

TITLE 35. OKLAHOMA DEPARTMENT OF AGRICULTURE, FOOD, AND FORESTRY

CHAPTER 45. WATER QUALITY STANDARDS IMPLEMENTATION PLAN

SUBCHAPTER 1. WATER QUALITY STANDARDS IMPLEMENTATION PLAN

35:45-1-1. Section I - Statutory authority, definitions, standards, jurisdiction, beneficial uses and protocols

(a) Subsection B, 27A O.S. Supp 1998, Section 1-1-202 (enacted through Senate Bill 549), mandates that each state environmental agency shall promulgate, by July 1, 2001, a Water Quality Standards Implementation Plan (WQSIP) for its jurisdictional areas of environmental responsibility specifying how the agency utilizes and enforces the Oklahoma Water Quality Standards for surface water and groundwater. The Implementation Plan must be promulgated in compliance with the Administrative Procedures Act and pursuant to Section 1-1-202. After initial promulgation, each state environmental agency must review its plan at least every three years thereafter to determine whether revisions to the plan are necessary. All references to sections are to the original plan document, which is available from the Oklahoma Department of Agriculture.

(b) The Water Quality Standards Implementation Plan is to include eight elements for each jurisdictional area:

- (1) Program Compliance with Antidegradation Requirements and Protection of Beneficial Uses - General description of the processes, procedures and methodologies utilized to ensure that programs within the agency's jurisdictional areas of environmental responsibility comply with anti-degradation standards and lead to maintenance of water quality where beneficial uses are supported, removal of threats to water quality where beneficial uses are in danger of not being supported, and restoration of water quality where beneficial uses are not being supported.
- (2) Application of Use Support Assessment Protocols (USAP)-Procedures to be utilized in the application of use support assessment protocols (found at OAC 785:46 252:740, Subchapter 15) to make impairment determinations.
- (3) Description of Programs Affecting Water Quality - Description of the surface water and/or groundwater quality-related components of pertinent programs within each jurisdictional area.
- (4) Technical Information and Procedures - Technical information, databases, and procedures to be utilized by the Oklahoma Department of Agriculture, ~~(ODA)~~ Food, and Forestry (ODAFF) in the WQSIP.
- (5) Integration of WQSIP into ~~ODA~~ ODAFF activities - Describe how the Water Quality Standards Implementation Plan is and will be integrated into the water quality management activities of the agency, including rules, program area policies and guidance, and standardized methods of conducting business.
- (6) Compliance with Mandated Statewide Water Quality Requirements - Describe how ~~ODA~~ ODAFF is or will be complying with mandated statewide requirements affecting water quality developed by other state environmental agencies, including, but not limited to, total maximum daily load (TMDL) development, nonpoint source (NPS) pollution prevention programs, Oklahoma Water Quality Standards (OWQS), OWQS implementation procedures, and the Continuing Planning Process (CPP) document.

(7) Public and Interagency Participation - Summary of written comments and testimony received relative to all public meetings held for the purpose of providing public participation relating to the WQSIP, and new rules related to the WQSIP.

(8) Evaluation of Effectiveness of Agency Activities - Describe methods and means to evaluate the effectiveness of activities conducted pursuant to the WQSIP to achieve Water Quality Standards (WQS).

35:45-1-2. Pertinent definitions, abbreviations, and acronyms

The following words and terms, when used in this Subchapter, shall have the following meaning, unless the context clearly indicates otherwise:

"303" means Section 303 of the CWA, which requires states to review and, as necessary, revise their water quality standards at least every three (3) years.

"402" means Section 402 of the CWA, which establishes the National Pollutant Discharge Elimination System (NPDES).

"AgPDES" means Agriculture Pollutant Discharge Elimination System, as authorized by Oklahoma Agriculture Pollutant Discharge Elimination System Act, 2 O.S. § 2A-1 et seq.

"Animal Feeding Operation" means a lot or facility where the following conditions are met:

(A) animals have been, are, or will be stabled or confined and fed or maintained for a total of ninety (90) consecutive days or more in any twelve-month period, and

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

"Animal Waste" means animal excrement, animal carcasses, feed wastes, process wastewaters, or any other waste associated with the confinement of animals from an animal or poultry feeding operation.

