test. Other factors could still indicate that the watercourse is a stream.

Comment: Many of the Secondary Field Indicators do not strongly apply to bedrock streams common in middle Tennessee, or to highly altered streams in urbanized areas. Hydrologic professionals should be instructed to specially weight urban streams so they are properly identified and protected.

Response: As described in the Guidance, application of the secondary indicators in altered / urban systems does require investigators to acknowledge and appropriately weigh the absence of certain geomorphic attributes differently than if conducting an investigation in a natural, unaltered system.

Comment: Some commenters were concerned that the language of Rule 1200-04-03-.05(9)(a)1 means that anyone thinking of altering a watercourse should presume it is a stream and apply for a permit, or that it requires that a permit be obtained. If so, this constitutes a hardship on the regulated

community and is inconsistent with the intent of establishing a program where certified hydrologic professional can make determinations.

Response: The intent of this provision was to be at an applicant's discretion for their convenience. We have amended the language to clarify.

Comment: Proposed Rule 1200-04-03-.05(9)(a)1 provides that the department can process a permit application or provide authorization for a general permit without a full wet weather conveyance determination if the applicant so requests. While we support that approach, the rules should clarify that nothing shall preclude the applicant from seeking a wet weather conveyance determination while a permit application is being processed.

Response: We agree and have added language to the effect to the rule.

Comment: "Detailed guidance" is referred to on the proposed rule. Why is this detailed guidance not included in the rule?

Response: The Act requires both rules that contain standard procedures for hydrologic determinations and detailed guidance that is intended to be a support document not promulgated as rule. We have revised the draft rule containing the standard procedures to include more of the material also contained in the detailed guidance document.

Comment: The guidance document was not made available for review until mid November and apparently is not procedurally available for public comment nor is the department required to accept public comment on the guidance document.

Response: At the rulemaking hearing we announced that the guidance document is posted at our web site and that comments are invited. We have continued our internet posting of the guidance document with an invitation to the public to comment. We will continue to accept comments at any time in the future on ways to improve the guidance document. We do not feel that the guidance document can be finalized until the rules are finalized, or nearly so. This is to assure that the guidance reflects the procedures that are ultimately contained in the rule.

Comment: The guidance document and field data sheet contain flaws that do not match the new definition and criteria for wet weather conveyances.

Response: We do not agree that the use of the field data sheet presented for comment along with the draft rules would yield determinations inconsistent with the Act. We have made some revisions to the field data sheet and guidance that we believe clarify the relationship between the indicators and the criteria established in the Act.

Comment: A commenter points out that they participated in a hearing before the board concerning watercourses that the division believed were streams, but either had no channel at all or clearly had channels that ran only in response to rainwater. That case resulted in direction from the board for the division to develop guidelines necessary to accurately and more simply define streams. The rules do not accomplish the board's directive.

Response: The watercourses referred to by the commenter have been monitored twice per month for more than a year. That monitoring has shown that the watercourses in question demonstrate persistent flow for considerably more duration than the minimum required to be classified as streams. We believe that the rules achieve the purpose of the board's directive. Because the General Assembly enacted Public Chapter 464 addressing the same subject, it would not make sense to engage in two different processes.

Comment: The proposed rules abdicate to unpromulgated guidance, which violates TCA 4-5-201 and as such would be void ab initio if the department attempted to apply them.

Response: We have included more of the material originally proposed for inclusion in the guidance document into the revised rule. Since the Act required both the promulgation of rules and the development of guidance, we believe both are necessary.

Comment: In Rule 1200-04-03-.04, add a definition for "normal weather conditions" as used Rule 1200-04-03-.04(20)(d). One commenter proposes "a period (six months) preceding the conveyance determination that weather conditions have been documented as normal as it relates to rainfall. Should rainfall be above/below normal then NRCS soil maps, local geological data, and benthic surveys would be applicable and must be used in the determination."

Response: A definition of "normal weather conditions" has been included in the revised rule.

Comment: Rule 1200-04-03-.05(9)(b)1(ii) define "significant rain event (2year/24 hour rain event?).

Response: We have changed the phrase "significant rain event" to a more specific event in the revised rule. The new language states: "Field investigations for hydrologic determinations should not be conducted if a one inch precipitation event in 24 hours has occurred in the area of investigation within the previous 48 hours."

Comment: In the definition of "stream" remove "a surface water that is not a wet weather conveyance" and replace with the definition of "waters" found in Rule 1200-04-05-.02(88).

Response: The definition proposed in rule is that contained in Public Chapter 464.

Comment: In the definition of "wet weather conveyance," replace ""whose channels are at all times above the ground water table" with "whose channels are above the ground water table under normal weather conditions."

Response: The definition proposed in rule is that contained in Public Chapter 464.

Comment: The rules should provide a definition of "ground water table." Suggest definition in Rule 1200-04-03-.07.

Response: The referenced rule contains a definition of "ground water" but not "Ground water table." A definition of "ground water table" has been added to the rule. We have also added the definition of "ground water" from Rule 1200-04-03-.07 and definitions of "interflow" and "perched water."

Comment: The rules should address principles for determining the ground water table.

Response: We have added language to this effect to the revised rule. The commenter did not make specific suggestions as to how to accomplish this.

Comment: The rules and guidance should reflect accepted geologic terms and should refer to the accepted geologic definition of streams to further clarify groundwater table. The guidance should define and explain perennial, intermittent and ephemeral streams using U. S. Geological Survey and U. S. Army Corps of Engineers terminology. This would help focus the hydrologic determination process on ephemeral streams that may be either streams or wet weather conveyances since, by definition, they are above the groundwater table.

Response: We agree, at least in part. We have added a definition of "ground water table" and a definition of "ground water," a more general term. We have also added some language to the rule to clarify that all water flowing from beneath the surface of the ground is not ground water table discharge or indicative of ground water table contact. Concerning the use of definitions of different types of streams based on their relationship to the ground water table, we are avoiding the use of the term "ephemeral stream" because it has caused regulatory confusion in the past. The commenter has accurately pointed out that ephemeral streams are the watercourses that will be the subject of most hydrologic determinations. Confusion arises when the word "stream" is uses to describe a feature that may prove to be a wet weather conveyance under the state determination procedures.

Comment: The rules and guidance should specify that the emergence of water from the ground is not necessarily water from the ground water table. Likewise, perched water is not considered the ground water table. The rules or guidance should not use the term "ground water connection" since it does not appear in the definition of wet weather conveyance.

Response: We agree and have revised the rule and guidance to clarify this matter. Subsurface water connections or discharges to a watercourse, whether they are from interflow, interstitial flow or perched water may not represent a connection to the ground water table, but they are relevant in determining if a watercourse flows more than merely in direct response to precipitation runoff.

Comment: Rule 1200-04-03-.05(9) needs language addressing the presence of hydrophilic vegetation as an indicator in dry stream beds to assess watercourses.

Response: This variable is included in the rule and guidance as a secondary indicator of hydrology.

Comment: Rule 1200-04-03-.05(9)(a)4: Remove this sentence because it does not account for watercourses which over time, have come to sustain aquatic life despite the makeup of the flow. If this sentence cannot be removed, include language following it clarifying: "however, this type of watercourse is a point source for pollutants."

Response: It is our intent that the described watercourses are not to be classified as streams even if they have come to sustain aquatic life. We do not believe it is necessary to add the suggested language.

Comment: Rule 1200-04-03-.05(9)(b)1 – The presence of fish and/or certain aquatic indicators should automatically establish a waterway as a stream. However, caution should be exercised in using the absence of those biological criteria as an indicator the watercourse is not a stream because pollution, sedimentation, or other forms of human disturbance can eliminate aquatic life. This is of particular importance in urbanized or other highly impacted watersheds.

Response: We agree and believe the proposed rules and guidance address this.

Comment: Rule 1200-04-03-.05(9)(b)1 – Channel morphology should be a weighted indication if dry stream bed determinations are allowed. This attribute must include characterization of the stream bed and bed load material. For example, certain size gravels and fines as well as small cobble indicate persistent flow regimes that are much less common in wet weather conveyances. Additionally, from an erosion standpoint, wet weather conveyances are much less likely to have internal benches and eroded slope toes as opposed to streams that have persistent flow for extended periods. It is during that low flow (base flow) that these erosion patterns emerge.

Response: We agree and believe the proposed indicators reflect this concept.

Comment: In Rule 1200-04-03-.05(9)(b)2 Siphlonuridae and Ephemeridae (Hexagenia) should not be excluded, all Odonata should be included (not just those explicitly listed), Trichoptera, Leptoceridae, and Limnephilidae should not be excluded, and Amphipods, Isopods, and Decapods should also be included in this list.

Response: The excluded taxa mentioned were evaluated for conformance to the language found in Public Chapter 464, and were found to either be able to exist in a lentic environment, or have an aquatic phase of less than two months.

Comment: The program being proposed is cumbersome and needs to be streamlined to be clearer and more efficient for the private sector to properly act on.

Response: We believe the proposed rules and guidance are as simple as they can be and still achieve the intent of the Act that determinations must be based on sound scientific principles.

Comment: Commenter inquires about coordination with federal regulatory programs or other jurisdictions. Will reports need to be submitted to regulators at the state or local level? Will the state post a record of determinations that have been made so they can be shared?

Response: The state regulatory program regularly coordinates with both federal and local government where they have programs involved in a particular matter before the state. We also recommend to applicants or others considering alteration of a watercourse that they coordinate those programs. However, we do not propose such coordination as a mandatory requirement. The division will maintain a record of all hydrologic determinations.

Certified Hydrologic Professionals & Training

Comment: The certification program should be set up to ensure that truly qualified people make these calls and not someone with no experience in this field since much has been learned in recent years.

Response: The division agrees. That concept is consistent with PC 464.

Comment: We believe field determinations are the essential element of implementing these rules. Therefore, any training program should be primarily in-stream and hands-on. One commenter suggests a minimum of two days fieldwork as part of the training.

Response: The training program established by the division will have both classroom and field elements.

Comment: We are concerned that the cost / burden of the certification program could be prohibitive to the environmental community. Therefore, we recommend providing a reduced fee to those recognized and established environmental 501(c)(3) organizations.

Response: The final details of the training program, including fee structure, have not yet been worked out.

Comment: The statute provides a vague description of who could become a qualified hydrologic professional. This could relinquish the state's right and duty to make principled decisions on water degradation issues. There is not currently a body of professionals qualified to determine who should be certified as a qualified hydrologic professional. Such a professional board should be established similar to the Tennessee Board of Architectural and Engineer Examiners.

Response: The statute requires the department to establish the program and we must do so within the limits of available resources. The program could be modified at some future date if it is determined there is a better approach based on experience gained.

Comment: Having any one of the degrees specified in the rule does not necessarily indicate expertise in all of the areas needed to perform hydrologic determinations.

Response: The training program and experience requirements for certification are expected to develop the necessary expertise and those seeking certification will be required to demonstrate the necessary expertise to perform hydrologic determinations.

Comment: No criteria have been proposed for what constitutes qualifying experience toward becoming a certified hydrologic professional.

Response: The proposed rule does establish a minimum level of experience necessary to seek certification. The certification process will require candidates for certification to demonstrate expertise.

Comment: Replace the five years' experience requirement with five (or more) determinations regardless of time period of experience. Individuals who perform numerous hydrologic determinations per year as a part of their normal job assignment should be able to qualify for certification in less than five years.

Response: The Act establishes the requirement of five years of relevant experience.

Comment: Rule 0400-40-17-.01(2) "regular, periodic field work" should be "regular or periodic field work."

Response: Our intent is as stated in the rule. Qualifying experience should be spread throughout the five-year period.

Comment: Submittals from private hydrologic professionals should be disqualified unless they include:

- time and date stamped photos and appropriate latitude/longitude data;
- official precipitation records from the sixty days preceding site visits.

Response: The division agrees that this documentation is needed and is including such a requirement in the guidance. Rather than time and date stamped photographs, we are requiring submittals to contain a statement as to when photographs were taken. Section 5 of PC 464 states that the failure to include all information required by the guidance disqualifies one for the presumption of correctness.

Comment: The language of Rule 0400-40-17-.04(1) and (2) indicates that a particular project is already envisioned when a hydrologic determination is requested. This is not always the case. Sometimes there is a desire to assess a parcel prior to making or finalizing plans. Suggest adding "...if known at the time of the report."

Response: The language in the rule closely follows the provision of the Act, which states that these provisions apply when a person desires to alter a specific water. We have added language to clarify that submittals must indicate the extent of potential alteration of watercourses. An applicant may choose or be required to alter less that the extent indicated on the submittal. Certified hydrologic professionals may submit hydrologic determinations to the division on behalf of clients in other situations, such as when a parcel is being evaluated. In that case the thirty-day period for a challenge by the division with a presumption of correctness of the determination would not apply.

Comment: Rule 0400-40-17-.04(1)(j)(5): "sewage/septic system proposed" – add "if applicable."

Response: The recommended language has been added.

Comment: The minimum content and format of the "report" should be specified. We suggest including a description of the data, the procedures used to propose the classification of a channel as a wet weather conveyance and a list of down-channel riparian landowners (names and addresses which can be obtained from county property ownership or tax records) who may be affected by the proposed alteration of the channel to be classified as a wet weather conveyance. On this last point, we believe the public interest would best be served by requiring that a copy of the report be mailed to such down-channel riparian landowners at the same time the report is filed with the TDEC. The regulations should provide a standard notice concerning the legal authorization for the filing of a report, the procedures the department will follow in reviewing and responding to the report, the legal effect of the report if the determination is sustained by either department approval or inaction and information as to how the riparian owner may comment upon or contest the reports proposed classification of a channel as a wet weather conveyance.

Response: The rules do establish the required content and format of hydrologic determination reports when they are submitted on behalf of a person who proposes to alter the watercourses in question and who is asserting the presumption of correctness. The law does not require notification to downstream landowners and we believe that such a requirement would make the process too cumbersome and constitute an undue burden In addition, the submitted determinations would only apply to the evaluated reach of watercourse for which alterations are proposed, and should not directly apply to either upstream or downstream landowners.

Comment: The rules for submittals by Qualified Hydrologic Professionals require the inclusion of information not relevant to the intent of hydrologic determination.

Response: We have deleted the information requirements from the rule that were not relevant to the purpose of the submittal.

Comment: If there is an examination requirement to become a certified hydrologic professional, this should be specified under Rule 0400-40-17-.01.

Response: The rule contains a requirement that to become certified an individual must successfully complete the training course. That included passing the test that is part of the course.

Comment: The rule states that the certification would be good for three years. What if there has been a significant rule change relevant to this section during that time? Suggest adding "so long as the test is still in compliance with existing rules."

Response: Submittals by certified hydrologic professionals would have to conform to the rules and guidance in existence at the time of the submittal. Significant changes to these procedures would be preceded by a public comment period. The division believes that the requirement for a refresher course on three-year intervals is sufficient to maintain the competency of certified hydrologic professionals.

Comment: The rules should require hydrologic professionals to periodically obtain continuing education in hydrologic determination of at least an eight hour course as approved by the board.

Response: We agree with the need for continuing education to maintain certification as a hydrologic professional. The division plans to offer refresher courses the successful completion of which will be required to maintain certification.

Comment: In the case of revocation of certification, the rule specifies that the board will be the recipient of appeals. What board and are they qualified for this purpose?

Response: The board referred to in the rule is the Tennessee Water Quality Control Board. We believe they are the appropriate body to hear such appeals.

Comment: Revocation causes should include submitting two (another commenter suggests one or more) determinations deemed by the department to be blatantly inaccurate or overwhelmingly lacking in required information.

Response: The rules state that repeated submission of reports in support of hydrologic determinations that contain significant failures to exercise the skills of a certified hydrologic professional in accordance with the rules and guidance established by the department may be grounds for revocation

Comment: TDEC must randomly check the accuracy of findings in at least 10% of hydrologic determinations submitted.

Response: The division expects to review all submitted reports and to conduct field verification when there is a question regarding a determination.

Comment: The proposed rule does not specify under which circumstances a hydrologic determination must be documented and submitted to TDEC. Rule 0400-40-17-.04(2) does not specifically state that all hydrologic determinations must be submitted to TDEC, and it does not specify under which conditions a wet weather conveyance determination should be requested of TDEC.

Response: Neither the Act nor the rule establish a requirement for anyone to submit hydrologic determinations to the division. As specified in the Act and rule, the requirements for submission of a hydrologic determination report to the division apply when a person desires to alter a particular watercourse and wishes to avail themselves of the services of a certified hydrologic professional and assert the presumption of correctness established in the Act.

Comment: Paragraph Rule 0400-40-17-.04(2) of the proposed rule says that TDEC has thirty days after receiving a report of a hydrologic determination conducted by a QHP to notify the person submitting the report that TDEC has significant questions about whether the water of the state in question is a stream or wet weather conveyance. The rule does not stipulate that the person must wait thirty days after submission of a report before proceeding with the planned work. A thirty-day waiting period prior to any alteration of a wet weather conveyance would be a burdensome new requirement and would seem to contradict Rule 1200-04-17-.04(10)(a).

Response: This provision is established by the Act, and therefore not within the department's authority to change. The process referred to by the commenter applies to individuals who choose to avail themselves of the process established in the Act. Individuals can still request a hydrologic determination from the division as is done at present. These determinations are typically provided in less than thirty days. Alternatively, since the provisions for altering a wet weather conveyance do not require notification to the division, a person desiring to alter what they believe to be a wet weather conveyance can do so without consultation with or approval by the division. However, this would be done at some risk of committing a violation if the watercourse is subsequently determined to be a stream.

Comment: When performing hydrologic determinations it is sometimes necessary for the assessor to identify taxa of aquatic organisms. This is a specialized skill that is not necessarily possessed by a person with degrees in geology, engineering, or even biology or ecology. TDEC should consider either modifying the QHP requirements or teach taxonomic identification to the extent required, as a part of the training program. Alternatively, TDEC could consider having two levels of certification - a base level certifying persons possessing the skills to make hydrologic determinations when identification of benthic organisms is not required, and a higher level of certification for individuals qualified to make necessary taxonomic identifications.

Response: The training and certification program will require that any individual obtaining certification demonstrate the required skills and knowledge in all aspects of hydrologic determinations. In addition, the certified hydrologic professional does not personally have to perform the identification of collected aquatic organisms themselves, but could utilize the services of an outside consultant or lab.

Comment: Into Rule 0400-40-17-.04 consider adding: "The hydrologist report shall identify all potentially affected downstream property owners and shall contain a certification that a copy of the report has been mailed to all these identified property owners."

Response: The Act does not establish this requirement and we do not believe it would be reasonable or practicable to implement.

Comment: The division should maintain a list of all certified hydrologic professional and place the listing on the division's web site.

Response: Each certified hydrologic professional will be assigned a unique certification number, and the division will maintain a list.

Comment: If a certified hydrologic professional does not take the refresher course within three years, will the certification be revoked?

Response: The rule has been changed to clarify the process. The certification only last for three years and an application for renewal must be submitted showing successful completion of the refresher course 90 days prior to expiration. If the refresher course has not been successfully completed the new certificate will not be issued.

Comment: If the department revokes a certificate, is the revocation effective immediately or after the opportunity for a hearing?

Response: The rule has been changed to clarify this process. The revocation will not be effective until the time for filing an appeal has expired or the matter later becomes final without appeal. If an appeal is filed, it is a UAPA contested case to be heard by the board.

Concentrated Animal Feeding Operations

Comment: Rule 1200-04-05-.02(64): The definition of "Point source" needs to exactly match the federal definition given in the Clean Water Act. It should read: "'Point Source' means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture."

Response: The wording of Rule 1200-04-05-.02(64) is not materially different from that of the CWA definition. Therefore the division does not agree that changes to the definition are warranted.

Comment: Rule 1200-04-05-.14(2): Will state operating permits allow discharges as a result of rainfall events exceeding design storms? Are the 25-year, 24-hour and 100-year, 24-hour storm exemptions are still in federal rule?

Response: The wording of Rule 1200-04-05-.14(2) has been changed to clearly distinguish between facilities requiring NPDES permit coverage and those requiring State Operating Permit coverage. It now reads:

(2) All operations defined as CAFOs must seek permit coverage as follows:

(a) CAFOs within the range given in column 2 of TABLE 1200-04-05-14.1 and either discharge or are designed, constructed, operated or maintained such that a discharge could occur must obtain coverage under an NPDES permit.

(b) All other CAFOs must obtain coverage under a State Operating Permit.

This will allow facilities covered under state operating permits to discharge if they are so designed. The federal effluent limitation guideline (ELG) to contain all runoff from the 25-year, 24-hour storm remains in federal regulations as the best practicable control technology (BPT), best conventional control technology (BCT) and best available control technology (BAT) for dairy cows, cattle, swine, poultry and veal calf operations. This requirement also serves as the new source performance standard (NSPS) for dairy cows and cattle operations; however the previous NSPS (requirement to contain all runoff from the 100-year, 24-hour storm) for swine, poultry and veal calf operations was replaced with a "no discharge" requirement. It should be noted here that the federal ELGs are only applicable for those facilities required to obtain coverage under an NDPES permit. A new provision (Rule 1200-04-05-.14(13)) was added to the rule that sets requirements for facilities that are not subject to federal ELGs.

Comment: Rule 1200-04-05-.14(4)(a) and (b) need to be changed to exactly match the wording from the federal rule. The should read as follows: a) pollutants are discharged into waters of the United States through a man-made ditch, flushing system, or other similar man-made device or b) pollutants are discharged directly into waters of the United States 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. Also, (c), (d) and (e) need to be deleted from the rule. There is no need to exceed the reach of the federal rule in this instance by adding these caveats. These facilities are not discharging and they are not large facilities – the risk of their adding pollutants to surface waters is very low. These items are not in the federal rule and there is nothing uniquely pertaining to Tennessee that would require their addition.

Response: The AFOs described in Rule 1200-04-05-.14(4) are not subject to NPDES permitting. Therefore, there is no need for the wording to exactly match that of the federal rule. Furthermore, the facilities covered by this part are consistent with the Tennessee CAFO policy that was developed

in 1999 to address concerns specific to Tennessee. Some of these facilities may in fact discharge and the nutrients produced by these operations represent a significant potential pollutant load to Tennessee streams.

Comment: Do all of the deadlines in Rule 1200-04-05-.14(7) still apply? Are they still in the federal rule? Most have already come and gone long ago, rendering them meaningless. We propose to simplify this section by deleting most of these points about dates and deadlines. Subparagraphs (7)(a) through (e) should be replaced with the following two points: (a) existing CAFOs without a permit are operating in violation of law and must apply for a permit immediately, and (b) proposed CAFOs must have a permit before feeding animals on the site. It is recommended that you apply at least 180 days prior to expected start date. The existing (7)(f) can remain as-is.

Response: The deadlines remain in the federal rule. For that reason, the deadlines will remain in this rule. However, the wording has been changed slightly to reflect that the deadlines have passed. The provision now reads as follows:

(7) The following deadlines apply for AFOs defined as CAFOs:

(a) Operations that were defined as CAFOs prior to April 14, 2003, must have sought coverage under a permit, as of April 14, 2003.

(b) Existing operations defined as CAFOs only as of April 14, 2003, or existing operations defined as CAFOs as of July 21, 2004, must have sought coverage under a permit no later than February 27, 2009.

(c) CAFOs constructed after April 14, 2003, that are not subject to new source performance standards must seek coverage under a permit no later than 180 days prior to the time that the CAFO commences operation. CAFOs seeking coverage under a general permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(d) AFOs that made or make changes after April 14, 2003, to their operations that result in becoming defined as CAFOs for the first time, yet are not subject to new source performance standards must seek coverage under a permit no later than 90 days after becoming defined as a CAFO. CAFOs seeking coverage under a general permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(e) New sources must seek to obtain coverage under a permit at least 180 days prior to the time that the CAFO commences operation. CAFOs seeking coverage under a general permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(f) AFOs designated as CAFOs by the director must seek to obtain coverage under a permit no later than 90 days after receiving notice of the designation.

Comment: In Rule 1200-04-05-.14(8), the word "potential" should now only apply to operations with SOP coverage. This needs to be rewritten to make it clear that this section does not apply to CAFOs covered under NPDES.

Response: The wording of this paragraph has been changed so that it is applicable to facilities with either SOP or NPDES coverage. It now reads as follows:

(8) CAFOs must comply with the permit reissuance requirements of Rule 1200-04-05-.05(4) and must maintain permit coverage until such time as the CAFO demonstrates to the satisfaction of the director that it no longer meets the definitions set forth in Rule 1200-04-05-.14(3), (4) and (5) and there no longer remains the potential for a discharge of manure, litter or associated process wastewater, other than agricultural stormwater from land application areas.

Comment: Rule 1200-04-05-.14(9) and (10) should be deleted.

Response: The deadlines given are not found in federal rule, for that reason, Rule 1200-04-05-.14(9) was deleted and (10) was modified and renumbered to read:

(9) CAFOs must have a nutrient management plan developed, approved and have all measures, structures, etc., in place to fully implement upon the date of permit coverage.

Comment: Does Rule 1200-04-05-.14(11) allow for both the "Narrative Approach" and the "Linear Approach"? If so, it should specifically mention both are acceptable. The federal rules require any permit to require compliance with the terms of the site-specific nutrient management plan. The federal rules also require the terms of the plan to address rates of application using either the linear or narrative approach. TDEC needs to devote a large section in the new rule to explain these approaches.

Response: Subparagraph (a) under this provision (renumbered to be Rule 1200-04-05-.14(10)) was deleted and the wording of the renumbered (a) was changed to read as follows:

(a) For all CAFOs, a requirement to develop, submit for state approval, implement, keep on site and comply with a site-specific nutrient management plan that:

1. Includes best management practices and procedures necessary to implement applicable effluent limitations and standards including those specified in applicable state and federal rules;

The division agrees with the commenter that the state rule should also provide for the linear and narrative approaches when determining how manure, litter or process wastewater is applied to land. The division added language consistent with 40 CFR §122.23(e)(5) at Rule 1200-04-05-.14 (10)(f).

Comment: It seems somewhat redundant and unnecessary to have both Rule 1200-04-05-.14(11)(b)10 [which requires CAFOs to identify specific records to keep to document the implementation of the minimum elements of a site-specific NMP] and Rule 1200-04-05-.14(11)(d). In particular, (b)10 seems backwards and useless because in reality, producers don't tell TDEC what records they are going to keep...TDEC tells them what records to keep in subparagraph (d). That being the case, it is recommended that the current part (b)10 be deleted and replaced with the list of required records that is now subparagraph (d).

Response: First of all, please note that due to other revisions in the rules, Rule 1200-04-05-.14(11)(b) and (d) were renumbered to be Rule 1200-04-05-.14(10)(a) and (b). Although many of the recordkeeping requirements of 1200-04-05-.14(10)(b) would document implementation of the NMP as required by part (a)(10), a CAFO operator may identify other records that would need to be maintained in order to adequately document compliance. The existing wording in the regulation allows for this flexibility.

Comment: This list of record-keeping requirements obviously came from the federal rule and so has to apply to NPDES permits. However, is there really a need to require this much record-keeping of CAFOs with SOPs? We recommend coming up with a much shorter and simpler list of records to require SOP holders to keep.

Response: The division believes that the records required by the rule are appropriate for all CAFOs.

Comment: How does the requirement that CAFOs keep records that explain the basis for determining manure application rates fit with the procedures/instructions for the narrative and linear approaches?

Response: This provision is intended to be equivalent to the federal provision found at 40 CFR § 412.37(c)(6) which refers to "provided in the technical standards established by the Director." The language in

Rule 1200-04-05-.14(10)(b)14 has been modified to read as follows:

> 14. Explanation of the basis for determining manure application rates, as provided in the technical standards established by the NRCS or as otherwise approved by the director or the Tennessee Department of Agriculture and consistent with applicable state and federal rules;

This ensures that rates must be determined according to applicable rules which include both the linear and narrative approaches, now incorporated into state rules at Rule 1200-04-05-.14(10)(f). The language is also worded to allow the division flexibility in applying appropriate guidance to assist CAFOs in determining rates under either approach.

Comment: We [TDA] see no need to continue to have Annual Reports (Rule 1200-04-05-.14(11)(e)) sent to TDA.

Response: The division will delete the requirement (now at Rule 1200-04-05-.14(10)(e) to have reports sent to TDA in addition to TDEC.

Comment: A "field-specific assessment of the potential for N transport" does not exist. Therefore, all mention of nitrogen should be removed from Rule 1200-04-05-.14(12).

Response: The requirements for a "field-specific assessment of the potential for nitrogen transport" are found in the federal rule in numerous locations. Removing these requirements (now at Rule 1200-04-05-.14(11) would make Tennessee's rule inconsistent with the federal rule. The language will remain.

Comment: Rule 1200-04-05-.14(12)(c) can be deleted entirely because it already covered exactly by Rule 1200-04-05-.14(11)(d)18.

Response: First of all, please note that due to other revisions in the rules, Rule 1200-04-05-.14(12)(c) and Rule 1200-04-05-.14(11)(d)18 were renumbered to be Rule 1200-04-05-.14(11)(c) and Rule 1200-04-05-.14(10)(b)18, respectively. These provisions are not actually duplicative as the comment suggests. Rule 1200-04-05-.14(10)(b)18 refers to record keeping requirements and 1200-04-05-.14(11)(c) refers to a required management practice.

Comment: Rule 1200-04-05-.14(12)(d) is too complicated. Simplify by just incorporating the 590 recommendations for setbacks...at least for water bodies and wells.

Response: First of all, please note that due to other revisions in the rules, Rule 1200-04-05-.14(12)(d) was renumbered to be Rule 1200-04-05-.14(11)(d). Replacing the requirements of 1200-04-05-.14(11)(d) with NRCS guidance would be inconsistent with federal rule. Therefore the language will remain as is.

Comment: A major development of the federal rule is the addition of new requirements pertaining to public notice and public availability. However, there does not seem to be any new language in TDEC's revised rule to establish a policy and procedure for how they intend to implement these requirements in Tennessee. Such language needs to need to be added.

Response: The division agrees that language should be added to make Tennessee's rule consistent with the federal rule. A new provision has been added at Rule 1200-04-05-.14(10)(g) that incorporates the federal requirements. The new provision differentiates between NPDES permits and state permits with regard to public notice. Specifically, the language pertaining to state permits is as follows:

> (i) The CAFO owner or operator must provide the director with the most current version of the CAFO's nutrient management plan and identify changes from the previous version, except that the results of calculations made in accordance with the requirements of subparts (f)1(ii) and (f)2(v) of this paragraph are not considered to be changes to the nutrient management plan subject to the requirements of this paragraph.

(ii) The director must review the revised nutrient management plan to ensure that it meets the requirements of this paragraph and applicable effluent limitations and standards and must determine whether the changes to the nutrient management plan include revision to the terms of the nutrient management plan as set forth in subparagraph (f) of this paragraph. If the terms of the nutrient management plan are not revised, the director must notify the CAFO owner or operator and upon such notification the CAFO may implement the revised nutrient management plan. If the terms of the nutrient management plan are revised, the director must determine whether such changes are substantial changes as described in part 2 of this subparagraph.

Comment: The new federal rule spends a great deal of time introducing and describing the concept of "certification." Again, TDEC's new rule does not even mention "certification" or how that process will work in Tennessee. That issue needs to be addressed in some detail.

Response: The division agrees and has added language at Rule 1200-04-05-.14(15) that addresses "no discharge certification."

Comment: The department should reference the exact language in federal rules when determining which CAFOs must receive a NPDES permit.

Response: The language Rule 1200-04-05-.14(2) has been modified clearly distinguish between facilities requiring NPDES permit coverage and those requiring State Operating Permit coverage. It reads as follows:

(2) All operations defined as CAFOs must seek permit coverage as follows:

(a) CAFOs within the range given in column 2 of TABLE 1200-04-05-14.1 and either discharge or are designed, constructed, operated or maintained such that a discharge could occur must obtain coverage under an NPDES permit.

(b) All other CAFOs must obtain coverage under a State Operating Permit.

This language is consistent with the federal rule, so a direct reference is not necessary.

Comment: The proposed rules should have a separate regulatory scheme for operations that are required to receive the NPDES permit and those operations that are required to receive the state operating permit. The state operating permits should not be as stringent as the NPDES requirements. We ask the department to withdraw the proposed rules and work with stakeholders to develop a separate section in the rules for state operating permits and incorporate new provisions from the 2008 federal rule for NPDES permits.

Response: The state met with stakeholders on March 12, 2010 to discuss their concerns and receive additional input on the rules. As a result of that meeting as well as comments received, the state made significant changes to the rules. However, withdrawal and re-notice is not necessary to accommodate these significant changes.

Changes made to the rule do allow for some differences between facilities covered by NPDES permits and those covered by state operating permits. For example, Rule 1200-04-05-.14(10)(c) and (d) do not require the same level of record keeping for manure, litter or process wastewater transferred to a 3rd party for operations covered by an SOP. Also Rule 1200-04-05-.14(13) sets standards for non-NPDES facilities that differ from those applicable to CAFOs that are covered by an NPDES permit. The department considered different requirements in nutrient management, but decided that the requirements are appropriate for both CAFOs covered by NPDES permits as well as those covered by SOPs.

Comment: The definition of "Permit action" in Rule 1200-04-05-.02 includes a reference to the no potential to discharge described in the current Rule 1200-04-05-.14(6). The proposed rules delete this paragraph because the federal rules do not recognize no potential to discharge determinations

any longer. This should be removed.

Response: The division agrees with the commenter and will remove the provision.

Comment: In the federal rules under 40 CFR §122.23(h), the director is required to notify the public of the director's proposal to grant coverage under the NPDES permit regardless of whether it is an individual NPDES permit or general NPDES permit. This also includes the nutrient management plan submitted with the permit proposal. Does Rule 1200-04-05-.06 need to reflect that CAFO general permits are also submitted for public review? Does a public review of a CAFO NPDES general permit have to comply with all of the public review requirements of Rule 1200-04-05-.06? No other type of Notice of Intent (NOI) for general permit coverage requires public review. It will be extremely burdensome for producers as well as the department if all general permits required public review that met all the requirements of this section. We believe a simplified and streamlined process for public review of CAFO general permits would be in everyone's best interest.

Response: It is true that the federal rules require public notice for CAFO permits, including the nutrient management plan. However, in Tennessee's case, CAFOs subject to NPDES permitting will be covered under individual NPDES permits. Therefore, the requirements of Rule 1200-04-05-.06 would naturally apply. This would also be true for any facility covered by an individual SOP. However, Tennessee is in the process of issuing two general SOPs for CAFOs. One would cover facilities that discharge and one would cover facilities that do not discharge. Facilities covered by these permits would not be subject to the public notice requirements of the federal rule nor to the public notice requirements of Rule 1200-04-05-.06.

Comment: Rule 1200-04-05-.14(2)(a) says CAFOs that have discharged or.....such that a discharge could occur. The federal rules in 40 CFR §122.23(d)(1) specifically say if the CAFO discharges or proposes to discharge - the state rules imply if you have discharged in the past or there "could" be a discharge then you get a NPDES permit. It needs to reflect federal language. Simply having a discharge in the past should not require future NPDES permitting. Also, the language "could" implies a potential to discharge and would subject CAFO operations with only a potential to discharge to NPDES authority. This language needs to be consistent with the federal language.

Response: The language at Rule 1200-04-05-.14(2) has been modified to require NPDES permits only for those large CAFOs that either discharge or are designed, constructed, operated or maintained such that a discharge could occur. These facilities are considered to have more than simply the potential to discharge.

Comment: Rule 1200-04-05-.14(2)(c) implies neither a Medium nor Large CAFO can discharge unless authorized by an NPDES permit. Only the Medium operations that fit the federal category as a CAFO and the Large operations are restricted from discharging without an NPDES permit. Medium operations that do not fit the federal definition should not be by default pulled into this statement. The words "state operating permit" should be added after "NPDES".

Response: The language in Rule 1200-04-05-.14(2)(c) has been deleted and the language of Rule 1200-04-05-.14(2)(a) and (b) has been modified.

Comment: Rule 1200-04-05-.14(4)(a) – contains the words "discrete, discernable conveyance". The federal language uses "man-made ditch, flushing system, or other similar man-made device". This should be changed back to the wording in the federal rules.

Response: The language of Rule 1200-04-05-.14(4)(a) is consistent with the state's definition of a point source as well as the agricultural exemption found in T.C.A. §69-3-120(g).

Comment: Rule 1200-04-05-.14(7) – This paragraph should be taken out. The new federal rules 40 CFR §122.23(b)(3) allow for a process to certify no discharge or proposed discharge. Does the state operating permit give the CAFO operator the same coverage in the event of a discharge as the certification for no discharge? To protect CAFOs from unintended consequences, the department should implement 40 CFR §122.23(b)(3) containing a no discharge certification option for those

CAFOs not regulated under the Clean Water Act. This option should replace the determination for no potential to discharge that currently exists in the rules.

Response: That division deleted that provision in the draft rules. The recently issued SOP general permit for non-discharging CAFOs (SOPC00000) will serve as a certification of no discharge. A new provision that provides for such certification has been added to the rules at Rule 1200-04-05-.14(15).

Comment: Rule 1200-04-05-.14(9) – Is this section still relevant? It appears that paragraph (10) covers the requirements of paragraph (9).

Response: That particular provision (that required NMP implementation by December 31, 2006) has been deleted.

Comment: Rule 1200-04-05-.14(11)(a) – The requirement for a Comprehensive Nutrient Management Plan (CNMP) should be removed. EPA has established two types of nutrient management plans that have to be used based on their rules. These are called Linear and Narrative approach and the rules describe each type of approach. Does a CNMP work in place of the two approaches outlined by EPA? It appears that simply requiring a CNMP based on NRCS standards does not comply with the requirements of using the Linear or Narrative approach.

Response: The division agrees with the commenter and all references to CNMPs have been removed. The division added language at Rule 1200-04-05-.14(10)(f) that is consistent with the linear and narrative approaches found in the federal rule.

Comment: Rule 1200-04-05-.14(11)(b)3 – Producers have indicated this provision is being enforced for reasons other than water quality. Mortality management not related to water quality is under the purview of the state veterinarian. If the department believes the types and quality of mortality management should be enforced then specific mortality management guidelines should be established in cooperation with stakeholders and the state veterinarian and proposed for this rule.

Response: The language that requires proper mortality management has been renumbered as Rule 1200-04-05-.14(10)(a)3. It is consistent with the federal language of 40 CFR §412.37. The state rule does refer to NRCS guidance, but the division will work with stakeholders to determine if additional guidance is needed.

Comment: Rule 1200-04-05-.14(11)(d)(4) – The new federal rules in 40 CFR §412.37(a)(2) removed the 100 year, 24 hour rainfall event language from new source swine or poultry CAFOs. This was replaced with language referring to 40 CFR §412.46(a)(1) which allows swine and poultry CAFOs subject to the new source performance standards to request the director to establish NPDES permit BMP effluent limitations designed to ensure no discharge. The current requirement for weekly records of the depth marker for swine and poultry CAFOs that are new sources indicating containment for a 100 year-24 hour storm event must be removed according to the new federal rules. The department needs to clarify language to also include the new federal language that allows the director to establish BMP effluent limitations for those swine and poultry operations that may be designed for 100 year-24 hour storm events.