"Appendix F" means Appendix F of the OWQS, OAC ~~785:45252:730~~, which has the statistical values of historic data for TDS, chloride, and sulfate for streams in most of the watersheds across the state.

"Background" means the ambient level of a pollutant relative to a potential source of pollution, and which is characterized by upstream (to the source being investigated) concentrations of a pollutant for surface waters or hydraulically upgradient concentrations for groundwater.

"BMP" means Best Management Practices, which are schedules of activities, prohibitions on practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state.

"CAFO" means Concentrated Animal Feeding Operation, as defined by the Oklahoma Concentrated Animal Feeding Operations Act, 2 O.S. § 20-41(B)(11).

"CPP" means the Continuing Planning Process document, submitted by the state to EPA, which describes present and planned water quality management programs and the strategy used by the State in conducting these programs. Information on how the state utilizes the WQS and WQS Implementation Criteria are contained in this document.

"CWA" means the federal Clean Water Act and amendments.

"CWAC" as defined in OAC ~~785:45 252:730~~, means Cool Water Aquatic Community, a subcategory of the beneficial use category "Fish and Wildlife Propagation" where the water quality, water temperature and habitat are adequate to support warm water intolerant climax fish communities and includes an environment suitable for the full range of cool water benthos.

"DEQ" means the Oklahoma Department of Environmental Quality.

"Discharge" means any release by leaking, pumping, pouring, emitting, emptying, dumping, escaping, seeping, leaching, or other means of release of wastes or wastewater except

as otherwise provided in Section ~~9-204.1~~ 20-6 of Title 2 of the Oklahoma Statutes. The term discharge shall not include a distribution of waste water into an irrigation system for the purpose of land application of waste to property, provided the waste does not leave the land application area.

"EPA" means the federal Environmental Protection Agency.

"Fish and Wildlife Propagation" means the WQS beneficial use designation for promoting fish and wildlife propagation for the fishery classifications of HLAC, WWAC, CWAC, and Trout Fishery (Put and Take).

"Fish Consumption" means the WQS beneficial use designation for the protection of human health for the consumption of fish.

"HLAC" as defined in OAC ~~785:45252:730~~, means Habitat-Limited Aquatic Community, a subcategory of the beneficial use category "Fish and Wildlife Propagation" where the water chemistry or habitat are not adequate to support a warm water aquatic community (WWAC).

"HQW" means High Quality Water, defined as those waters of the state which possess existing water quality which exceeds that necessary to support the propagation of fishes, shellfishes, wildlife, and recreation in and on the water. HQWs must receive special protection against degradation.

"Land Application" means the application of substances including animal waste and other substances to the land, at approved rates within the capacity of the land or crops.

"LMFO" means a Licensed Managed Feeding Operation, as defined by the Oklahoma Swine Feeding Operations Act at 2 O.S. § 20-3(B)(18).

"MDL" means the Method Detection Limit and is defined as the minimum concentration of an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. MDL is dependent upon the analyte of concern.

"NOI" means Notice of Intent.

"Nonpoint Source" means a source of pollution without a well defined point of origin or a single identifiable source such as an outfall pipe, often involving overland flow of pollutants with storm water or subsurface flow of pollutants with groundwater over a wide area.

"NPDES" means the National Pollutant Discharge Elimination System, as authorized by Section 402 of the CWA.

"Nutrient-Limited Watershed" means a watershed of a water body that is designated as nutrient limited in the most recent Oklahoma Water Quality Standards.

"Nutrient-Vulnerable Groundwater" means groundwater that is designated nutrient-vulnerable in the most recent Oklahoma Water Quality Standards.

"OAC" means Oklahoma Administrative Code.

"ODAFF" means the Oklahoma Department of Agriculture, Food, and Forestry.

"ORW" means Outstanding Resource Water, defined as a water of the state that constitutes an outstanding resource or is of exceptional recreational or ecological significance. ORWs must receive special protection against degradation.

"O.S." means Oklahoma Statutes.

"OWRB" means the Oklahoma Water Resources Board.

"PBCR" means Primary Body Contact Recreation, a WQS beneficial use designation.

"Plan" means the Water Quality Standards Implementation Plan, or portion thereof, promulgated by ODAFF in this chapter for the programs that affect water quality within ODAFF's jurisdictional areas of environmental responsibility.