Response: This provision has been renumbered as Rule 1200-04-05-.14(10)(b)4 and has been reworded as follows:

4. Weekly records of the depth of the manure and process wastewater in any open surface liquid impoundment as indicated by the required depth marker which indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. In the case of swine or poultry CAFOS that are new sources must indicate minimum capacity necessary to contain the runoff and direct precipitation associated with the design storm used for sizing the impoundment;

The language at renumbered Rule 1200-04-05-.14(12) remains unchanged and requires

compliance with applicable federal guidelines. That would include the BMP provisions of 40 CFR §412.46(a)(1). Also a new provision has been added at Rule 1200-04-05-.14(13) (given below) that establishes the requirements for CAFOs not subject to NPDES permitting. The reference to "operated or maintained" could include BMPs as described in the federal rule.

(11) For CAFOs that are not subject to applicable federal effluent guidelines, the following standards shall be applied:

(a) For CAFOs that either discharge or are designed, constructed, operated or maintained such that a discharge could occur, the production area must be designed, constructed, operated and maintained to contain all manure, litter and process wastewater including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event.

(b) For all other CAFOs not subject to applicable federal effluent guidelines, the production area must be designed, constructed, operated and maintained so that no discharge will occur.

Comment: Rule 1200-04-05-.14(11)(g) – the federal rules incorporated an extra requirement in the annual report. The requirement is in 40 CFR §122.42(e)(4)(viii).

Response: The division added provisions at renumbered Rule 1200-04-05-.14(10)(e)8 through 13 in order to be consistent with the federal rule.

Comment: In the federal rules under 40 CFR §122.23(e)(1) and (2), large operations that do not have a NPDES permit must land apply wastes according to site-specific nutrient management practices that meet the requirements of 40 CFR §122.42(e)(1)(vi) through (ix) in order to be eligible for the agricultural stormwater exemption in the Clean Water Act. Do the requirements under the state operating permit suffice to prove a non-NPDES permitted Large CAFO is eligible for the agricultural stormwater exemption? Is a non-NPDES permitted Large CAFO required to develop this site-specific nutrient management plan using a Linear or Narrative approach described in 40 CFR §122.42(e)(5)?

Response: The division requires CAFOs covered by SOPs to develop site-specific nutrient management plans. Therefore, discharges from the land application areas would be considered agricultural stormwater for facilities that are in compliance with the requirements of the applicable SOP.

Comment: The rules need an explicit statement that the NMP is an enforceable part of the permit.

Response: Language has been added at Rule 1200-04-05-.14(10)(f) that addresses this concern and is given below:

(f) Provisions that require compliance with the terms of the CAFO's site-specific nutrient management plan such that the plan is enforceable through the permit...

Comment: The federal rule refers to NMP software. The state rule should as well.

Response: In response to this comment, the division added the following language to Rule 1200-04-05-.14(14).

(a) The design of the open manure storage structure as determined by the most recent version of the National Resource Conservation Service's Animal Waste Management (AWM) software. CAFOs may use equivalent design software or procedures as approved by the Director.

(b) All inputs used in the open manure storage structure design including actual climate data for the previous 30 years consisting of historical average monthly precipitation and evaporation values, the number and types of animals, anticipated animal sizes or weights, any added water and bedding, any other process wastewater, and the size

and condition of outside areas exposed to rainfall and contributing runoff to the open manure storage structure.

(c) The planned minimum period of storage in months including, but not limited to, the factors for designing an open manure storage structure listed in paragraph (a)(1)(i) of this section. Alternatively the CAFO may determine the minimum period of storage by specifying times the storage pond will be emptied consistent with the CAFO's Nutrient Management Plan.

Comment: With regard to Rule 1200-04-05-.14(4)(c), stream impairment should not be a basis for permitting.

Response: This approach was established in the 1999 CAFO strategy and is a necessary part of the division's mission to restore impaired waters.

Comment: How is poultry litter kept from contaminating groundwater where it is stored?

Response: Litter storage facilities must be designed in accordance with Natural Resources Conservation Service Conservation Practice Standard 313. It sets out minimum standards for either soil or concrete foundations of storage facilities.

Comment: How do CAFOs expand without formal permit action?

Response: The revised rules include new provisions at Rule 1200-04-05-.14(10)(g) applicable to facilities covered by NPDES permits that require public notice for substantial changes to the nutrient management plan. In these cases, the modification to the nutrient management plan would be analogous to modification of the individual permit.

Comment: Why don't the rules require setbacks from structures and property lines? How can CAFOs be located close to schools?

Response: The rules are promulgated under the authority of the Tennessee Water Quality Control Act (T.C.A. §69-3-101, et seq.). The purpose of act is to abate existing pollution of state waters, to reclaim polluted waters, to prevent the future water pollution and to enable the state to participate in the national pollutant discharge elimination system established under §402 of the Federal Clean Water Act. Any provision in the rules that included setbacks from structures, property lines or schools would be outside of that authority.

Comment: How much arsenic is in poultry litter? Is it a threat to drinking water wells?

Response: Most of the arsenic used as an antibiotic in commercial broiler production ends up in the litter in concentrations ranging from 30 to 50 milligrams per kilogram. At the pH ranges typically seen in poultry litter, arsenic has limited mobility. Poultry litter applied at agronomic levels, using good soil conservation practices and away from water features, generally will not raise arsenic concentrations sufficiently over background levels to pose environmental or human health risks. The proposed rules require that litter be applied at an agronomic rate and that application areas be setback at least 100 feet from water features such as wells, streams and sinkholes.

Comment: What about BMPs for transporting litter by 3rd parties?

Response: Once manure and/or litter is transferred to a 3rd party, the rules for manure management are no longer applicable since the 3rd party is not a CAFO subject to state or federal regulation. Therefore, the rules cannot mandate BMPs for transport.

Comment: The state rule should be compared with the federal rule to ensure that it is consistent.

Response: The division carefully reviewed the recently revised federal rule and made changes to the definition of an "AFO production area," deleted the provisions applicable to a "no potential to discharge" determination and replaced with language consistent with the federal requirement for a "no discharge certification," added provisions related to the narrative and linear approaches to

nutrient management, added provisions related to public notice and availability and modified the reporting requirement for transfer of manure to 3rd parties.

Comment: Facilities covered by state permits should have less prescriptive requirements for nutrient management plans (NMPs) than those for NPDES permits.

Response: The division agreed with the comment and revised Rule 1200-04-05-.14(10)(f) to read:

> (f) Provisions that require compliance with the terms of the CAFO's site-specific nutrient management plan such that the plan is enforceable through the permit. The terms of the nutrient management plan are the information, protocols, best management practices, and other conditions in the nutrient management plan determined by the commissioner to be necessary to implement the nutrient management plan. For NPDES permits, the terms of the nutrient management plan, with respect to protocols that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater, must include the fields available for land application; field-specific rates of application properly developed, through either the linear approach or the narrative approach as described in parts 1 and 2 of this subparagraph; and any timing limitations identified in the nutrient management plan concerning land application on the fields available for land application.

This change only subjects those facilities covered by NPDES permits to the provisions related to either linear or narrative approaches to nutrient management planning. The existing NMP language of Rule 1200-04-05-.14(10)(a) still applies to facilities covered by state permits.

Comment: With regard to numerous references to nitrogen transport from fields, Tennessee does not have a tool to "assess" nitrogen transport from fields. Instead, nutrient planners use the crop N demand as the maximum applied to reduce losses. Perhaps a statement of this fact should be incorporated into the rule

Response: The references in the rule are generic in nature, except for Rule 1200-04-05-.14(11)(a)1, which was modified to read,

> 1. Include a field-specific assessment of the potential for nitrogen and phosphorus transport from the field to surface waters, and 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 movement to surface waters, that employs the Tennessee Phosphorus Index (a tool developed by the University of Tennessee Extension Service and the NRCS to assess the risk of phosphorus movement from the application area to waters of the state) and University of Tennessee recommendations for manure application; and

Comment: Rule 1200-04-05-.14(10)(f)1(i)(IV) and 2(i)(V) should refer to crop uptake recommendations of the University of Tennessee Extension and/or those summarized in the Tennessee NRCS Conservation Practice Standard 590 entitled "Nutrient Management

Response: The wording in Rule 1200-04-05-.14(10)(f)1(i)(IV) and 2(i)(V) has been modified to read:

> (IV) The nitrogen and phosphorus recommendations as recommended by the University of Tennessee Extension for each crop or use identified for each field;

Comment: Rule 1200-04-05-.14(10)(f)1(i)(VI) and 2(ii)(IV) should be clear that multi-year phosphorus application is only allowed for fields that don't have a high potential for phosphorus runoff.

Response: Rule 1200-04-05-.14(10)(f)1(i)(VI) and 2(ii)(IV) have been modified to refer to Rule 1200-04-05-.14(11)(a)(2) which limits multi-year phosphorus application to those fields with low phosphorus

runoff potential.

Comment: Rule 1200-04-05-.14(10)(f)1(i)(X) should include reference Mehlich 1 for the soil P analysis protocol, or specify how the conversion from other soil P analysis protocols to Mehlich 1 should be made. Our crop N requirements are based on soil tests using Mehlich 1.

Response: The division prefers not to refer to a specific method in the rules. However, for consistency this provision refers to Rule 1200-04-05-.14(10)(a)8 and 1200-04-05-.14(11)(b) which describe the methodology for such testing. The wording of Rule 1200-04-05-.14(10)(f)1(i)(X) now reads as follows:

(X) The methodology by which the nutrient management plan accounts for the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied as described in 1200-04-04-.14(10)(a)8 and 1200-04-05-.14(11)(b).

Comment: Definition (6)(e): The phrase "on-farm" should be added twice, so that it reads, "The production area also includes any "on-farm" egg washing or egg processing.....in the storage, handling, treatment or "on farm" disposal of mortalities.

Response: The division agrees and has made the change

Comment: Definition (47): The definition of mature dairy cow should be revised to include only "confined animals".

Response: The division disagrees with the proposed change because the confinement status is unrelated to whether or not a cow has previously given birth to a calf.

Comment: Definition (52): The definition for multi-year phosphorus application needs to be changed to the following:

"Multi-year phosphorus application" means phosphorus applied to a field in excess of crop needs and/or crop removal rates when there is no soil test recommendation for phosphorus and the Tennessee Phosphorus Index indicates waste should be applied at the crop phosphorus removal rate. Subsequent phosphorus application is prohibited until the applied phosphorus has been removed via harvest and/or crop removal or a subsequent soil test indicates phosphorus is required. Crop phosphorus removal rates are set in Tennessee NRCS Conservation Practice Standard 590 (or alternative Extension technical guidance document for nutrient management).

Response: The division changed the definition as follows, removing reference to NRCS Conservation Practice Standard 590.

(52) "Multi-year phosphorus application" means phosphorus applied to a field in excess of crop needs and/or crop removal rates when there is no soil test recommendation for phosphorus and the Tennessee Phosphorus Index indicates manure, litter or process wastewater should be applied at the crop phosphorus removal rate. Subsequent phosphorus application is prohibited until the applied phosphorus has been removed via harvest and/or crop removal or a subsequent soil test indicates phosphorus is required. Crop phosphorus removal rates are set by University of Tennessee Extension technical guidance documents for nutrient management.

Comment: Definition (66): The last word in the definition for "Point Source" should be changed from "runoff" to "discharges".

Response: The division agrees and has made the change.

Comment: Definition (81): This definition should be modified to provide a provision for lakes.

Response: Any change in the definition of "stream" would make it inconsistent with T.C.A. §69-3-101 et seq.; therefore the definition will remain as is.

Comment: Rule 1200-04-05-.14(2)(a), (3), (4), and (4)(e). The column numbers should be changed to correspond with the three columns of Table 1200-04-05-.14-1.

Response: The phrase, "or exceeding the size thresholds in column 2 of TABLE 1200-04-05-.14.1" was added to Rule 1200-04-05-.14(2)(a) to make it clear that only large CAFOs that had discharged or are designed, constructed, operated or maintained such that a discharge could occur must obtain coverage under an NPDES permit. The reference to column 1 in Rule 1200-04-05-.14(3) was changed to read, "column 2" The reference to column 2 in Rule 1200-04-05-.14(4)(e) was changed to read, "column 3".

Comment: Rule 1200-04-05-.14(2)(a). The wording should be changed from "...such that a discharge could occur...", to "...such that a discharge will occur...".

Response: The division agrees and has made the change.

Comment: Rule 1200-04-05-.14(2)(a). What does "designed, constructed, operated and maintained" mean? Add language to clarify that this means either open lagoons or all facilities where discharge was contemplated in the design of the facility.

Response: EPA's May 28, 2010, Implementation Guidance on CAFO Regulations –CAFOs That Discharge or Are Proposing to Discharge describes several factors that should be considered when determining if a facility is designed, constructed, operated and maintained such that discharge will occur. The clarification language requested by the commenter would result in Tennessee's rule being narrower than EPA guidance recommends.

Comment: Rule 1200-04-05-.14(4)(e). Add the promulgation date of this regulation.

Response: The division agrees and has made the change.

Comment: Table 1200-04-05-.14-1. The terms "liquid waste management" and "dry waste management" should be defined. Consideration of a threshold of 15% solids to be the breakpoint between liquid and dry waste.

Response: A note to Table 1200-04-05-.14-1 has been added to indicate that dry waste management refers systems where continuously overflowing watering systems are not used and birds are raised in an enclosed building with earthen or concrete floors spread with layer of sawdust, wood shavings, rice hulls, or chopped straw.

Comment: Rule 1200-04-05-.14(10)(e). For all SOPs (CAFOs required to only submit site-specific NMPs), the annual report should only be parts 1 through 7 of subparagraph (10)(e). All 13 parts under subparagraph (10)(e) would only apply to Class 1 NPDES liquid systems with proposed discharge.

Response: The division disagrees with the commenter. Parts 8 through 13 include information that is necessary to assure that manure, litter or process wastewater is being applied such that any runoff from the fields would be considered agricultural discharge. The requirement for reporting

under subparagraph (10)(e) will remain the same for all CAFOs.

Comment: 1200-04-05-.14(10)(c)1 and 2. Language should be added to clarify the analysis should be land grant University approved.

Response: The phrase, "and approved by the University of Tennessee Extension," was added after the reference to 40 CFR Part 412 in both parts.

Comment: Rule 1200-04-05-.14(10)(c)1 and 2. Instead of the language "large CAFOs" and "all other CAFOs", should this be changed to "CAFOs with NPDES permits" and "CAFOs with SOPs", respectively?

Response: The division believes that the current language is simpler than that proposed by the commenter and will remain as is.

Comment: Rule 1200-04-05-.14(10)(f)2(i)(V) and various other locations. "Commissioner" should be replaced by "Director".

Response: The division agrees and the changes have been made.

Comment: Rule 1200-04-05-.14(10)(g). There should be a deadline for "Director" to respond back to the producer regarding the revisions to the nutrient management plan; suggest a 30-day timeframe.

Response: In Tennessee, review of nutrient management plans is conducted by an agency not under control of the director. Therefore, placing a deadline for response related to this review on the director would not be appropriate.

Comment: Rule 1200-04-05-.14(10)(g)3. For SOPs, changes to NMPs that occur should be addressed through some notification process, and require the producer to update the NMP at permit renewal every five years.

Response: This particular provision requires the producer to provide the director with the most current version of the NMP whenever changes are made. The division is unsure what additional notification process would be needed.

Comment: All references to NRCS Conservation Practice Standard 590 should be removed.

Response: The division agrees and has removed those particular references.

Comment: Rule 1200-04-05-.14(2)(a): The rule doesn't specific which type of "NPDES" permit, individual or general.

Response: The rule intentionally doesn't specify either an individual or general permit so as to allow the division flexibility in permitting.

Comment: 1200-04-05-.14(4)(d): The phrase "expanded its operation" is unclear. We have dairies that fluctuate during the season, from less than 200 in confinement summer to more than 200 in confinement winter - a practice that has gone on well before these rules went into effect.

Response: The division considers that such operations meet the requirements of Rule 1200-04-05-.14(4)(d) and should be permitted accordingly.

Comment: Table 1200-04-05.14.1: "Mature" should not be in the header for column 1, but should be in front of "dairy cow" in row 2. That animal type should read as the federal rule does: "mature dairy cows whether milked or dry".

Response: The division agrees and has made the change.

Comment: Rule 1200-04-05-.14(5): The federal rule requires an onsite inspection.

Response: The division prefers to leave the language as is since the CAFOs typically designated would be those subject to state permitting only.

Comment: Rule 1200-04-05-.14(7)(b): The permit coverage date should be "February 27, 2006" for the "existing operations defined as CAFOs as of July 21, 2004, ...". For the benefit of the regulated community, referring back to Table 14.1 and specifying which groups were " existing operations defined as CAFOs as of July 21, 2004" would be helpful.

Response: The division must consider which dates are statutory deadlines per the federal rule. At this point in time, the division considers that the existing language is adequate.

Comment: Rule 1200-04-05-.14(10)(a)7: "Natural riparian buffers" should be included - they are not "implemented" or managed but left in place. It's a practice we should encourage.

Response: The division agrees that this is a practice to be encouraged. The wording of Rule 1200-04-05-.14(11)(d)1(i) has been changed to allow a "left in place" natural riparian buffer.

Comment: Rule 1200-04-05.14(10)(b)4: "In the case of swine or poultry CAFOs that are new sources the depth marker must indicate ....". This statement does not match up well with the current extensive requirements for open manure storage structures for these CAFO groups in the federal regulations. See 40 CFR 412.46(a)(1). Apparently the intent of the new fed rules is to remove the ability to store swine waste in open surface impoundments.

Response: This provision applied to both state and federal CAFOs. For that reason the language will remain as is.

Comment: Rule 1200-04-05-.14(10)(b)14: This should end with "rates, as provided in the technical standards established by the Director" rather than mentioning either NRCS or Extension.

Response: The division does not develop such technical standards, rather it relies on agencies such as the University of Tennessee Extension or NRCS to develop and/or recommend such standards.

Comment: Rule 1200-04-05-.14(10)(c) and (d): Any requirement here, especially for Medium CAFOs is burdensome even at 100 tons.

Response: The reporting requirements for NPDES-permitted CAFOs are consistent with the federal rule. There is no change in reporting requirements for other CAFOs. The division believes that the requirements are appropriate.

Comment: Rule 1200-04-05-.14(10)(e): The requirements for the annual report were greatly expanded in the 2008 rule. It's burdensome to have this expansive report for Medium CAFOs. As our rules stand, there is practically no difference in the requirement for very large farms and the medium farms.

Why not go back to what we originally asked for the Mediums?

Response: In Tennessee, most CAFOs are medium-sized and thus, are the source of a significant amount of nutrients being land applied. For this reason, the division believes that it is in the interest of water quality to have the same reporting requirements for both large and medium CAFOs.

Comment: Rule 1200-04-05-.14(10)(e)7: Instead of "certified nutrient management planner" list "registered Technical Service Provider in the USDA Technical Service Provider Registry in the Category of "CNMP Plan Development - Total Plan" for the State of Tennessee."

Response: The federal rule refers to "certified nutrient management planner." To maintain consistency the wording in Rule 1200-04-05-.14(10)(e)7 will remain as is.

Comment: Rule 1200-04-05-.14(10)(e)8: Should be provided for the "previous calendar year." Keep in mind some crops planted in the calendar year will not be harvested until the next calendar year.

Response: This language is consistent with the federal rule and will remain as is.

Comment: Rule 1200-04-05-.14(10)(e)13: Shouldn't this be only for "fields that received manure and process wastewater" and for the "previous calendar year instead of "previous 12 months" to match with parts 7 and 8 in this paragraph. Fed list previous 12 months, but I agree the previous calendar year makes a lot more sense.