"Point Source" means any discernible, confined and discrete conveyance from which pollutants are or may be discharged such as a discharge pipe (see also definition in OAC ~~785:45252:730~~).

"Poultry Feeding Operation" means a property or facility where the following conditions are met:

(A) poultry have been, are or will be confined and fed or maintained for a total of forty-five (45) days or more in any twelve-month period,

(B) crops vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over any portion of the property or facility, and

(C) producing over ten (10) tons of poultry waste per year.

"PPP" means Pollution Prevention Plan and is a written plan to control the discharge of pollutants that has been prepared in accordance with industry acceptable engineering and management practices.

"PQL" means Practical Quantitation Limit and is defined as 5 times the MDL. The PQL represents a practical and routinely achievable detection limit with high confidence.

"PPWS" means Public and Private Water Supply, a WQS beneficial use designation for the protection of human health for the consumption of water and consumption of fish and water.

"Remediation" means the removal of pollutants from soil or water by absorption, excavation, pumping, natural attenuation, biological, chemical, or other means or combination of methods.

"Scenic River" means a river or stream so designated pursuant to the Wild and Scenic Rivers Act. A scenic river is automatically considered an ORW.

"Silviculture" means the art and science of controlling the establishment, composition, and growth of forests.

"SWS" means Sensitive Public and Private Water Supply.

"TMDL" means Total Maximum Daily Load, a written, pollutant-specific and water body-specific plan establishing pollutant loads for point and nonpoint sources, incorporating safety reserves, to ensure that a specific water body will attain and maintain the water quality necessary to support existing and designated beneficial uses. The term also includes consideration of increases in pollutant loads.

"UAA" means Use Attainability Analysis, an investigation by ~~OWRB~~ of whether a WWAC or CWAC subcategorization (for the Fish and Wildlife Propagation beneficial use) is reasonably attainable.

"USAP" means Use Support Assessment Protocols, defining how sampling and other data shall be used to determine whether or not a water body is meeting its beneficial uses, as defined at OAC 785:46252-740, Subchapter 15.

"USDA NRCS" means the United States Department of Agriculture Natural Resources Conservation Service.

"USGS" means the United States Geological Survey.

"Waters of the State" means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, storm sewers and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through or border upon this state or any portion thereof, and shall include under all circumstances the waters of the United States which are contained within the boundaries of, flow through or border upon this state or any portion thereof. Provided, waste treatment systems, including treatment ponds and lagoons designed to meet federal and state requirements other than cooling ponds as defined in the federal Clean Water Act or promulgated rules, are not waters of the state.

"WQS (or OWQS)" means the Oklahoma Water Quality Standards, established pursuant to Section 303 of the CWA, and which serve as goals for water quality management planning and benchmark criteria for the ~~NPDES/OPDES~~ AgPDES permitting process. Water Quality Standards consist of beneficial use classifications for navigable waters, water quality

criteria to support those uses, and an antidegradation policy statement. Oklahoma's Water Quality Standards are found at OAC ~~785:45~~252:730.

"WQSIP" means Water Quality Standards Implementation Plan.

"WWAC" as defined in OAC ~~785:45~~252:730, means Warm Water Aquatic Community, a subcategory of the beneficial use category "Fish and Wildlife Propagation" where the water quality and habitat are adequate to support climax fish communities and includes an environment suitable for the full range of warm water benthos.

35:45-1-3. General statement of policy; responsibility for WQSIP document

(a) As a general statement of agency policy, programs and activities within ODAFF will be managed to protect the beneficial uses of the state's waters and to maintain water quality standards. In addition, when problems are identified, the agency will assist landowners, the industry, and other agencies with technical recommendations on remediation efforts using appropriate practices.

(b) The Assistant Director with water quality program supervisory responsibilities and the Water Quality Staff Forester prepared the WQSIP for the Forestry Services Division. The Agricultural Environmental Management Services Division section was initially prepared by the ~~Division's~~ Professional Engineer. The Consumer Protection Services Division section was developed by the Water Quality Program Administrator. ~~These individuals~~ the three division directors will be ~~are~~ responsible for maintaining ~~distributing copies of~~ the final plan, ~~informing field offices and~~ updating the plan as necessary.