Response: This language is consistent with the federal rule and will remain as is.

Regulatory Flexibility Addendum
Pursuant to T.C.A. § 4-5-401 through 4-5-404, prior to initiating the rule making process as described in T.C.A. § 4-5-202(a)(3) and T.C.A. § 4-5-202(a), all agencies shall conduct a review of whether a proposed rule or rule affects small businesses.

(If applicable, insert Regulatory Flexibility Addendum here)

(1) The type or types of small business and an identification and estimate of the number of small businesses subject to the proposed rule that would bear the cost of, or directly benefit from the proposed rule.

For more information on what these rules do, see the summary provided in the information for the Joint Government Operation Committees below. Two types of small businesses could be affected by these rules, businesses that are interested in being certified as Qualified Hydrologic Professionals (QHPs) and farming operations that have large numbers of animals confined so that they qualify as Concentrated Animal Feeding Operations (CAFOs). There are 20 to 30 firms that may be interested in having QHPs on staff. There are approximately 265 CAFOs permitted in Tennessee.

(2) The projected reporting, recordkeeping, and other administrative costs required for compliance with the proposed rule, including the type of professional skills necessary for preparation of the report or record.

The persons who wish to become certified as QHPs will have costs for training and becoming certified comparable to other professional qualifications.

(3) A statement of the probable effect on impacted small businesses and consumers.

Other than what is mentioned in item (2) above, we do not anticipate that these rules will impose costs on businesses or consumers because there is no mandate in the law or rules for people to use the services of a QHP and the changes to the CAFO rules made lessen rather than increase the requirements on CAFOs.

(4) A description of any less burdensome, less intrusive or less costly alternative methods of achieving the purpose and objectives of the proposed rule that may exist, and to what extent the alternative means might be less burdensome to small business.

We are not aware of any.

(5) A comparison of the proposed rule with any federal or state counterparts.

We are not aware of a federal counterpart to the wet weather conveyance / QHP law.

(6) Analysis of the effect of the possible exemption of small businesses from all or any part of the requirements contained in the proposed rule.

An exemption for small businesses is likely to have two effects, it would make parts of them inconsistent with federal requirements and such an exemption is likely to be unlawful if challenged.

Additional Information Required by Joint Government Operations Committee

All agencies, upon filing a rule, must also submit the following pursuant to TCA 4-5-226(i)(1).

(A) A brief summary of the rule and a description of all relevant changes in previous regulations effectuated by such rule;

This proposed rule was made necessary by two bills passed by the General Assembly in 2009, Public Chapters 330 and 464. The first amended the section requiring Concentrated Animal Feeding Operations (CAFOs) to have permits under the Water Quality Control Act, to state that only those CAFOs required to have a permit under federal law will have a permit that meets all federal requirements. In 1998, because of concern about CAFOs in Tennessee, the General Assembly enacted a law requiring CAFOs to obtain these permits before the details of what was required for large CAFOs was established at the federal level. When EPA's CAFO requirements later became effective, they chose a higher threshold for regulation than what had been adopted in Tennessee. The 2009 amendment provided that instead of all regulated CAFOs meeting the same requirements as apply to those CAFOs regulated by EPA, only those that meet the federal threshold have to meet those requirements. The provisions of this rule amending Chapter 1200-04-05 make that change as well as making other changes to be consistent with EPA requirements for CAFOs.

P. Ch. 464 amended the Water Quality Control Act in two main ways. It codified a definition of a wet weather conveyance that was more specific than the previous definition in the rules and it created an optional method by which someone desiring to alter a wet weather conveyance (WWC) could hire a certified person to confirm that the conveyance meets the definition of a WWC and make a submission to the department documenting that. If the department does not object within 60 days, the work can proceed. The provisions of this rule creating a new Chapter 0400-40-17 establish the QHP program. The provisions of this rule amending Chapter 1200-04-03 implement the other provisions of P. Ch. 464 regarding WWCs, by stating what the procedures shall be for making determinations of whether watercourses are streams or wet weather conveyances.

(B) A citation to and brief description of any federal law or regulation or any state law or regulation mandating promulgation of such rule or establishing guidelines relevant thereto;

Public Chapter 330 was codified at Tenn. Code Ann. §69-3-108(b)(7). P. Ch. 464 amended several sections of the Water Quality Control Act, including §§69-3-105, 69-3-107, and 69-3-108. Federal regulations regarding CAFOs were mostly recently revised by 73 FR 70418 which is codified mainly in 40 CFR Part 122 and Part 412.

(C) Identification of persons, organizations, corporations or governmental entities most directly affected by this rule, and whether those persons, organizations, corporations or governmental entities urge adoption or rejection of this rule;

People who are interested in being certified as Qualified Hydrologic Professionals (QHPs) and farming operations that have large numbers of animals confined so that they qualify as Concentrated Animal Feeding Operations (CAFOs) are most directly affected.

(D) Identification of any opinions of the attorney general and reporter or any judicial ruling that directly relates to the rule;

The Department is not aware of any.

(E) An estimate of the probable increase or decrease in state and local government revenues and expenditures, if any, resulting from the promulgation of this rule, and assumptions and reasoning upon which the estimate is based. An agency shall not state that the fiscal impact is minimal if the fiscal impact is more than two percent (2%) of the agency's annual budget or five hundred thousand dollars ($500,000), whichever is less;

The department does not expect a fiscal impact from these rules.

(F) Identification of the appropriate agency representative or representatives, possessing substantial knowledge and understanding of the rule;

Saya Qualls and Dan Eager
Division of Water Pollution Control
6th Floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1538

(G) Identification of the appropriate agency representative or representatives who will explain the rule at a scheduled meeting of the committees;

Alan M. Leiserson
Legal Services Director
Office of General Counsel

(H) Office address, telephone number, and email address of the agency representative or representatives who will explain the rule at a scheduled meeting of the committees; and

Office of General Counsel
Tennessee Department of Environment and Conservation
20th Floor L & C Tower
Nashville, Tennessee 37243-1548
(615) 532-0131
Alan.Leiserson@tn.gov

(I) Any additional information relevant to the rule proposed for continuation that the committee requests.

The Department is not aware of any.

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Rulemaking Hearing Rule(s) Filing Form

Rulemaking Hearing Rules are rules filed after and as a result of a rulemaking hearing. TCA Section 4-5-205

Agency/Board/Commission:	Environment and Conservation
Division:	Water Pollution Control
Contact Person:	Saya Qualls
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Revision Type (check all that apply):

X Amendment
X New
___ Repeal

Rule(s) Revised (**ALL** chapters and rules contained in filing must be listed here. If needed, copy and paste additional tables to accommodate multiple chapters. Please enter only **ONE** Rule Number/Rule Title per row)

Chapter Number	**Chapter Title**
0400-40-17	Certification of Qualified Hydrologic Professionals
Rule Number	**Rule Title**
0400-40-17-.01	Minimum Qualifications
0400-40-17-.02	Application for Certification
0400-40-17-.03	Maintenance and Revocation of Certification
0400-40-17-.04	Requirements for Wet Weather Conveyance Determination Reports

Chapter Number	**Chapter Title**
1200-04-03	General Water Quality Criteria
Rule Number	**Rule Title**
1200-04-03-.04	Definitions
1200-04-03-.05	Interpretation of Criteria

Chapter Number	**Chapter Title**
1200-04-05	Permits, Effluent Limitations and Standards
Rule Number	**Rule Title**
1200-04-05-.02	Definitions
1200-04-05-.14	Animal Feeding Operations

Chapter Number	Chapter Title
1200-04-07	Aquatic Resource Alteration
Rule Number	**Rule Title**
1200-04-07-.03	Definitions
1200-04-07-.04	Permits

(Place substance of rules and other info here. Statutory authority must be given for each rule change. For information on formatting rules go to http://state.tn.us/sos/rules/1360/1360.htm)

New Rules

Chapter 0400-40-17
Certification of Qualified Hydrologic Professionals

Table of Contents

0400-40-17-.01 Minimum Qualifications

(1) Persons seeking to be certified by the department as Tennessee qualified hydrologic professionals must hold, at a minimum, a bachelor's degree in biology, geology, ecology, engineering, or related sciences, must have a minimum of five years relevant experience, and must successfully complete the Tennessee Hydrologic Delineation Class offered or accredited by the department.

(2) Qualifying relevant experience is professional employment that includes regular, periodic fieldwork in biologic or hydrologic assessments of streams and wet weather conveyances. Every year of qualifying experience shall include at a minimum one wet weather conveyance determination.

0400-40-17-.02 Application for Certification

(1) Persons may take the test offered for the certification program for qualified hydrologic professionals without seeking the certification; provided however, that if someone passes the test before they have the required experience and later wishes to use the results from that test to obtain certification, the date of that test or the latest refresher test may not be more than three years prior to the date of application for certification.

(2) Persons seeking certification as a qualified hydrologic professional shall submit the following to the department's designee for the certification program prior to taking the test: a fully completed form developed by the department and signed under penalty of perjury that contains all information showing their qualifications, including the details of their educational degrees and professional experience including documentation or description of at least five hydrologic determinations.

(3) In determining years of experience, the work done to meet any requirement for a bachelors level degree program does not qualify toward the five years of professional experience required for certification. However, relevant work experience obtained on summer employment, work study, or other employment that is not a degree requirement does qualify for such purposes.

0400-40-17-.03 Maintenance and Revocation of Certification

(1) Certificates will be valid for three years from issuance. Once a person has been certified by the department as a qualified hydrologic professional, he or she must successfully complete a refresher course offered by the department every three years in order to maintain such certification. Evidence of successful completion of a refresher course shall be submitted by the hydrologic professional with the

application for renewal of a certificate at least 90 days before expiration of the certificate. A new certificate will not be issued without evidence of successful completion of a refresher course.

(2) During the term of a certificate, the department may revoke the certification of any qualified hydrologic professional if it is determined that there is cause. Cause for decertification includes, but is not limited to, failure to timely and successfully complete any required refresher courses, submission to the department of materially false information, or repeated submission of reports in support of hydrologic determinations that contain significant failures to exercise the skills of a certified hydrologic professional in accordance with these rules and the Guidance for Making Hydrologic Determinations (Guidance) which contains the instructions and examples for proper application of these rules to situations in the field that has been developed pursuant to §69-3-107(25). Such revocation shall be sent to the hydrologic professional by certified mail. An appeal of a revocation will be heard by the board as a contested case under the Uniform Administrative Procedures Act, Tenn. Code Ann. §§ 4-5-301 et seq. A revocation by the Commissioner or by an order of the board will not become effective until the applicable period for filing an appeal from such action has passed without the filing of an appeal.

(3) If a person's certification as a qualified hydrologic professional is revoked by the department, the person may appeal the revocation by filing a petition stating the reasons for disagreeing with the revocation with the board within 30 days of the date of receipt of the revocation.

(4) When a person's certification as a qualified hydrologic professional has been revoked, he or she must again successfully complete the Tennessee Hydrologic Delineation Class offered or accredited by the department. However, the de-certified person may not re-apply to take the class for a period of one year after the certification has been revoked.

0400-40-17-.04 Requirements for Wet Weather Conveyance Determination Reports

(1) A report regarding a wet weather conveyance determination submitted to the department by a person certified as a Qualified Hydrologic Professional (QHP) seeking to qualify for the treatment provided in §69-3-108(r) shall so state in bold print on the first page of the document and shall be sent to the appropriate field office of the department accompanied by the following documentation.

(a) A written and an electronic copy of the report. The report should include the name, address, and phone number of the current property owner(s), and the person or applicant who proposes to alter the watercourse (if different from the owner), and the name, affiliation, and certification identification number of the QHP submitting the report.

(b) A statement, signed by the certified QHP attesting that all submitted information is true, accurate and complete.

(c) An explanation of the purpose and context of the hydrologic determination report, including any proposed alterations to wet weather conveyances, streams, wetlands, or other aquatic resources.

(d) The identification of the starting and ending points along a watercourse of the areas determined to be a wet weather conveyance; such areas may not be larger than what is currently proposed to be altered by the proponent of project.

(e) A vicinity map, including the property boundaries or hydrologic determination review area (if different then property boundary). A color copy of the United States Geological Survey topographical map with an overlay of the property (development) boundary is preferred. On linear projects, start and terminus points are required. The map should clearly indicate the specific locations of all hydrologic features that are subjects of the provisions of §69-3-108(r) identified in the report. Specific latitude/longitude coordinates must either be included on the map or in the body of the hydrologic determination report.

(f) Color photographs of each of the hydrologic features to potentially be altered or otherwise identified in the report; including the date each photograph was taken, latitude and longitude, in decimal degrees of each photograph location and indicate the location and direction of each photographic view on the site map or plan. These photographs must be representative over the

overall reach of water feature evaluated. At a minimum, include a photograph of the area to potentially be altered, immediately up channel of the area to potentially be altered, and immediately down channel.

(g) TDEC Hydrologic Determination Field Data Sheets, completed in conformance with the current TDEC-WPC Guidance for Making Hydrologic Determinations and Streams. At least one data sheet must be submitted for each watercourse to potentially be altered or identified.

(h) Any previous assessments of hydrologic features on site known to the submitter.

(i) Any other information used in making the hydrologic determinations included in the report. Examples include NRCS Soil Maps, local geological data, recent and seasonal precipitation gauge records, benthic surveys, etc.

(j) Recommended, but not required information includes:

1. Site development (concept) plans and project name (separate sheet(s), if available);

2. Close-contour survey maps;

3. An aerial photo with an overlay of the property boundary;

4. Municipal jurisdiction of the project site; and

5. Location, dimensions, and type of sewage/septic system proposed if applicable.

(2) When a person desiring to alter a specific water of the state requests a determination from the commissioner that the watercourse is a wet weather conveyance and submits a report from a certified QHP conducted in accordance with all requirements of the rules and guidance adopted pursuant to §69-3-105(m) and §69-3-107(25), and containing all of the information required by paragraph (1) of this rule, then the determination made in the report shall be presumed to be correct, unless the department notifies such person in writing, or by electronic mail, within thirty (30) days of the submittal of the report, that the department has affirmatively determined that there is a significant question about whether the water of the state in question is a stream or wet weather conveyance and states the reason(s) for that determination.

(3) If the department has made such a determination that there is a significant question regarding such a submittal, then the department shall, within thirty (30) days following the date of such notification, determine whether the water of the state in question is a stream or wet weather conveyance, and notify such person in writing, or by electronic mail, of that decision and the reasons for that determination.

(4) If the department rejects the hydrologic determination submitted by a certified QHP on behalf of a person desiring to alter a specific water of the state who has requested a determination from the commissioner that the watercourse is a wet weather conveyance, that person may appeal the department's determination that the specific water is a stream by filing a petition for appeal with the board within thirty (30) days of receiving the department's rejection.

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

Chapter 1200-04-03
General Water Quality Criteria

Amendments in redline form

Rule 1200-04-03-.04 Definitions is amended by deleting it in its entirety and replacing it with the following so that, as amended, the rule shall read as follows:

1200-04-03-.04 Definitions

In addition to the meanings provided in the Water Quality Control Act (T.C.A. §69-3-103), terms used in these rules shall ~~have the meanings provided below~~ mean the following:

(1) Atypical consumers - Those persons in the vicinity of a stream or lake who due to physiological factors or previous exposure are more sensitive to specific pollutants than is the population in general. Examples of atypical consumers may include, but are not limited to: children; pregnant or nursing women; subsistence fishermen; frequent purchasers of commercially harvested fish; and agricultural, industrial, or military personnel who may have had previous occupational exposure to the contaminant of concern.

(2) Conventional Water Treatment - Conventional water treatment as referred to in the criteria denotes coagulation, sedimentation, filtration, and chlorination or disinfection.

(3) Degradation - The alteration of the properties of waters by the addition of pollutants or removal of habitat.

(4) De Minimis – Alterations, other than those resulting in the condition of pollution or new domestic wastewater discharges, that represent either a small magnitude or a short duration shall be considered a de minimis impact and will not be considered degradation for purposes of implementing the antidegradation policy. Discharges other than domestic wastewater will be considered de minimis if they are temporary or use less than five percent of the available assimilative capacity for the substance being discharged. Water withdrawals will be considered de minimis if less than five percent of the 7Q10 flow of the stream is removed (the calculations of the low flow shall take into account existing withdrawals). Habitat alterations authorized by an Aquatic Resource Alteration Permit (ARAP) are de minimis if the division finds that the impacts are offset by a combination of impact minimization and/or insystem mitigation. If more than one activity has been authorized in a segment and the total of the impacts uses no more than ten percent of the assimilative capacity, available habitat, or 7Q10 low flow, they are presumed to be de minimis. Where total impacts use more than ten percent of the assimilative capacity, available habitat, or 7Q10 low flow they may be treated as de minimis provided that the division finds on a scientific basis that the additional degradation has an insignificant effect on the resource and that no single activity is allowed to consume more than five percent of the assimilative capacity, available habitat or 7Q10 low flow.

(5) Ecoregion - A relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

(6) Epilimnion – The upper layer of water in a thermally stratified lake or reservoir. This layer consists of the warmest water and has a fairly uniform (constant) temperature.

(7) Ground Water – Water beneath the surface of the ground within the zone of saturation, whether or not flowing through known and definite channels.

(8) Ground water table – The upper surface of the zone of saturation by groundwater.

~~(7)~~(9) Hypolimnion - The lowest layer in a thermally stratified lake or reservoir. This layer consists of colder, more dense water, has a constant temperature and no mixing occurs. The hypolimnion of a eutrophic lake is usually low or lacking in oxygen.

(10) Interflow – The runoff infiltrating into the surface soil and moving toward streams as shallow, perched water above the main ground-water level.

~~(8)~~(11) Mixing Zone - That section of a flowing stream or impounded waters in the immediate vicinity of an outfall where an effluent becomes dispersed and mixed.

(12) Multiple populations – Two or more individuals from each of two or more distinct taxa, in the context of obligate lotic aquatic organisms.

(13) Normal weather conditions – Those within one standard deviation of the cumulative monthly precipitation means for at least the three months prior to the hydrologic determination investigation, based on a 30-year average computed at the end of each decade. Precipitation date shall come from National Oceanographic and Atmospheric Agency's National Climatic Data Center, National Resources Conservation Service's National Climatic Data Center, Natural Resources Conservation Service's National Water and Climate Center, or other well-established weather station.

(14) Obligate lotic aquatic organisms - Organisms that require flowing water for all or almost all of the aquatic phase of their life cycles.

(15) Perched water – Water that accumulates above an aquitard that limits downward migration where there is an unsaturated interval below it, between the aquitard and the zone of saturation.

~~(9)~~(16) Photic Zone - the region of water through which light penetrates and where photosynthetic organisms live.

~~(10)~~(17) Reference condition - A parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

~~(11)~~(18) Reference Site - Least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

~~(12)~~(19) Stratification – The tendency in lakes and reservoirs for distinct layers of water to form as a result of vertical change in temperature and, therefore, in the density of water. During stratification, dissolved oxygen, nutrients, and other parameters of water chemistry do not mix well between layers, establishing chemical as well as thermal gradients.

(20) Stream - A surface water that is not a wet weather conveyance.

~~(13)~~(21) Subecoregion - A smaller, more homogenous area that has been delineated within an ecoregion.

~~(14)~~(22) Thermocline – The middle layer in a thermally stratified lake or reservoir. In this layer there is a rapid decrease in temperature with depth. Also called the metalimnion.

~~(15)~~(23) Wadeable streams - Streams that can be sampled using a hand held, one meter square or smaller kick net without water and materials escaping over the top of the net.

(24) Watercourse - A man-made or natural hydrologic feature with a defined linear channel which discretely conveys flowing water, as opposed to sheet-flow.