35:45-1-4. Pertinent water quality standards

(a) Pursuant to Section 303 of the CWA, Oklahoma's surface water quality standards are promulgated by the ~~OWRB~~ ODEQ at OAC ~~785:45~~252:730, Subchapter 5. Surface water quality standards are comprised of three elements:

(1) Beneficial uses, designated to apply to specific water bodies or defined water body segments, ~~as listed in Appendix A to OAC 785:45~~, generally address the goals of the CWA. Certain default beneficial uses are assumed for waters not listed in Appendix A until a UAA indicates otherwise. The subset of beneficial uses which address water quality are:

(A) Public and Private Water Supply (PPWS) (~~OAC 785:45-5-10~~);

(B) Fish and Wildlife Propagation (F&W) (~~OAC 785:45-5-12~~), according to one of four fishery subcategories:

(i) Habitat-Limited Aquatic Community (HLAC).

(ii) Warm Water Aquatic Community (WWAC).

(iii) Cool Water Aquatic Community (CWAC).

(iv) Trout Fishery (Put and Take) - Criteria used in the protection of F&W shall include DO, T0, pH, Oil and Grease, Bio Criteria, toxic substances, turbidity, and sediments.

(C) Agriculture (Ag) (~~OAC 785:45-5-13~~);

(D) Primary Body Contact Recreation (PBCR) (~~OAC 785:45-5-16~~);

(E) Secondary Body Contact Recreation (~~OAC 785:45-5-17~~); and

(F) Aesthetics (~~OAC 785:45-5-19~~).

(G) Fish Consumption (~~OAC 785:45-5-20~~).

(2) Numerical and narrative criteria (~~OAC 785:45-5~~) apply statewide. Numerical criteria are pollutant-specific and apply to a water body according to its beneficial uses ~~in accordance with OAC 785:45~~. Narrative criteria are generally referred to as "free from" prohibitions.

(3) Numerical salinity water quality standards are only for agricultural beneficial uses (irrigation and watering livestock). Stream segment averages of historic data for chlorides, sulfates, and TDS are available in Appendix F for most stream segments statewide. The WQS also allows for use of upstream/background data and data from surrounding streams instead of these averages if this data provides a more appropriate basis for setting standards for a specific stream (~~OAC 785:45-5-13(e) and (f)~~). However, for the protection of Agriculture use, neither long nor short term average concentrations of minerals shall be required to be less than 700 mg/l for TDS, nor less than 250 mg/l for either chlorides or sulfates (~~OAC 785-45-5-13 (g)~~).

(4) General Narrative Criteria for Minerals at ~~OAC OAC 785:45-5-9(a)~~ states that "Increased mineralization from other elements such as, but not limited to, calcium, magnesium, sodium, and their associated anions shall not impair any beneficial use," which ~~OWRB~~ ODEQ interprets as meaning that neither salinity nor other minerals shall be allowed to impair the PPWS, F&W, PBCR, and other beneficial uses listed for streams in the WQS.

(5) Excess sediment impacts may be addressed through the numeric turbidity standards established for F&W. Heavy metal numerical WQS have been set by ~~OWRB~~ ODEQ for many beneficial uses.

(6) A water quality antidegradation policy, which applies statewide, and is consistent with the goals of the CWA, is found at ~~OAC 785:45, Subchapter 3. Antidegradation policy implementation is found at OAC 785:45-5-25 and OAC 785:46, Subchapter 13.~~ Levels of protection are as follows:

(A) Attainment or maintenance of existing or designated beneficial uses.

(B) Maintenance quality of improved waters.

(C) Maintenance of beneficial uses and water quality in higher quality waters and sensitive public and private water supplies of the state, as well as in waters of ecological or recreational significance.

(D) Prohibition of any water quality degradation from new point source discharges or increased loading from existing discharges into waters designated as outstanding resource waters and scenic rivers.

(7) Special provision at ~~OAC 785:45-5-29~~ - Delineation of Nutrient Limited Watershed (NLW) areas specifies spatial limitations of these areas that require additional protection.

(b) Although not required by any provision of the CWA, the OWRB has promulgated groundwater quality standards for the state at OAC 785:45, Subchapter 7. Groundwater quality standards and protection are comprised of seven elements:

(1) Beneficial uses, designated to apply to the groundwater situated below the surface of the dedicated land identified in a groundwater use permit or right issued by the OWRB. Such beneficial uses are defined at OAC 785:45-7-3(b) and may include, but are not limited to:

(A) Public and Private Water Supply (including municipal use and domestic use).