~~(16)~~(25) Wet weather conveyance - Man-made or natural watercourses, including natural watercourses that have been modified by channelization:

(a) That flow only in direct response to precipitation runoff in their immediate locality; ~~and~~

(b) Whose channels are at all times above the ground water table; ~~which do not support fish or aquatic life and~~

(c) That are not suitable for drinking water supplies; and

(d) In which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at

least two months.

(26) Wet weather conveyance determination - The decision based on site specific information of whether a particular watercourse is a stream or a wet weather conveyance. It is synonymous with "stream determination" and "hydrologic determination."

(27) Zone of saturation – A subsurface zone below the ground water table in which all of the interconnected voids and pore spaces are filled with water.

Rule 1200-04-03-.05 Interpretation of Criteria is amended by adding a new paragraph so that the new paragraph (9) shall read as follows:

(9) Standard operating procedures for making stream and wet weather conveyance determinations (hydrologic determinations)

(a) General

1. Because a primary purpose of the Water Quality Control Act is to protect the waters of the state for the public, and since streams receive a higher level of protection than wet weather conveyances, anyone desiring to alter a watercourse who wishes to avoid unnecessary expense and delay, may request the department to process a permit application or issue an authorization under a general permit with the presumption that the watercourse is a stream. In that instance, a full hydrologic determination would not be performed under these rules. However, nothing shall preclude an applicant from subsequently seeking a wet weather conveyance determination.

2. The procedures detailed in this rule are intended to be used in situations where there is some question whether a watercourse is a stream or wet weather conveyance. In situations where it is obvious that a watercourse is a stream, such as named rivers or streams with watersheds larger than a square mile, or spring-fed streams with consistent flow greater than one cubic foot per second, it is not necessary to conduct a detailed hydrologic determination.

3. It is the purpose of this rule to set out the framework for making stream and wet weather conveyance determinations taking into consideration all relevant and necessary information on the biology, geology, geomorphology, precipitation, hydrology, and other scientifically based principles. Staff of the department and certified hydrologic professionals not employed by the department who are making a submission pursuant to §69-3-108(r) shall follow these rules and the Guidance for Making Hydrologic Determinations (Guidance) which contains the instructions and examples for proper application of these rules to situations in the field that has been developed pursuant to §69-3-107(25) in making these determinations.

4. The format for documenting these determinations is provided in the Hydrologic Determination Field Data Sheet (Data Sheet) in the Guidance. All available field characteristics necessary to make an accurate determination shall be evaluated, and all evidence utilized in making a determination shall be documented using the Data Sheet or as an addendum. Applicants may choose to submit additional hydrological or geotechnical data not included in the standard procedure in support of a hydrologic determination. Any additional relevant information submitted to the department shall be considered by the division in its determination.

5. Any significant revision to the Data Sheet or Guidance shall be subject to a thirty-day public comment period prior to adoption. The department shall advertise its intent to modify the Data Sheet or Guidance by posting notice of proposed changes on the department's internet web site and by sending to the permit mailing list. Significant modifications include the addition or deletion or substantive modification of either the primary or secondary indicators or a change in the scoring system. The department shall

consider the need for modifications to the Data Sheet and Guidance periodically and whenever a significant comment is submitted in regard to them.

6. To be classified as a wet weather conveyance, a watercourse must meet all four elements of the definition in §69-3-103. Therefore, if it is determined that any one of the four elements does not apply to a watercourse, the watercourse is a stream.

7. Because natural variation and human activities can alter hydrologic conditions over time, hydrologic determination will only be considered valid for a maximum of five years or the term of a permit based on it.

8. Because there can be considerable variability within a given reach of a watercourse, wet weather conveyance determinations should not be made on a single point but must also investigate up and down channel and consider the watercourse's landscape context.

9. All of the indicators referred to in these rules and the Guidance are evidence relevant to the presence or absence of one or more of the four elements of the wet weather conveyance definition. The difference between the primary and secondary indicators is that each of the primary indicators is considered presumptive evidence alone regarding one or more of the four elements, and will allow for an immediate hydrologic determination to be made in most cases. Some of the primary indicators involve direct observations of the presence or absence of one or more of the elements. The primary indicators of wet weather conveyances are:

   (i) hydrologic feature exists solely due to a process discharge,

   (ii) defined bed and bank absent, watercourse dominated by upland vegetation/ grass,

   (iii) watercourse dry anytime during February through April 15th under normal precipitation/ ground water conditions, and

   (iv) daily flow and precipitation records showing feature only flows in direct response to rainfall.

10. Primary indicators of streams are:

   (i) presence of multiple populations of obligate lotic organisms with two months or longer aquatic phase,

   (ii) presence of fish (except Gambusia),

   (iii) presence of naturally occurring ground water table connection,

   (iv) flowing water in channel seven days or more since the last precipitation in the local watershed, and

   (v) evidence watercourse has been used as a supply of drinking water.

11. When primary indicators cannot be observed or documented, then the investigator must evaluate the watercourse using secondary indicators. The secondary indicators are an aggregate set of observations that in total are used to evaluate the presence or absence of one or more of the elements of a wet weather conveyance. Secondary indicators are:

   (i) continuous bed and bank,

   (ii) sinuous channel,

(iii) in-channel structure, riffle-pool sequences,

(iv) sorting of soil textures or other substrate,

(v) active/relic floodplain,

(vi) depositional bars or benches,

(vii) braided channel,

(viii) recent alluvial deposits,

(ix) natural levees,

(x) headcuts,

(xi) grade controls,

(xii) natural valley draingeway,

(xiii) at least second order channel on United States Geological Survey or Natural Resources Conservation Service map,

(xiv) subsurface flow/discharge into channel,

(xv) water in channel more than forty-eight hours since rain,

(xvi) leaf litter in channel,

(xvii) sediment on plants or on debris,

(xviii) organic debris lines or piles (wrack lines),

(xix) hydric soils in channel bed or sides,

(xx) fibrous roots in channel,

(xxi) rooted plants in channel,

(xxii) crayfish in channel (exclude in floodplain),

(xxiii) bivalves/mussels,

(xxiv) amphibians,

(xxv) macrobenthos,

(xxvi) filamentous algae, periphyton,

(xxvii) iron-oxidizing bacteria/fungus, and

(xxviii) wetland plants in channel.

12. The secondary indicators shall be scored in accordance with the instructions in the Guidance. Hydrologic determinations will often be made on the basis of secondary indicators because none of the primary indicators is present at the time of investigation. Any of the primary indicators contained in these rules and the Guidance may be considered conclusive after consideration of appropriate background information including recent weather and precipitation, in the absence of any directly contradictory

evidence. However, since hydrologic determinations are required to be made at all times of year, secondary indicators of hydrologic status will be used, in accordance with the Guidance and these rules, as determinant evidence in the absence of primary indicators. The secondary indicators used in the Guidance shall be based on sound scientific principles.

13. Watercourses in which flow is solely a result of process or wastewater discharge or other non-natural sources shall not be regulated as streams even though they may exhibit characteristics of a stream rather than a wet weather conveyance.

(b) The specific procedures outlined herein are intended to consider each of the four elements necessary for a watercourse to be classified as a wet weather conveyance.

1. Because the duration of the flow in a watercourse is the central inquiry of hydrologic determinations, all of the primary and secondary indicators are relevant to evaluating it. Although other factors may also be relevant, at a minimum the following procedures shall be used to determine if a watercourse flows only in direct response to precipitation runoff in its immediate vicinity.

(i) Prior to conducting a field evaluation, the investigator should review recent precipitation patterns for the local area, the longer-term seasonal precipitation trends, and any other available information such as historic land use, regional geology and soil types, or previous hydrologic determinations near the site to be investigated.

(ii) The investigator must decide if the determination is being conducted under "normal weather conditions." The procedure for determining if weather conditions are normal, or either wetter or drier than normal, is contained in the Guidance. If conditions are either wetter or drier than normal the investigator must take this into consideration in making a hydrologic determination.

(iii) The vast majority of wet weather conveyances will generally cease to flow within 48 hours of almost all except some of the largest rain events. This is especially true in urbanized, impervious areas, or other areas with low infiltration rates, such as mowed lawns. The investigator shall document the presence or absence of flow within the watercourse. If in-stream surface flow is observed within the evaluated reach, and it has been at least seven days since the last rainfall event in the upstream watershed, the flow will not be considered a direct storm response, and the investigator shall conclude that the feature is a stream. The investigator shall document the source of the precipitation data. The source used shall be as close as feasible to the watercourse.

(iv) When subsurface water discharges such as seeps, interstitial flow, perched water, or interflow are observed and used as indicators of hydrology, investigators shall consider the influence of recent precipitation events and localized soil and geologic conditions on these features to determine if these features provide adequate hydrology such that the watercourse flows more than in direct response to precipitation. For example, since some such features have more flow when there has been significant recent precipitation, if they are flowing when there has not been much recent precipitation, it is more likely that they flow for sustained periods. In some instances, there may be observable outcroppings of a confining layer such as shale or clay that causes interstitial flow to discharge to a watercourse. In this situation, the capacity of up-gradient conditions such as the permeability and volume of the soils above the confining layer to sustain extended periods of surface flow should be considered. These types of sustained discharges should not be considered a direct response to rainfall. In other instances, such as in areas with a highly karst geology, observed seeps into a watercourse may be not be able to sustain extended periods of flow, and may be considered a more direct response to rainfall.

(v) Field investigations for hydrologic determinations should not be conducted if a one-inch precipitation event in 24 hours has occurred in the area of investigation within the previous 48 hours.

2. The following procedures are to determine if the channel is above the ground water table at all times. Under the definition of wet weather conveyance in §69-3-103, if there are any times that the channel is not above the ground water table, it is a stream.

(i) Since larger streams and rivers are frequently in contact with the ground water table, the investigator shall review topographic maps to determine if the watercourse is within the floodplain of, or within twenty feet in elevation of a larger stream or river known to carry perennial flow. Flow in such a watercourse should not be considered conclusive evidence of a ground water table connection, but is contributing evidence to be considered in the determination. Therefore further investigation into additional factors including those listed below is necessary to determine that the watercourse in question is in contact with the ground water table.

(ii) Since the presence of wetlands often indicates a shallow depth to the ground water table, the investigator shall search for the presence of wetlands in the immediate vicinity of the watercourse both on topographic maps and in the field. The presence of wetlands in the vicinity of the watercourse being examined should not be considered conclusive evidence of a ground water table connection, but is contributing evidence to be considered in the determination. Therefore further investigation into other factors including those listed below is necessary to determine that the watercourse in question is in contact with the ground water table.

(iii) The investigator shall review United States Department of Agriculture soil surveys. Their soil descriptions often contain information on depth to water table. For watercourses whose channels are at a depth that indicates contact with the ground water table for the soil type in which they are formed, the investigator can conclude that the watercourse is in contact with the water table, absent contradicting field information.

(iv) The investigator shall review site geological characteristics affecting the elevation of the ground water table with respect to the elevation of the channel, including the presence of karst bedrock features, erodibility of watershed soils, thickness of regolith and channel alluvium, depth to bedrock or laterally persistent silt or clay horizons, land-use disturbances, and other watershed conditions controlling or contributing to the presence or absence of channel base flow.

(v) If data are available from water wells within one mile of and in similar landscape position to a watercourse under investigation, and if the surface elevation of standing water in the well is at or above the elevation of the bottom of the channel of the watercourse, then the investigator can conclude that the watercourse is in contact with the ground water table.

(vi) The observed emergence of water from the ground is not necessarily water from the ground water table and should not be considered as conclusive for the purpose of this element. Therefore further investigation into factors including those listed above is necessary to determine the source of the emergent water.

3. The following procedures are to determine if a watercourse is suitable for drinking water supplies. The investigator should note spring boxes, water pipes to carry water from the watercourse to a residence, or other observable evidence the watercourse is being used as a household water supply upstream of or within the segment being evaluated. When

these features are noted, the investigator can conclude that the watercourse is a stream absent contradicting information.

4. The following procedures are to determine if a watercourse, under normal weather conditions, due to naturally occurring ephemeral or low flow does not have sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(i) The presence of the requisite aquatic life is a primary indicator that the watercourse supports that aquatic life. In order to find that the requisite aquatic life is present, the investigator must document more than one individual of at least two qualifying taxa in the evaluated reach under normal weather conditions. Unhatched eggs or any other stage of a taxon's life cycle that could be found in a wet weather conveyance or lentic habitat (such as a deceased winged adult) should not be considered as a primary indicator that a watercourse is a stream. The specific taxa found should be noted on the Data Sheet. Representative individuals of the taxa used to make this determination should be collected for confirmation of identification. All aquatic life observed should be noted, even if some do not qualify as primary indicators. These organisms may also be relevant as secondary field indicators.

(ii) Indigenous members of taxa within the benthic macroinvertebrate groups listed below are obligate lotic aquatic organisms and thus are primary indicators that a watercourse is a stream when two or more specimens of two or more taxa are documented under normal weather conditions.

(I) Gastropoda: Pleuroceridae, Viviparidae, Valvatidae

(II) Bivalvia: Unionidae

(III) Coleoptera: Dryopidae, Elmidae, Psephenidae, Ptilodactylidae, Staphylinidae

(IV) Diptera: Athericidae, Blephariceridae, Chironomidae (except: Chironomini or red midges), Empididae, Ptychopteridae, Tanyderidae, and some Tipulidae (Antocha, Rhabdomastix, Dicranota, Hexatoma, Limnophila, Tipula)

(V) Ephemeroptera: all members, except: Siphlonuridae, and some Ephemeridae (Hexagenia)

(VI) Megaloptera: all members, except: Chauliodes

(VII) Odonata: Aeshnidae, Calopterygidae, Cordulegastridae, Gomphidae, some Coenagrionidae (Argia, Chromagrion, Amphiagrion), some Libellulidae (Perithemis) and some Corduliidae (Epitheca, Helocordulia, Neurocordulia)

(VIII) Plecoptera: all members

(IX) Trichoptera: all members, except: Molannidae, some Leptoceridae (Nectopsyche, Triaenodes), and some Limnephilidae (Ironoquia, Limnephilus, Hesperophylax)

(X) Oligochaetes: Branchiobdellidae, Lumbriculidae, Sparganophilidae, some Tubificidae (subfamily Naidinae, Ilyodrilus, Rhyacodrilus, Varichaetadrilus), and some Lumbricidae (Eiseniella tetraedra only).

(iii) The presence of any indigenous fish species, other than the Mosquitofish (*Gambusia*), documented under normal weather conditions, is also a primary indicator that the watercourse is a stream, and constitutes support of the requisite aquatic life.

(iv) There are conditions in which a stream may be dry for a period of weeks or even months, but supports multiple populations of lotic aquatic organisms or fish at other times during a year. In such conditions, an investigator could appropriately determine that there is sufficient water on an annual basis to support such populations even though there were not any present on a particular date. In addition, manmade pollution or other water quality issues may preclude support of these organisms. Therefore, the absence of lotic aquatic organisms at the time of the investigation cannot be the sole basis for a determination that a watercourse meets the fourth element of the definition. When multiple populations of lotic aquatic organisms or fish cannot be documented to occur in a watercourse, then the investigator must consider the hydrologic and biologic factors referred to as secondary indicators in these rules and the Guidance to make a hydrologic determination.

(v) Under normal weather conditions, if the investigator documents the absence of water due to naturally occurring conditions in a watercourse between February 1 and April 15, then the investigator can conclude the watercourse is unable to support fish or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months and is therefore a wet weather conveyance.

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

Amendments in redline form

Rule 1200-04-05-.02 Definitions is amended by deleting it in its entirety and replacing with the following so that, as amended, the rule shall read as follows:

1200-04-05-.02 Definitions

~~(1)~~ All terminology not specifically defined herein shall be defined in accordance with the Water Quality Control Act, Tennessee Code Annotated (T.C.A.) §§69-3-101 through 69-3-137. When used in Rules 1200-04-05-.01 through .14, the following terms have the meanings given below unless otherwise specified:

(1) "Act" means the Water Quality Control Act, T.C.A. §§69-3-101 et seq.

(2) "Administrator" means the administrator of the United States Environmental Protection Agency, or an authorized representative.

(3) "Ammonia (as N)" means ammonia reported as nitrogen.

(4) An "Animal Feeding Operation" (AFO) is a facility that (1) stables, confines and feeds or maintains animals (other than aquatic animals) for a total of 45 days or more in any 12-month period and (2) does not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season over any portion of the facility. 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.

(5) An "AFO 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.

(6) An "AFO production area" includes the animal confinement area ~~(open lots, barns, houses)~~, the manure storage area ~~(i.e., lagoons, ponds, compost piles)~~, the raw materials storage area ~~(feed silos)~~ and the waste containment areas ~~that separate contaminated stormwater from uncontaminated stormwater~~.

(a) The animal confinement area includes but is not limited to open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milk rooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways associated with barns or barnyards, and stables.

(b) 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. If an AFO stores manure in the field (i.e., manure or litter piled for more than several days before land application occurs), the field storage is considered to be a production area. Note that manure or litter stored uncovered for more than two weeks is not considered to be short-term or temporary storage, and is included in the definition of production area.

(c) The raw materials storage area includes but is not limited to feed silos, silage bunkers, and organic bedding materials.

(d) The waste containment area includes but is not limited to settling basins and areas within berms and diversions which separate uncontaminated storm water.

(e) The production area also includes any on-farm egg washing or egg processing facility, and any area used in the storage, handling, treatment, or on-farm disposal of mortalities.

(7) "Animal Waste Management System" means any system used for the collection, storage, treatment, handling, transport, distribution, land application, or disposal of agricultural wastes, animal

waste/wastewater, waste product, and dead animals generated by an AFO that meets or exceeds NRCS technical standards and guidelines.

(8) "Area-wide waste treatment management plan" means a plan that has been approved by the administrator pursuant to § 208 (33 U.S.C. § 1288) of the CWA, Public Law 92-500.

(9) The term "BATEA" (or "BAT") means the best available technology economically achievable as defined by EPA regulations. Effluent limitations established by this designation shall be effective in accordance with the requirements of Section 301(B)(2)(A), Federal Water Pollution Control Act, PL 92-500.

(10) The term "biological monitoring" shall mean the determination of the effects on aquatic life, including accumulation of pollutants in tissue, in receiving waters due to the discharge of pollutants (a) by techniques and procedures, including sampling of organisms representative of appropriate levels of the food chain appropriate to the volume and the physical, chemical, and biological characteristics of the effluent, and (b) at appropriate frequencies and locations.

(11) "Board" means the Water Quality Control Board.

(12) "BOD_5" means 5-day biochemical oxygen demand.

(13) The term "BPTCA" means the best practicable control technology currently available, as defined by EPA regulations.

(14) A "bypass" is defined as the intentional diversion of waste streams from any portion of a treatment facility.

(15) A "calendar day" is defined as the 24-hour period from midnight to midnight or any other 24-hour period that reasonably approximates the midnight to midnight time period.

(16) "$CBOD_5$" means 5-day carbonaceous biochemical oxygen demand.

(17) A "closure plan" is a description of the steps taken after a permittable activity has ceased to prevent contamination of surface waters from the inactive site.

(18) "Commencement of construction" is the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.

(19) "Commissioner" means the commissioner of the Department of Environment and Conservation or the commissioner's duly authorized representative and, in the event of the commissioner's absence or a vacancy in the office of commissioner, the deputy commissioner.

(20) A "composite sample" is a combination of not less than 8 influent or effluent portions, of at least 100 ml, collected over a 24-hour period. Under certain circumstances a lesser time period may be allowed, but in no case, less than 8 hours.

(21) A "Comprehensive Nutrient Management Plan (CNMP)" is a conservation plan that is unique to animal feeding operations. It is a grouping of conservation practices and management activities which, when implemented as part of a conservation system, will help to ensure that both production and natural resource protection goals are achieved. Guidance for developing a CNMP is located in USDA-NRCS's National Planning Procedures Handbook.