(B) Agriculture for irrigation or livestock watering.

(C) Industrial and municipal process and cooling water.

(2) Classifications, found at ~~OAC 785:45-7-3(a)~~ are as follows:

(A) Class I (Special Source Groundwater): Groundwaters where exceptional water quality exists, where there is an irreplaceable source of water, where it is necessary to maintain an outstanding groundwater resource or where the groundwater is ecologically important. This class of groundwater is considered to be very vulnerable to contamination and includes:

- (i) All groundwater located beneath the watersheds of surface waters designated as Scenic Rivers in ~~Appendix A to OAC 785:45~~.
- (ii) Groundwater located underneath lands located within the boundaries of areas with waters of ecological and/or recreational significance ~~listed in Tables 1 and 2 of Appendix B to OAC 785:45~~.
- (iii) Groundwater located underneath lands within the boundaries of a state-approved wellhead or source water protection area for public water supply.

(B) Class II (General Use Groundwater): Groundwaters capable of being used as a drinking water supply with conventional or no treatment methods, with the potential for multiple beneficial uses, and with mean TDS levels < 3000 mg/l.

(C) Class III (Limited Use Groundwater): Poor quality groundwaters due to natural conditions, which require extensive treatment for use as a drinking water source, with mean TDS levels of ≥ 3000 mg/l and < 5000 mg/l.

(D) Class IV (Highly Mineralized Treatable Groundwater): Very poor quality groundwaters due to natural conditions, which require extensive treatment for use as a drinking water source, having mean TDS levels ≥ 5000 mg/l but < 10000 mg/l.

(3) Beneficial use designations: Class I and II, not identified in Appendix H of OAC ~~785:45252:730~~, shall be public and private water supply, agriculture, and Industrial and municipal process and cooling water. Class III and IV, not identified in Appendix H of OAC ~~785:45252:730~~, shall be agriculture, and Industrial and municipal process and cooling water. Appendix H specifies beneficial uses for groundwater contained in the appendix.

(4) Vulnerability level: Certain hydrogeologic basins are classified according to its vulnerability to contamination and identified as Very Low, Low, Moderate, High and Very High per Table 1 of Appendix D of OAC ~~785:45252:730~~.

(5) Nutrient-vulnerable groundwater: Certain groundwaters are subject to further designation as nutrient-vulnerable groundwater per Table 2 of Appendix D.

(6) Criteria for protection of groundwater quality:

(A) Groundwaters of the state shall be maintained to prevent alteration of their chemical properties by harmful substances not naturally found in groundwater.

(B) Protective measures shall be at all times maintained which are adequate to preserve and protect existing and designated groundwater basin classifications and which are sufficient to minimize the impact of pollutants on groundwater quality.

(C) The concentration of any synthetic substances or any substances not naturally occurring in that location shall not exceed the PQL in an unpolluted groundwater sample using laboratory technology.

(D) Prescriptive measures shall be developed by each state environmental agency and included in their WQSIP, and they shall be implemented to prevent-groundwater pollution caused by any person or entity within their jurisdictional area of environmental responsibility.

(E) Each state environmental agency shall consider the hydrogeologic basin's vulnerability level and designated nutrient vulnerable groundwaters for surface activities with the potential to contaminate groundwater.

(7) Criteria for corrective action:

(A) Groundwater that has been polluted as a result of human activities shall be restored to a quality that will support uses designated in OAC ~~785:45252:730-7-~~

3(b) for that groundwater or meet the requirements of a site specific remediation plan approved by the appropriate state environmental agency.

(B) Measures to remedy, control or abate groundwater pollution caused by any person shall be the responsibility of each state environmental agency within its jurisdictional areas of environmental responsibility as prescribed in the agency's WQSIP.

35:45-1-7. Animal waste programs

(a) Compliance with antidegradation requirements and protection of beneficial uses.