(22) A "concentrated animal feeding operation" (CAFO) is an AFO that either meets the large (Class I) CAFO size criteria of Rule 1200-04-05-.14(3), the medium (Class II) criteria of Rule 1200-04-05-.14(4) or has otherwise been designated as a CAFO by the director.

(23) "Construction" means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

(24) The "daily maximum amount" is a limitation on the total amount of any pollutant in the discharge by weight

during any calendar day.

(25) The "daily maximum concentration" is a limitation on the average concentration, in units of mass per volume, of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

(26) The meaning of "Degradation" shall be the same as defined in Rule 1200-04-03-.04.

(27) "Department" means the Department of Environment and Conservation.

(28) "Director" means the director of the Division of Water Pollution Control.

(29) "Discharge" or "discharge of a pollutant" refers to the addition of pollutants to waters from a source.

(30) "Division" means the Division of Water Pollution Control.

(31) A "dry weather overflow" is a type of sanitary sewer overflow and is defined as one day or any portion of a day in which unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall occurs and is not directly related to a rainfall event. Discharges from more than one point within a 24-hour period shall be counted as separate overflows.

(32) "Effluent limitation" means any restriction, established by the board or the commissioner, on quantities, rates or concentrations of chemical, physical, biological, or other constituents which are discharged into waters or adjacent to waters.

(33) "Fecal coliform" means fecal coliform bacteria, an indicator of pathogenic organisms.

(34) The "geometric mean" of any set of values is the n^{th} root of the product of the individual values where n is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero shall be considered to be one.

(35) A "grab sample" is a single influent or effluent sample collected at a particular time.

(36) "Hydrologic connection" means the interflow and exchange between surface impoundments or containment structures and groundwater or surface water through an underground corridor or pathway. In the context of this chapter, the purpose of prevention/reduction of hydrologic connection is to prevent/ reduce groundwater flow contact resulting in the transfer of pollutants into groundwater.

(37) "IC_{25}" refers to the inhibition concentration in which at least a 25% reduction in reproduction and/or growth in test organisms occurs.

(38) "Industrial user" means those industries identified in the standard industrial classification manual, Bureau of the Budget, 1987, as amended and supplemented, under the category "Division D - Manufacturing" and such other classes of significant waste producers as the board or commissioner deems appropriate.

(39) "Industrial wastes" means any liquid, solid, or gaseous substance, or combination thereof, or form of energy including heat, resulting from any process of industry, manufacture, trade, or business or from the development of any natural resource.

(40) The "instantaneous maximum concentration" is a limitation on the concentration, in units of mass per volume (where appropriate), of any pollutant contained in the wastewater discharge determined from a grab sample taken of the discharge at any point in time.

(41) The "instantaneous minimum concentration" is the minimum allowable concentration, in units of mass per volume (where appropriate), of a pollutant parameter contained in the wastewater discharge determined from a grab sample taken from the discharge at any point in time.

(42) "Land application area" means the land under the control of an AFO owner or operator to which manure, litter or process wastewater from the AFO production area is or may be applied.

(43) A "large CAFO" (Class I CAFO) is an AFO that confines greater than or equal to the number of animals specified in ~~table~~ TABLE 1200-04-05-.14.1.

(44) "LC_{50}" refers to the concentration that causes at least 50 % lethality of the test organisms.

(45) "Major facility" refers to a municipal or domestic wastewater treatment plant with a design capacity of 1 million gallons per day or greater; or any other facility or activity classified as such by the commissioner.

(46) The term "manure" is defined to include manure, bedding, compost and raw materials or other materials comingled with manure or set aside for disposal.

(47) "Mature dairy cow" refers to a cow that has previously given birth to a calf.

(48) A "medium CAFO" (Class II CAFO) is an AFO that confines greater than or equal to the number of animals specified in ~~table~~ TABLE 1200-04-05-.14.1 and also meets the criteria of Rule 1200-04-05-.14(4).

(49) "Minor facility" refers to any facility or activity that is not a major facility.

(50) The "monthly average amount", is the arithmetic mean of all the measured daily discharges by weight during the calendar month when the measurements were made.

(51) The "monthly average concentration", a limitation on the discharge concentration in units of mass per volume, of any pollutant, other than bacteria, is the arithmetic mean of all the composite or grab samples collected in a one calendar-month period.

(52) "Multi-year phosphorus application" means phosphorus applied to a field in excess of ~~the~~ crop needs ~~for that year~~ and/or crop removal rates when there is no soil test recommendation for phosphorus and the Tennessee Phosphorus Index indicates manure, litter or process wastewater should be applied at the crop phosphorus removal rate. Subsequent phosphorus application is prohibited until the applied phosphorus has been removed via harvest and/or crop removal or a subsequent soil test indicates phosphorus is required. Crop phosphorus removal rates are set by University of Tennessee Extension technical guidance documents for nutrient management.

(53) "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the federal CWA. The term includes an "approved program."

(54) A "natural riparian buffer" is a permanent strip of natural vegetation adjacent to a stream that contains dense vegetation made up of grass, shrubs and trees. The purpose of a natural riparian buffer is to maintain existing water quality by minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching adjacent surface waters and to further prevent negative water quality impacts by providing canopy over adjacent waters.

(55) The term "new source" means any building, structure, facility, area or installation from which there is or may be a "discharge of pollutants," the construction of which commenced after the publication of state or federal regulations prescribing a standard of performance.

(56) "Nitrate (as N)" means nitrate reported as nitrogen.

(57) "Non-contact cooling water" in general practice, refers to cooling water that does not contact raw materials, materials being produced, finished product, by-products or process wastewater. For some industrial categories, other, more specialized definitions related to non-contact cooling water may also apply.

(58) "Nonpoint source pollution" occurs when precipitation moves over and through the ground, picks up and carries away pollutants and deposits them into waters of the state.

(59) "NRCS" means the Natural Resources Conservation Service, an agency within the U.S. Department of Agriculture.

(60) The term "1-hour average maximum" is a limitation on the concentration in units of mass per volume, of a composite consisting of any three equal volume grab samples collected consecutively at thirty minute intervals.

(61) A "one week period" (or "calendar-week") is defined as the period from Sunday through Saturday. For reporting purposes, a calendar-week that contains a change of month shall be considered part of the latter month.

(62) "Owner or operator" means any person who owns, leases, operates, controls or supervises a source.

(63) A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

(64) "Permit" means an authorization, license, or equivalent control document issued by the Division of Water Pollution Control which implements the requirements of the TWQCA. "Permit" includes an NPDES "general permit."

(65) "Permit action" refers to the issuance, reissuance, revocation, denial or modification of an individual permit. ~~"Permit action" also refers to a determination of no potential to discharge as described in Rule 1200-04-05-.14(6).~~

(66) "Point source" refers to any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water ~~runoff~~ discharges.

(67) "Person" means an individual, association, partnership, corporation, municipality, state or federal agency, or an agent or employee thereof.

(68) "Pollutant" means sewage, industrial wastes, or other wastes.

(69) "Pollution" means such alteration of the physical, chemical, biological, bacteriological, or radiological properties of the waters of this state including, but not limited to, changes in temperature, taste, color, turbidity, or odor of the waters that will:

(a) Result or will likely result in harm, potential harm or detriment of the public health, safety, or welfare;

(b) Result or will likely result in harm, potential harm or detriment to the health of animals, birds, fish, or aquatic life;

(c) Render or will likely render the waters substantially less useful for domestic, municipal, industrial, agricultural, recreational, or other reasonable uses; or

(d) Leave or likely leave the waters in such condition as to violate any standards of water quality established by the board.

(70) "Process wastewater" means water that comes in contact with a production process, its raw materials, products or byproducts. This includes spillage, wash-water, overflow from animal watering systems or contact-cooling water. In the case of AFOs, process water would include water that contacts manure, litter, feed, milk, eggs or bedding.

(71) A "rainfall event" is defined as any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event. Ten -year, 24-hour rainfall event, 25-year, 24-hour rainfall event, and 100-year, 24-hour rainfall event are mean precipitation events with a probable recurrence interval of once in 10 years, or 25 years, or 100 years, respectively, 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.

(72) A "rationale" (or "fact sheet") is a document that is prepared when drafting an NPDES permit or permit action. It provides the technical, regulatory and administrative basis for an agency's permit decision.

(73) A "sanitary sewer overflow (SSO)" is defined as an unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall.

(74) "Schedules of compliance" means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, condition of a permit, other limitation, prohibition, standard, or regulation.

(75) "Setback" means a specified distance from surface waters or potential conduits to surface waters where manure, litter, and process wastewater may not be land applied. Examples of conduits to surface waters include but are not limited to: open tile line intake structures, sinkholes, and wells.

(76) "Severe property damage" when used to consider the allowance of a bypass or SSO means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass or SSO. Severe property damage does not mean economic loss caused by delays in production.

(77) "Sewage" means water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, or other water as may be present.

(78) "Sewerage system" means the conduits, sewers, and all devices and appurtenances by means of which sewage and other waste is collected, pumped, treated, or disposed.

(79) "Source" means any activity, operation, construction, building, structure, facility, or installation from which there is or may be the discharge of pollutants.

(80) "Standard of performance" means a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the commissioner determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

(81) "Stream" means a surface water that is not a wet weather conveyance.

(82) "Total coliform" means all coliform bacteria.

(83) "Total dissolved solids (TDS)" means nonfilterable residue.

(84) "Toxic effluent limitation" means an effluent limitation on those pollutants or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of available information, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

(85) "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed

treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(86) "Variance" means an authorization issued to a person by the commissioner, which would allow that person to cause a water quality standard to be exceeded for a limited time period without changing the standard.

(87) "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.

(88) The term, "washout" is applicable to activated sludge plants and is defined as loss of mixed liquor suspended solids (MLSS) of 30.00% or more from the aeration basin(s).

(89) "Watercourse" means a man-made or natural hydrologic feature with a defined linear channel which discretely conveys flowing water, as opposed to sheet-flow.

(90) "Waters" means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

(91) The term "water quality limited segment" means any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the federal CWA.

(92) The "weekly average amount", is the arithmetic mean of all the measured daily discharges by weight during the calendar week when the measurements were made.

(93) The "weekly average concentration", a limitation on the discharge concentration in units of mass per volume of any pollutant, is the arithmetic mean of all the concentrations measured in a calendar week.

(94) "Wet weather conveyance" means, notwithstanding any other law or rule to the contrary, man-made or natural watercourses, including natural watercourses that have been modified by channelization:

(a) That flow only in direct response to precipitation runoff in their immediate locality;

(b) Whose channels are at all times above the groundwater table;

(c) That are not suitable for drinking water supplies; and

(d) In which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(95) A "wet weather overflow" is a type of sanitary sewer overflow and defined as an unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall that is directly related to a specific rainfall event. Discharges occurring from multiple locations within a single rainfall event are considered separate, wet-weather overflows.

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

Rule 1200-04-05-.14 Animal Feeding Operations is amended by deleting it in its entirety and replacing with the following so that, as amended the rule shall read as follows:

(1) In addition to the applicable provisions of Rules 1200-04-05-.01 through 1200-04-05-.13, CAFOs are also subject to the provisions of this Rule.

(2) All operations defined as CAFOs must seek permit coverage ~~under an NPDES permit~~ as follows:

(a) CAFOs meeting or exceeding the size thresholds in column 2 of TABLE 1200-04-05-.14.1 that have discharged or are designed, constructed, operated or maintained such that a discharge will occur must obtain coverage under an NPDES permit.

(b) All other CAFOs must obtain coverage under a State Operating Permit.

(3) AFOs meeting or exceeding the size thresholds in column ~~1~~ 2 of ~~table~~ TABLE 1200-04-05-.14.1 are considered large (Class I) CAFOs.

(4) AFOs within the range given in column ~~2~~ 3 of ~~table~~ TABLE 1200-04-05-.14.1 are considered medium (Class II) CAFOs if any of the following conditions are met:

(a) pollutants are discharged through a discrete, discernable conveyance to waters of the state; or

(b) pollutants are discharged to waters of the state that come into direct contact with the animals confined in the operation; or

(c) the AFO is located on a waterbody that has been identified by the department as being impaired for nutrients or pathogens; or

(d) the AFO began operation on or after May 1, 1999; or

(e) the AFO expanded its operation so that it falls within the range given in column 3 of TABLE 1200-04-05-.14.1 on or after ~~the promulgation date of this regulation~~ July 21, 2004.

TABLE 1200-04-05-.14.1

Mature Animal Type	Class I (Large CAFO	Class II Medium CAFO
Dairy Cows	700+	200 – 699
Cattle	1,000+	300 – 999
Swine	2,500+ (≥ 55 lbs) 10,000+ < 55 lbs	750 – 2,499 (≥ 55 lbs) 3,000 – 9,999 < 55 lbs
Chickens (liquid waste management)	30,000+	9,000 – 29,999
Chickens (dry waste management*)	125,000+ (non-layers) 82,000+ (layers)	37,500 -124,999 (non-layers) 25,000 – 81,999 (layers)
Horses	500+	150 – 499
Sheep/lambs	10,000+	3,000 – 9,999
Turkeys	55,000+	16,500 – 54,999
Ducks	5,000+ (liquid waste management) 30,000+ (dry waste Management*)	1,500 – 4,999 (liquid waste management) 10,000 – 29,999 (dry waste management)

* dry waste management refers to systems where continuously overflowing watering systems are not used and birds are raised in an enclosed building with earthen or concrete floors spread with layer of sawdust, wood shavings, rice hulls, or chopped straw

(5) Other AFOs may be designated as CAFOs at the discretion of the director. Factors to be considered in this determination include the AFO's size, the amount of waste reaching waters of the state, the location of the AFO and the means of waste conveyance to waters of the state.

(6) All CAFOs must submit application information in accordance with Rule 1200-04-05-.05(2)~~, unless an exception has been granted under Rule 04-05-.14(7)~~.

(a) All CAFOs must submit application information to the Tennessee Department of Agriculture and the Department of Environment and Conservation.

(b) In addition to the application requirements of Rule 1200-04-05-.05(2), CAFOs must submit, at the time of application:

1. ~~a~~ A closure/ rehabilitation plan for the waste system storage/treatment structure(s) that meets or exceeds NRCS technical standards and guidelines, and at a minimum, addresses maintenance of the facility until proper closure is completed and includes a proposed schedule for closure not to exceed 360 days; and

2. ~~either a comprehensive~~ A nutrient management plan ~~or site-specific nutrient management plan~~ as outlined in Rule 1200-04-05-.14~~(16)(b)~~(10)(a).

~~(7) A CAFO that does not land apply manure, litter or process wastewater may request that it be determined to have no potential to discharge manure, litter or process wastewater to waters of the state. In requesting a determination of "no potential to discharge," the CAFO owner or operator must submit the following information to support the request:~~

~~(a) the name of the owner and/or operator;~~

~~(b) the facility location and mailing addresses;~~

~~(c) latitude and longitude of the entrance to production area;~~

~~(d) a topographic map showing the specific location of the production area;~~

~~(e) the number and type of animals;~~

~~(f) whether in open confinement or housed under roof~~

~~(g) data that shows that the type of containment and storage (anaerobic lagoon, roofed storage shed, storage ponds, under floor pits, above ground storage tanks, below ground storage tanks, concrete pad, impervious soil pad, other) is adequate to contain the manure considering climate, crop active growing periods, fertilizer timing recommendations (from University of Tennessee Agricultural Extension Service) and soil trafficability;~~

~~(h) the total capacity for manure, litter, and process wastewater storage (tons or gallons);~~

~~(i) the total number of acres under control of the applicant available for land application of manure, litter, or process wastewater, if any, and certification that the land won't be used for disposal of manure, litter or process wastewater;~~

~~(j) estimated amounts of manure, litter, and process wastewater generated per year (tons/gallons);~~

~~(k) estimated amounts of manure, litter and process wastewater transferred to other persons per year (tons/gallons);~~

~~(l) for operations that transfer 100 tons or more of manure, litter and process wastewater per year to a 3rd party for disposal, documentation that the following has been done:~~

~~1. most recent manure nutrient analysis was provided to the 3rd party;~~

~~2. the 3rd party has signed the Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO using the form in Appendix A of paragraph (20) of this Rule, and~~

~~3. the date, recipient's name and address, and approximate amount of manure removed~~

has been recorded using the form in Appendix B of paragraph (20) of this Rule; and

(m) any other information requested by the director.

(8) Upon receipt of a request for a determination of "no potential to discharge," the department will issue a "notice of no potential to discharge" in accordance with the public notice procedures of Rule 1200-4-5-.06 stating that such request has been received. The notice must be accompanied by a fact sheet which includes:

(a) a brief description of the type of facility or activity under consideration;

(b) a brief summary of the factual basis for the request; and

(c) a description of the procedures for reaching a final decision.

(9) In making a determination of "no potential to discharge," the director must consider the following factors:

(a) the potential for discharge from both the production area and any available land application areas;

(b) any prior discharges by the CAFO. (in no case may the CAFO be determined to have no potential to discharge if it has had a discharge within the 5 years prior to the date of the request);

(c) information provided by the CAFO to support the request;

(d) relevant information received during the public notice period; and

(e) recommendation by Tennessee Department of Agriculture.

(10) The director must notify any CAFO seeking a "no potential to discharge" determination of the final determination within 90 days of receiving the request.

(11) If circumstances materially change at a CAFO that has been determined to have no potential to discharge, such that the CAFO has a potential for discharge, the CAFO must immediately notify the director, and seek coverage under an NPDES permit within 30 days after the change in circumstances.

(12)(7) The following deadlines apply for AFOs defined as CAFOs:

(a) Operations that are were defined as CAFOs prior to April 14, 2003, must have or seek sought coverage under an NPDES a permit, or request a determination of "no potential to discharge" as of April 14, 2003.

(b) Existing operations defined as CAFOs only as of April 14, 2003, or existing operations defined as CAFOs as of July 21, 2004, must seek have sought coverage under an NPDES a permit or request a determination of "no potential to discharge" no later than February 13, 2006.

(c) CAFOs constructed after April 14, 2003, that are not subject to new source performance standards must seek have sought coverage under an individual NPDES a permit or request a determination of "no potential to discharge" no later than 180 days prior to the time that the CAFO commences operation. CAFOs seeking coverage under a general NPDES permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(d) AFOs that make changes after April 14, 2003, to their operations that result in becoming defined as CAFOs for the first time, yet are not subject to new source performance standards must seek coverage under an NPDES a permit or request a determination of "no potential to discharge" no later than 90 days after becoming defined as a CAFO; unless the same change would not have resulted in the AFO being defined as a CAFO prior to April 14, 2003. In that case, the deadline for

~~seeking NPDES permit coverage or request a determination of "no potential to discharge" is April 13, 2006, or 90 days after becoming defined as a CAFO, whichever is later~~. CAFPs seeking coverage under a general permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(e) New sources must seek to obtain coverage under ~~an individual NPDES~~ a permit ~~or request a determination of "no potential to discharge"~~ at least 180 days prior to the time that the CAFO commences operation. CAFOs seeking coverage under a general ~~NPDES~~ permit must do so in accordance with the notice of intent timeframes established for the appropriate general permit.

(f) AFOs designated as CAFOs by the director must seek to obtain coverage under ~~an NPDES~~ a permit ~~or request a determination of "no potential to discharge"~~ no later than 90 days after receiving notice of the designation.

~~(13)~~(8) CAFOs must comply with the permit reissuance requirements of Rule 1200-04-05-.05(4) and must maintain permit coverage until such time as the CAFO demonstrates to the satisfaction of the director that ~~there is no remaining~~ it no longer meets the definitions set forth in Rule 1200-04-05-.14(3), (4) and (5) and there no longer remains the potential for a discharge of manure, litter or associated process wastewater, other than agricultural stormwater from land application areas.

~~(14) CAFOs must have their nutrient management plans developed, approved and implemented by December 31, 2006.~~

~~(15)~~(9) CAFOs ~~that seek NPDES permit coverage after December 31, 2006,~~ must have a nutrient management plan developed, approved and have all measures, structures, etc., in place to fully implement upon the date of permit coverage.

~~(16)~~(10) Any permit issued to a CAFO must include:

~~(a) For large CAFOs with liquid manure management systems, a requirement to develop, submit for state approval, implement and keep on site a comprehensive nutrient management plan that meets NRCS standards as found in the NRCS Field Office Conservation Practice Standards and/or the NRCS Animal Waste Handbook;~~

~~(b)~~(a) For all ~~other~~ CAFOs ~~(large, dry litter operations; medium operations and designated CAFOs)~~, a requirement to develop, submit for state approval, implement and keep on site a site-specific nutrient management plan that:

1. ~~i~~Includes best management practices and procedures necessary to implement applicable effluent limitations and standards;

2. ~~e~~Ensures adequate storage of manure, litter, and process wastewater including procedures to ensure proper operation and maintenance of the storage facilities;

3. ~~e~~Ensures proper management of mortalities (i.e., dead animals) so 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 as outlined in NRCS Conservation Practice Standard 316, October 2002 (or most recent) and/or the NRCS Animal Waste Handbook;

4. ~~e~~Ensures that clean water is diverted, as appropriate, from the production area;

5. ~~p~~Prevents direct contact of confined animals with waters of the state;

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

7. ~~i~~Identifies appropriate site specific conservation practices to be implemented, including as

appropriate buffers or equivalent practices, to control runoff of pollutants to waters of the state (these practices must meet minimum standards set in the NRCS Field Office Practice Standard and/or the NRCS Animal Waste Handbook);

8. ~~i~~Identifies protocols for appropriate testing of manure, litter, process wastewater, and soil that are approved by the University of Tennessee testing lab for Tennessee conditions;

9. ~~e~~Establishes 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 (dairy, cattle, swine, poultry and veal CAFOs that land apply manure, litter, or process wastewater must also comply with the provisions of Rule 1200-04-05-.14~~(17)~~(11));

10. ~~i~~Identifies specific records that will be maintained to document the implementation and management of the minimum elements described in parts 1 through 9 of this subparagraph; and

11. ~~i~~Incorporates the requirements of Rule 1200-04-05-.14~~(17)~~(11)(a).

~~(c) CAFOs subject to Rule 1200-4-5-.14(16)(b) may develop, implement and keep on site a comprehensive nutrient management plan in lieu of meeting the requirements of Rule 1200-4-5-.14(16)(b.~~

~~(d)~~(b) ~~a~~A requirement that the permittee must create, maintain for five years, and make available to the director, upon request, the following records:

1. ~~a~~All applicable records identified in part (b)10 of this paragraph;

2. ~~a~~A copy of the CAFO's site-specific nutrient management plan;

3. ~~r~~Records documenting the following visual inspections:

   (i) ~~w~~Weekly inspections of all storm water diversion devices, runoff diversion structures and devices channeling contaminated storm water to the wastewater and manure storage and containment structure;

   (ii) ~~d~~Daily inspections of water lines, including drinking or cooling water lines; and

   (iii) ~~w~~Weekly inspections of the manure, litter, and process wastewater impoundments noting the liquid level in the impoundments;

4. ~~w~~Weekly records of the depth of the manure and process wastewater in ~~the~~ any open surface liquid impoundment as indicated by the required depth marker which indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. ~~or~~ In the case of swine or poultry CAFOS that are new sources the depth marker must indicate minimum capacity necessary to contain the runoff and direct precipitation ~~from a 100-year, 24-hour rainfall event~~ associated with the design storm used for sizing the impoundment;

5. ~~r~~Records documenting any corrective actions taken (if deficiencies are not corrected within 30 days of notice of deficiency, the records must include an explanation of the factors preventing immediate correction);

6. ~~r~~Records of mortalities management and practices used to comply with the nutrient management plan;

7. ~~r~~Records documenting the current design of any manure or litter storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity;

8. ~~r~~Records of the date, time, and estimated volume of any overflow;

9. ~~e~~Expected and actual crop yields;

10. ~~t~~The date(s) manure, litter, or process waste water is applied to each field;

11. ~~w~~Weather conditions at time of application and for 24 hours prior to and following application;

12 ~~t~~Test methods used to sample and analyze manure, litter, process waste water, and soil;

13. ~~r~~Results from manure, litter, process waste water, and soil sampling;

14. ~~e~~Explanation of the basis for determining manure application rates, as provided in the technical standards established by the NRCS or as otherwise approved by the director or the Tennessee Department of Agriculture and consistent with applicable state and federal rules;

15. ~~c~~Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than manure, litter, or process wastewater;

16. ~~t~~Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied;

17. ~~t~~The method used to apply the manure, litter, or process wastewater; and

18. ~~d~~Date(s) of manure application equipment inspection and calibration;

~~(e)~~(c) ~~a~~A requirement that prior to transferring ~~more than 100 tons of~~ manure, litter or process wastewater to a 3" party, CAFOs must provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis (consistent with 40 CFR § 412), and ensure that the 3'[1] party signs the Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO using the form in Appendix A of paragraph ~~(20)~~(16) of this Rule;

1. Large CAFOs must provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis (consistent with 40 CFR Part 412 and approved by the University of Tennessee Extension), and ensure that the 3rd party signs the Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO using the form in Appendix A of paragraph (16) of this Rule;

2. All other CAFOs must provide the recipient of the manure, litter or process wastewater with the most current nutrient analysis (consistent with 40 CFR Part 412 and approved by the University of Tennessee Extension), and ensure that the 3rd party signs the Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO using the form in Appendix A of paragraph (16) of this Rule only if the CAFO is transferring more than 100 tons of manure, litter or process wastewater to a 3rd party;

(d) ~~a~~A requirement ~~that CAFOs must~~ to retain ~~for five years~~ records of the date, recipient name and address, and approximate amount of manure, litter or process wastewater transferred to a 3'[1] party using the form in Appendix B of paragraph ~~(20)~~(16) of this Rule;

1. Large CAFOs must retain for five years records of the date, recipient name and address, and approximate amount of manure, litter or process wastewater transferred to a 3rd party using the form in Appendix B of paragraph (16) of this Rule;

2. All other CAFOs must retain for five years records of the date, recipient name and address, and approximate amount of manure, litter or process wastewater transferred to a 3rd party receiving more than 100 tons of manure, litter or process wastewater using the

form in Appendix B of paragraph (16) of this Rule;

~~(g)~~(e) ~~a~~A requirement that CAFOs submit to TDEC ~~and TDA~~, an annual report between January 1 and February 15 that includes:

1. ~~t~~The number and type of animals on site whether in open confinement or housed under roof;

2. ~~e~~Estimated amount of total manure, litter and process wastewater generated by the CAFO in the previous calendar year (tons/gallons);

3. ~~e~~Estimated amount of total manure, litter and process wastewater transferred to a 3" party by the CAFO in the previous calendar year (tons/ gallons);

4. ~~t~~Total number of acres for land application covered by the nutrient management plan;

5. ~~t~~Total number of acres under control of the CAFO that were used for land application of manure, litter and process wastewater in the previous calendar year;

6. ~~a~~A summary of all manure, litter and process wastewater discharges to waters of the state from the production area that have occurred in the previous calendar year, including date, time, and approximate volume; ~~and~~

7. ~~a~~A statement indicating whether the current version of the CAFO's nutrient management plan was developed or approved by a certified nutrient management planner~~.~~:

8. The actual crop(s) planted and actual yield(s) for each field;

9. The actual nitrogen and phosphorus content of the manure, litter and process wastewater;

10. The results of calculations to determine the maximum amount of manure, litter and process wastewater to be land applied and the data used in the calculations;

11. The actual amount of manure, litter and process wastewater applied during the previous 12 months;

12. The results of any soil tests for nitrogen and phosphorus conducted in the previous 12 months; and

13. The amount of any supplemental fertilizer applied during the previous 12 months.

(f) Provisions that require compliance with the terms of the CAFO's site-specific nutrient management plan such that the plan is enforceable through the permit. The terms of the nutrient management plan are the information, protocols, best management practices, and other conditions in the nutrient management plan determined by the director to be necessary to implement the nutrient management plan. For NPDES permits, the terms of the nutrient management plan, with respect to protocols that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater, must include the fields available for land application; field-specific rates of application properly developed, through either the linear approach or the narrative approach; and any timing limitations identified in the nutrient management plan concerning land application on the fields available for land application.

1. Linear approach. An approach that expresses rates of application as pounds of nitrogen and phosphorus, according to the following specifications:

(i) The terms include:

(I) Maximum application rates from manure, litter, and process wastewater for each year of permit coverage, for each crop identified in the nutrient management plan, in terms of total nitrogen and phosphorus, in pounds per acre, per year, for each field to be used for land application;

(II) The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field as described in Rule 1200-04-05-.14(11)(a)1;

(III) The crops to be planted in each field or any other uses of a field such as pasture or fallow fields; the realistic yield goal for each crop or use identified for each field;

(IV) The nitrogen and phosphorus recommendations as recommended by the University of Tennessee Extension for each crop or use identified for each field;

(V) Credits for all residual nitrogen in the field that will be plant available as recommended by the University of Tennessee Extension;

(VI) Consideration of multi-year phosphorus application in accordance with Rule 1200-04-05-.14(11)(a)2;

(VII) An accounting of all other additions of plant available nitrogen and phosphorus to the field;

(VIII) The form and source of manure, litter, and process wastewater to be land-applied;

(IX) The timing and method of land application; and

(X) The methodology by which the nutrient management plan accounts for the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied as described in Rule 1200-04-05-.14(10)(a)8 and Rule 1200-04-05-.14(11)(b).

(ii) Large CAFOs that use this approach must calculate the maximum amount of manure, litter, and process wastewater to be land applied at least once each year using the results of the most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application.

2. Narrative rate approach. An approach that expresses rates of application as a narrative rate of application that results in the amount, in tons or gallons, of manure, litter, and process wastewater to be land applied, according to the following specifications:

(i) The terms include:

(I) Maximum amounts of nitrogen and phosphorus derived from all sources of nutrients, for each crop identified in the nutrient management plan, in terms of total nitrogen and phosphorus, in pounds per acre, for each field, and certain factors necessary to determine such amounts.

(II) The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field as described in Rule 1200-04-05-.14(11)(a)1;

(III) The crops to be planted in each field or any other uses such as pasture or fallow fields (including alternative crops identified in subpart (iii) of this part;

(IV) The realistic yield goal for each crop or use identified for each field; and

(V) The nitrogen and phosphorus recommendations as recommended by the University of Tennessee Extension for each crop or use identified for each field for each crop or use identified for each field.

(ii) The terms include the methodology by which the nutrient management plan accounts for the following factors when calculating the amounts of manure, litter, and process wastewater to be land applied:

(I) Results of soil tests conducted in accordance with protocols identified in part (a)8 of this paragraph;

(II) Credits for all residual nitrogen in the field that will be plant available as recommended by the University of Tennessee;

(III) The amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied;

(IV) Consideration of multi-year phosphorus application in accordance with Rule 1200-04-05-.14(11)(a)2;

(V) Accounting for all other additions of plant available nitrogen and phosphorus to the field;

(VI) The form and source of manure, litter, and process wastewater;

(VII) The timing, except as described in subpart (f)2(iv) of this paragraph and method of land application; and

(VIII) Volatilization of nitrogen and mineralization of organic nitrogen.

(iii) The terms of the nutrient management plan include alternative crops identified in the CAFO's nutrient management plan that are not in the planned crop rotation. Where a CAFO includes alternative crops in its nutrient management plan, the crops must be listed by field, in addition to the crops identified in the planned crop rotation for that field, and the nutrient management plan must include realistic crop yield goals and the nitrogen and phosphorus recommendations as recommended by the University of Tennessee for each crop. Maximum amounts of nitrogen and phosphorus from all sources of nutrients and the amounts of manure, litter, and process wastewater to be applied must be determined in accordance with the methodology described in items (ii)(I) through (VIII) of this part.

(iv) For CAFOs using this approach, the following projections must be included in the nutrient management plan submitted to the director, but are not terms of the nutrient management plan: The CAFO's planned crop rotations for each field for the period of permit coverage; the projected amount of manure, litter, or process wastewater to be applied; projected credits for all nitrogen in the field that will be plant available; consideration of multi-year phosphorus application; accounting for all other additions of plant available nitrogen and phosphorus to the field; and the predicted form, source, and method of application of manure, litter, and process wastewater for each crop. Timing of application for each field, insofar as it concerns the calculation of rates of application, is not a term of the nutrient management plan.

(v) CAFOs that use this approach must calculate maximum amounts of manure, litter, and process wastewater to be land applied at least once each year using the methodology required in subpart (ii) of this part before land applying manure, litter and process wastewater and must rely on the following data:

(I) A field-specific determination of soil levels of nitrogen and phosphorus, including, for nitrogen, a concurrent determination of nitrogen that will be plant available consistent with the methodology required by subpart (ii) of this part, and for phosphorus, the results of the most recent soil test conducted in accordance with soil testing requirements approved by the commissioner; and

(II) The results of most recent representative manure, litter, and process wastewater tests for nitrogen and phosphorus taken within 12 months of the date of land application, in order to determine the amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.

(g) Changes to a nutrient management plan.

1. Any NPDES permit issued to a CAFO must require the following procedures when a CAFO owner or operator makes changes to the CAFO's nutrient management plan previously submitted to the director:

(i) The CAFO owner or operator must provide the director with the most current version of the CAFO's nutrient management plan and identify changes from the previous version, except that the results of calculations made in accordance with the requirements of subparts (f)1(ii) and (f)2(v) of this paragraph are not considered to be changes to the nutrient management plan subject to the requirements of this paragraph.

(ii) The director must review the revised nutrient management plan to ensure that it meets the requirements of this paragraph and applicable effluent limitations and standards and must determine whether the changes to the nutrient management plan include revision to the terms of the nutrient management plan as set forth in subparagraph (f) of this paragraph. If the terms of the nutrient management plan are not revised, the director must notify the CAFO owner or operator and upon such notification the CAFO may implement the revised nutrient management plan. If the terms of the nutrient management plan are revised, the director must determine whether such changes are substantial changes as described in part 2 of this subparagraph.

(iii) If the director determines that the changes to the terms of the nutrient management plan are not substantial, the director must make the revised nutrient management plan publicly available and include it in the permit record, and inform the public of any changes to the terms of the nutrient management plan.

(iv) If the director determines that the changes to the terms of the nutrient management plan are substantial, the director must notify the public and make the proposed changes and the information submitted by the CAFO owner or operator available for public review and comment. The process for public notice and participation must follow the procedures applicable to draft permits set forth in Rule 1200-04-05-.06. The director must consider all significant comments received during the comment period and require the CAFO owner or operator to further revise the nutrient management plan if necessary. Once the director approves the revised terms of the nutrient management plan, the director must issue a notice of determination that addresses all comments received and

notifies the owner or operator and the public of the final decision concerning revisions to the nutrient management plan.

2. Substantial changes to the terms of a nutrient management plan incorporated as terms and conditions of a permit include, but are not limited to:

(i) Addition of new land application areas not previously included in the CAFO's nutrient management plan or in the terms of a nutrient management plan incorporated into an existing NPDES permit. If the CAFO owner or operator applies manure, litter, or process wastewater on the newly added land application area in accordance with existing field-specific permit terms applicable to the newly added land application area, such addition of new land would be a change to the new CAFO owner or operator's nutrient management plan but not a substantial change for purposes of this paragraph;

(ii) Any changes to the field-specific maximum annual rates for land application set in accordance with the linear approach or to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop set in accordance with the narrative approach;

(iii) Addition of any crop or other uses not included in the terms of the CAFO's nutrient management plan and corresponding field-specific rates of application; and

(iv) Changes to site-specific components of the CAFO's nutrient management plan, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the state.

3. CAFOs covered by state operating permits are subject to the following procedures when the CAFO owner or operator makes changes to the CAFO's nutrient management plan previously submitted to the director:

(i) The CAFO owner or operator must provide the director with the most current version of the CAFO's nutrient management plan and identify changes from the previous version, except that the results of calculations made in accordance with the requirements of subparts (f)1(ii) and (f)2(v) of this paragraph are not considered to be changes to the nutrient management plan subject to the requirements of this paragraph.

(ii) The director must review the revised nutrient management plan to ensure that it meets the requirements of this paragraph and applicable effluent limitations and standards and must determine whether the changes to the nutrient management plan include revision to the terms of the nutrient management plan as set forth in subparagraph (f) of this paragraph. The director must advise the CAFO owner or operator whether or not the changes meet the requirements of this paragraph and applicable effluent limitations and standards and upon such notification the CAFO must either make further revisions to the nutrient management plan or implement the revised nutrient management plan.

~~(17)~~(11) All ~~dairy, cattle, swine, poultry and veal~~ CAFOs that land apply manure, litter, or process wastewater, must do so in accordance with the following best management practices (BMPs) that are implemented through a nutrient management plan ~~(either comprehensive or site-specific)~~ that incorporates a field-specific assessment of the potential for nitrogen and phosphorus transport from the field and that addresses the form, source, amount, timing, and method of application of nutrients on each field to achieve realistic production goals, while minimizing nitrogen and phosphorus movement to surface waters:

(a) Application rates for manure, litter, and other process wastewater applied to land under the

ownership or operational control of the CAFO must minimize phosphorus and nitrogen transport from the field to surface waters in compliance with technical standards for nutrient management that:

1. ~~i~~Include a field-specific assessment of the potential for nitrogen and phosphorus transport from the field to surface waters, and 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 movement to surface waters, that employs the Tennessee Phosphorus Index (a tool developed by the University of Tennessee Extension Service and the NRCS to assess the risk of phosphorus movement from the application area to waters of the state); and

2. ~~i~~Include appropriate flexibilities for any CAFO to implement nutrient management practices to comply with the technical standards, including consideration of multi-year phosphorus application on fields that do not have a high potential for phosphorus runoff to surface water, phased implementation of phosphorus-based nutrient management, and other components, as determined appropriate by the director;

(b) Annual manure analysis for nitrogen and phosphorus content, using procedures outlined in NRCS Conservation Practice Standard 590, and soil analysis at a minimum of once every five years for phosphorus content (the results of these analyses are to be used in determining application rates for manure, litter, and other process wastewater);

(c) Periodic inspection of equipment used for land application of manure, litter and other process wastewater;

(d) Application of manure, litter, and process wastewater that:

1. ~~i~~Is applied no closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters unless,

(i) ~~t~~The CAFO substitutes the 100-foot setback with a 35-foot wide vegetated buffer or by leaving in place a 60-foot natural riparian buffer, where applications of manure, litter, or process wastewater are prohibited; or

(ii) ~~t~~The CAFO demonstrates that a setback or buffer is not necessary because implementation of alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent to or better than the reductions that would be achieved by the 100-foot setback;

2. ~~i~~Is applied ~~in accordance with setbacks established in NRCS Conservation Practice Standard 590~~ no closer than 100 feet for any potable well, public or private or as recommended by the University of Tennessee Extension; and

~~(a)~~(e) For new CAFOs that are located adjacent to ~~high quality streams~~ exceptional Tennessee waters and outstanding national resource waters (as identified by the department), leave in place a minimum 60-foot natural riparian buffer between the stream and the land application area.

~~(18)~~(12) For CAFOs with applicable federal effluent guidelines, technology-based effluent limitations and standards in accordance with those guidelines shall be applied.

(13) For CAFOs that are not subject to applicable federal effluent guidelines, the following standards shall be applied:

(a) For CAFOs that either discharge or are designed, constructed, operated or maintained such that a discharge could occur, the production area must be designed, constructed, operated and maintained to contain all manure, litter, and process wastewater including the runoff and the direct precipitation from a 25-year, 24-hour rainfall event.

(b) For all other CAFOs not subject to applicable federal effluent guidelines, the production area must be designed, constructed, operated and maintained so that no discharge will occur.

~~(19)~~(14) No CAFO liquid waste management system shall be constructed, modified, repaired, or placed into operation after April 13, 2006 unless it is designed, constructed, operated, and maintained in accordance with final design plans and specifications which meet or exceed standards in the NRCS Field Office Technical Guide and other guidelines as accepted by the Departments of Environment and Conservation, or Agriculture. Specifically, plans must contain the following:

(a) Any new or additional confinement buildings, waste/wastewater handling system, waste/wastewater transport structures, waste/wastewater treatment structures, settling basins, lagoons, holding ponds, sumps, or pits, and other agricultural waste containment/treatment structures constructed after April 13, 2006 shall be located in accordance with NRCS Conservation Practice Standard 313.

(b) Information to be used in the design of the open manure storage structure including, but not limited to, minimum storage for rainy seasons, minimum capacity for chronic rainfall events, the prohibition of land application to frozen, saturated, or snow-covered ground, the dewatering schedules set in the CAFO's Nutrient Management Plan, additional storage capacity for any manure intended to be transferred to another recipient at a later time, and any other factors that would affect the sizing of the open manure storage structure.

(c) The design of the open manure storage structure as determined by the most recent version of the National Resource Conservation Service's Animal Waste Management (AWM) software. CAFOs may use equivalent design software or procedures as approved by the Director.

(d) All inputs used in the open manure storage structure design including actual climate data for the previous 30 years consisting of historical average monthly precipitation and evaporation values, the number and types of animals, anticipated animal sizes or weights, any added water and bedding, any other process wastewater, and the size and condition of outside areas exposed to rainfall and contributing runoff to the open manure storage structure.

(e) The planning minimum period of storage in months including, but not limited to, the factors for designing an open manure storage structure listed in subparagraph (b) of this paragraph. Alternatively the CAFO may determine the minimum period of storage by specifying times the storage pond will be emptied consistent with the CAFO's Nutrient Management Plan.

~~(b)~~(f) A subsurface investigation for earthen holding pond, pit, sump, treatment lagoon, or other earthen storage/ containment structure suitability and liner requirements shall be a component of the system design. The subsurface investigation will include a detailed soils investigation with special attention to the water table depth and seepage potential. The investigation must evaluate soils to a depth of two feet below the planned bottom grade of the storage structure. Deeper investigations may be required in karst regions. A soils/geologic investigation shall be performed by a soil scientist (as described in Rule 1200-01-06-.18) and qualified geologist. A qualified geologist is defined as an individual who is a Registered Professional Geologist licensed by the State of Tennessee or an individual who meets the requirements for the title of Certified Professional Geologist, as defined by the American Institute of Professional Geologists. Unless relevant information is available to the contrary, compliance with this provision during design and construction of the facility will normally demonstrate that the hydrologic connection does not exceed a maximum allowable specific discharge of 0.0028 ft/day (1×10^{-6} cm/sec).

(15) A CAFO's coverage under an SOP that does not allow discharge will serve as proof of a No Discharge Certification provided that in addition to being in compliance with all the terms and conditions of the permit, which must include the requirements of paragraphs (9) and (10) of Rule 1200-04-05-.14, the facility meets the requirements of subparagraphs (a) and (b) of this paragraph:

(a) The owner of operator of a CAFO must document, based on an objective assessment of the conditions at the CAFO, that the CAFO is designed, constructed, operated, and maintained in a

manner such that the CAFO will not discharge as follows:

1. There are no open manure storage structures; and

2. All parts of a CAFO's production area are designed, constructed, operated, and maintained such that there will be no discharge of manure, litter, or process wastewater.

(b) In order to receive coverage under a SOP that does not allow discharges, a CAFO owner or operator must submit the following information:

1. A statement that describes the basis for the CAFO's certification that it satisfies the eligibility requirements identified in subparagraph (a) of this paragraph; and

2. The following certification statement, signed in accordance with the signatory requirements of paragraph (6) of Rule 1200-04-05-.05:

"I certify under penalty of law that I am the owner or operator of a concentrated animal feeding operation (CAFO), identified as [insert: name of CAFO], and that said CAFO meets the requirements of 40 CFR 122.23(i). I have read and understand the eligibility requirements of 40 CFR 122.23(i)(2) for certifying that a CAFO does not discharge or propose to discharge and further certify that this CAFO satisfies the eligibility requirements. As part of this certification, I am including the information required by 40 CFR 122.23(i)(3). I also understand the conditions set forth in 40 CFR 122.23(i)(4), (5) and (6) regarding loss and withdrawal of certification. I certify under penalty of law that this document and all other documents required for this certification were prepared under my direction or supervision and that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons directly involved in gathering and evaluating the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(c) A certification will become effective upon the effective date of a facility's permit coverage. Certification will remain in effect for the entire time the facility is covered by this permit and in compliance with the no discharge requirement. A certification is no longer valid when a discharge has occurred or when the CAFO ceases to meet the requirements of subparagraph (a) of this paragraph.

(d) If certification becomes invalid due to an unpermitted discharge in accordance with subparagraph (c) of this paragraph, the CAFO must withdraw its certification within three days of the date on which the CAFO becomes aware that the certification is invalid. A CAFO must withdraw its certification by submitting written notification to the division. Once a CAFO's certification is no longer valid, the CAFO is subject to the requirements of parts 1 and 2 of this subparagraph:

1. The owner/operator of a CAFO meeting the size criteria of column 1 of TABLE 1200-04-05-.14-1, that has had an unpermitted discharge or a change such that the CAFO is now designed, constructed, operated or maintained such that a discharge could occur must seek NPDES Permit coverage pursuant to subparagraph (2)(a) of this rule; and

2. For all other CAFOs that have had an unpermitted discharge or a change such that the CAFO is now designed, constructed, operated or maintained such that a discharge could occur the owner/operator of the CAFO must seek coverage under an SOP that allow discharge.

~~(20)~~(16) Appendices

Appendix A

Agreement for the Removal of Litter, Manure and/or Process Wastewater from an AFO

The conditions listed below help to protect water quality. These conditions apply to litter, manure and/or process wastewater removed from an AFO. The material covered by this agreement was removed on _____ from the facility owned by _____ located at _____.

A. The litter, manure and/or process wastewater must be managed to ensure there is no discharge of litter, manure and/or process wastewater to surface or groundwater.

B. When removed from the facility, litter, manure and/or process wastewater should be applied directly to the field or stockpiled and covered with plastic or stored in a building.

C. Litter, manure and/or process wastewater must not be stockpiled near streams, sinkholes, wetlands or wells.

D. Fields receiving litter, manure and/or process wastewater should be soil tested at least every two or three years.

E. A litter, manure and/or process wastewater nutrient analysis should be used to determine application rates for various crops.

F. Calibrate spreading equipment and apply litter, manure and/or process wastewater uniformly.

G. Apply no more nitrogen or phosphorus than can be used by the crop (i.e., agronomic rates).

H. A buffer zone is recommended between the application sites and adjacent streams, lakes, ponds, sinkholes and wells.

I. Do not apply litter, manure and/or process wastewater when the ground is frozen or on steep slopes subject to flooding, erosion or rapid runoff.

J. Cover vehicles hauling litter, manure and/or process wastewater on public roads.

K. Keep records of locations where ~~poultry~~ litter, manure, and/or process wastewater will be used as a fertilizer.

I, _____ am the person receiving litter and do understand the conditions listed above.
(name)

_____ _____
(signature) (date)

_____ _____
(address) (phone)

Appendix B

Names of Persons and/or Firms That Remove Litter, Manure and/or Process Wastewater from an AFO

____

(name of AFO)

Name: ____________________
Address: ____________________
____
Phone No.: ____________________
Tons Removed: ____________________
Date: ____________________

Name: ____________________
Address: ____________________
____
Phone No.: ____________________
Tons Removed: ____________________
Date: ____________________

Name: ____________________
Address: ____________________
____
Phone No.: ____________________
Tons Removed: ____________________
Date: ____________________

Name: ____________________
Address: ____________________
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Phone No.: ____________________
Tons Removed: ____________________
Date: ____________________

Name: ____________________
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Tons Removed: ____________________
Date: ____________________

Name: ____________________
Address: ____________________
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Phone No.: ____________________
Tons Removed: ____________________
Date: ____________________

Name: ____________________
Address: ____________________
____
Phone No.: ____________________
Tons Removed: ____________________
Date: ____________________

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.

Chapter 1200-04-07
Aquatic Resource Alteration

Amendments

Rule 1200-04-07-.03 Definitions is amended by deleting it in its entirety and replacing it with the following so that, as amended, the rule shall read as follows:

1200-04-07-.03 Definitions

As used in this rule chapter and in any ARAP permit issued, including General Permits, the following terms have these meanings:

(1) "Act" means The Tennessee Water Quality Control Act of 1977, as amended, T.C.A. §69-3-101 et seq.

(2) "Activity" means any and all work or acts associated with the performance, or carrying out of a project or a plan, or construction of a structure.

(3) "Adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the State by man-made dikes or barriers, natural river berms and the like are "adjacent wetlands".

(4) "Aquatic Resource Alteration Permit" means a permit pursuant to §69-3-108 of the Tennessee Water Quality Control Act of 1977, which authorizes the alteration of properties of waters of the State which result from activities other than discharges of wastewater through a pipe, ditch or other conveyance. Such a permit shall impose conditions, including standards and terms of periodic review, as are necessary to accomplish the purposes of the Act.

(5) "Background Conditions" means the biological (plant and animal species), chemical and physical conditions of the wetland or water body prior to the proposed activity. If the water body is disturbed, it may be necessary to use the biological, chemical and physical conditions of a similar water body as a reference condition.

(6) "Best Management Practices" means a schedule of activities, prohibition of practices, maintenance procedures and other management practices to prevent or reduce the pollution of waters of the State. BMP's include methods, measures, practices, and design and performance standards.

(7) "Certification" means an Aquatic Resource Alteration Permit under the Tennessee Water Quality Control Act of 1977, as required by §401 of the Federal Water Pollution Control Act, which certifies, either unconditionally or through imposition of terms under which the activity must be carried out, that the activity will comply with applicable provisions of §§301, 302, 303, 306, and 307 of the Federal Water Pollution Control Act and Chapter 1200-4-1 of the Rules of the Water Quality Control Board and the Department of Environment and Conservation and the Act.

(8) "Channelization" means the alteration of stream channels including but not limited to straightening, widening, or enlarging.

(9) "Cofferdam" means an enclosure from which water can be pumped to expose the bottom of a body of water or a barrier constructed to divert the flow of water to allow construction work.

(10) "Commence Construction" means the physical initiation of on-site structural or earthmoving work.

(11) "Constructed Wetland" means intentionally designed, built and operated on previously nonwetland sites for the primary purpose of wastewater treatment or stormwater retention; such wetlands are not created to provide mitigation for adverse impacts or other wetlands.

(12) "Clearing and Grubbing" means the removal of vegetation by cutting and digging up roots and stumps.

(13) "Cumulative Impacts" means the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. A cumulative impact to a wetland can be the loss of the variety of the natural wetland types, wetland acreage, functions and classified uses.

(14) "Debris" means woody materials, trash, flotsam, dislodged vegetation, and other potentially mobile materials which may, when located within a stream channel, contribute to flow blockage. This does not include gravel, sand, soil or its constituents such as silt, clay or other sediments.

(15) "Ditch" means a man-made excavation for the purpose of conveying water. Ditches do not include streams, modified streams or canals.

(16) "Dredging" (sand and gravel dredging) means the removal of sand, gravel and similar sediments or deposits from a stream, river, or lake bed or wetland by any method.

(17) "Earthmoving" means any construction or other activity, which disturbs the surface of the land including, but not limited to, excavation, embankment, fill, and cut of soil, rock, or earth.

(18) "Emergency" means a situation where life or substantive improvements to real property is in immediate danger.

(19) "Erosion" means the process by which the land surface is worn away by the action of water, wind, gravity, chemicals, or a combination thereof.

(20) "Excavation" (a) means a cavity formed by digging, quarrying, uncovering, displacing, or relocating soil or rock; or, (b) means to dig or remove soil, rocks, or other materials resulting in a change in all or part of the elevation of a site.

(21) "General Permit" means a permit issued under the Act and this Rule authorizing an alteration to state waters within the state for a specified category of activities that are substantially similar in nature.

(22) "Ground water" means water beneath the surface of the ground within the zone of saturation, whether or not flowing through known and definite channels.

(23) "Ground water table" means the upper surface of the zone of saturation by ground water.

~~(22)~~(24) "Hydrogeomorphic System" means a classification system for wetlands based on geomorphic setting, water source, and hydrodynamics; used to identify and group functionally similar wetlands.

~~(23)~~(25) "Individual Permit" means a permit issued by the Division of Water Pollution Control to a specified person to conduct specified activities at a specified location. This type of permit does not authorize an activity by a class of persons or the public in general.

(26) "Interflow" means the runoff infiltrating into the surface soil and moving toward streams as shallow, perched water above the main ground water level.

~~(24)~~(27) "In the Dry" means in such a manner that no equipment or dredged material is in contact with the stream or wetland and that the soil water boundary is not disturbed by equipment or that no infiltration is pumped to the stream from the dredge site.

~~(25)~~(28) "Minimal Impacts" means an activity for which the scope is very limited in area, the impact is very short in duration, and has no impact to waters just downstream of the location of the activity. Examples of activities with 'minimal impacts' include, but are not limited to, (1) minor channel changes associated with bank stabilization; and (2) an activity typically authorized by General Permit, but which requires an Individual Permit because the project falls under one of the listed exclusions.

~~(26)~~(29) "Minor Road Crossing" is a bridged or culverted roadway fill across a stream or river which results in the alteration of 200 linear feet or less of stream bed or shoreline.

~~(27)~~(30)"Mitigation" means compensating for impacts in regulated areas as provided by Rule 1200-04-07-.04(7).

(31) "Multiple populations" means two or more individuals from each of two or more distinct taxa, in the context of obligate lotic aquatic organisms.

(32) Normal weather conditions – Those within one standard deviation of the cumulative monthly precipitation means for at least the three months prior to the hydrologic determination investigation, based on a 30-year average computed at the end of each decade. Precipitation date shall come from National Oceanographic and Atmospheric Agency's National Climatic Data Center, National Resources Conservation Service's National Climatic Data Center, Natural Resources Conservation Service's National Water and Climate Center, or other well-established weather station.

(33) "Obligate lotic aquatic organisms" means organisms that require flowing water for all or almost all of the aquatic phase of their life cycles.

(34) "Perched water" means water that accumulates above an aquitard that limits downward migration where there is an unsaturated interval below it, between the aquitard and the zone of saturation.

~~(28)~~(35)"Practicable alternative" is an alternative that is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

~~(29)~~(36)"Resource Values" are the benefits provided by the water resource. These benefits include, but are not limited to, the ability of the water resource to:

(a) filter, settle and/or eliminate pollutants;

(b) prevent the entry of pollutants into downstream waters;

(c) assist in flood prevention;

(d) provide habitat for fish, aquatic life, livestock and water fowl;

(e) provide drinking water for wildlife and water fowl;

(f) provide and support recreational uses; and

(g) provide both safe and adequate quality and quantity of drinking water.

~~(30)~~(37)"Sediment" means soil or its constituents that has been deposited in water, is in suspension in water, is being transported, or has otherwise been removed or disturbed from its site of origin.

~~(31)~~(38)"Sedimentation or Siltation" means the process by which sediment is deposited in or by the waters of the State.

~~(32)~~(39)"Settling Basin" means a prepared storage area constructed to trap and store sediment from erodible areas in order to protect any streams below the construction areas from excessive siltation; an impoundment that accumulates transported sediment and has provisions for a principal spillway; a reservoir which retains high flows sufficiently to cause deposition of transported sediment.

~~(33)~~(40)"Stabilize" means the proper placing, grading, and/or covering of soil, rock, or earth to insure their resistance to erosion, sliding or other movement.

~~(34)~~(41)"Stream" means ~~all waters of the State on the surface of the ground except wet weather conveyances; streams include, but are not limited to, creeks, rivers, canals, and tributaries~~ a surface water that is not a wet weather conveyance.

~~(35)~~(42)"Structure" means any building, pier, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, mooring structure, moored floating vessel, piling, aid to navigation, bridge, culvert or any other obstacle or obstruction.

~~(36)~~(43)"Utility Line" means any pipe or pipeline for the transportation of any gaseous, liquid, liquefiable or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone and telegraph messages, and radio and television communication.

(44) "Watercourse" means a manmade or natural hydrologic feature with a defined linear channel which discretely conveys flowing water, as opposed to sheet-flow.

~~(37)~~(45)"Water Dependent" describes an activity that requires location in or adjacent to surface waters or wetlands in order to fulfill its basic purpose.

~~(38)~~(46)"Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

~~(39)~~(47)"Wetland Dependent" means that the location of a project or conducting an activity in a wetland is essential to fulfill the purpose of the project. Examples of such projects are fish and wildlife management, nature trails, wildlife observation points, etc.

~~(40)~~(48)"Wet Weather Conveyances" are man-made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation runoff in their immediate locality, whose channels are at all times above the ground water table, ~~and which do not support fish or aquatic life, and~~ that are not suitable for drinking water supplies, and in which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months.

(49) "Wet weather conveyance determination" means the decision based on site specific information of whether a particular conveyance is a stream or a wet weather conveyance. It is synonymous with "stream determination" and "hydrologic determination."

(50) "Zone of saturation" – A subsurface zone below the ground water table in which all of the interconnected voids and pore spaces are filled with water.

~~(41)~~(51)Terminology not specifically defined herein shall be defined in accordance with the Tennessee Water Quality Control Act of 1977, T.C.A. §69-3-101 et seq., and the rules adopted thereunder.

Rule 1200-04-07-.04 Permits is amended by adding the following new paragraph so that the new paragraph (10) shall read as follows:

(10) Alteration of wet weather conveyances

(a) The alteration of wet weather conveyances, as defined in §69-3-103, by any activity is permitted by this subsection and shall require no notice to or approval by the department, provided it is done in accordance with the following conditions:

1. The activity may not result in the discharge of waste or other substances that may be harmful to humans or wildlife;

2. Material may not be placed in a location or manner so as to impair surface water flow into or out of any wetland area; and

3. Sediment shall be prevented from entering other waters of the state.

(i) Erosion and sediment controls shall be designed according to the size and slope of disturbed or drainage areas to detain runoff and trap sediment and shall be

properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices.

(ii) Erosion and sediment control measures shall be in place and functional before earthmoving operations begin, and shall be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the work day, but shall be replaced at the end of the work day.

(iii) Checkdams shall be utilized where runoff is concentrated. Clean rock, log, sandbag or straw bale checkdams shall be properly constructed to detain runoff and trap sediment. Checkdams or other erosion control devices are not to be constructed in stream. Clean rock can be of various type and size depending on the application. Clean rock shall not contain fines or other wastes or contaminants.

4. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the state, All spills shall be reported to the appropriate emergency management agency and to the department. In the event of a spill, measures shall be taken immediately to prevent pollution of waters of the state, including ground water.

5. There shall be no additional conditions upon a person's activity within a wet weather conveyance. This provision does not apply to National Pollutant Discharge Elimination System Permits.

Authority: T.C.A. §§69-3-101 et seq. and 4-5-201 et seq.