(1) This area of jurisdiction includes the licensing or registering of CAFOs, LMFOs and poultry operations. These programs include land application of animal or poultry waste. Discharges of animal and poultry waste into waters of the State are statutorily prohibited. As a result, no discharge shall result from the operation of the facility. CAFOs and LMFOs may only discharge in the event of a 25 year/24 hour rainfall event and are required to construct the waste retention structures to contain the 25 year/24 hour rainfall event; except for new LMFO (swine), poultry and veal calves CAFOs, which are required to have waste management and storage facilities to contain all waste and runoff for 100 year/24 hour rainfall event. In addition, OAC 35:17-3-14(b)(3)(C) allows a facility which has been properly designed, constructed, and operated and is in danger of an imminent overflow due to chronic or catastrophic rainfall to discharge wastewaters to land application sites for filtering prior to discharging to surface or groundwaters of the state.

(2) Beneficial uses that could potentially be impaired by improper land application, leakage from animal waste lagoons, or breach of a lagoon could impact both ground water and surface water. Beneficial uses that could be affected include, but are not limited to: (1) Fish and Wildlife Propagation may be impaired by lack of DO due to nutrient loading. (2) Public and Private Water Supplies may be impaired by fecal coliform, algae growth, and nutrient loading. (3) Recreation may be impaired by pathogens. (4) Aesthetics may be impacted by nutrient loading. All of these impairments could be caused by unauthorized discharges to waters of the state.

(3) Violations of the "no discharge" standard for CAFOs, LMFOs, and poultry feeding operations result in enforcement actions. These actions integrate corrective ~~or~~ and remedial activities that can include clean-up activities and restoration activities. Remediation requirements are determined on a case-by-case basis. The Department shall assess and review all approved remediation requirements to provide technical standards for future remediations.

(4) Education programs are also required for all poultry waste applicators, operators of poultry feeding operations, and employees of LMFOs. Employees responsible for ~~CAFO~~ permit compliance must be annually trained or informed of any information pertinent to the proper operation and maintenance of the facility and waste disposal.

(5) OAC ~~785:46252:730-13-5~~ provides that no new or increased point source discharges are allowed in water bodies and watersheds designated by the WQS as an ORW or Scenic River. Waters that have been classified as HQW and SWS according to OAC ~~785:45252:730-5-25~~ (c) (3) and (4) are prohibited from having any new point source discharge(s) of any pollutant or increased load or concentration of specified pollutants from existing point sources discharge(s), except as provided in the regulations. CAFOs are by definition point sources. In addition, all nonpoint sources shall implement best management practices in watersheds designated as ORW. However, if nonpoint sources are identified as significantly contributing to the degradation of a water body designated as an ORW, conservation plans shall be developed in subwatersheds. Finally, LMFOs

established after August 1, 1998 applying for a new CAFO license or expansion after March 9, 1998 shall not be located within three (3) miles of any designated scenic river area or within one (1) mile of a water body designated as ORW.

(6) LMFO's that are located in nutrient-limited watersheds and or nutrient-vulnerable groundwaters as designated by the OWRB ~~must~~ shall meet current lagoon waste retention structure liner criteria according to Title 2, O.S. § 20-12(H)(3), and meet land application nutrient loading rate requirements per OAC 35:17-3-14(b)(4).

(7) Poultry feeding operations that are located in nutrient limited watersheds or nutrient vulnerable groundwaters as designated by OWRB shall meet soil and litter testing and litter application rate requirements per 2 O.S. § 10-9.7(E).

(b) Application of USAP - In the event ODAFF engages in surface water monitoring, USAP as adopted by OWRB will be consulted to determine if beneficial uses have been impaired. All animal waste programs require no discharges from facilities, therefore USAP is not applicable. Any discharge will be a violation of the license and subject to enforcement action and possible fines.

(c) Description of programs affecting water quality.

(1) The Agricultural Environmental Management Services (AEMS) Division of ODAFF is responsible for the review of applications for animal feeding operations that meet size and type requirements. The division also investigates complaints received by the Department regarding animal waste issues that could affect water quality.

(2) In December 2012, ~~The~~ the EPA authorized ODAFF to perform NPDES permitting pursuant to the CWA. ODAFF reviews NOIs for authorizations pursuant to a general permit and reviews applications for individual permits. AgPDES activities include CAFOs, pesticides, silviculture, and storm water at agricultural facilities.

(3) The animal waste program, pesticide program, fertilizer program, and forestry management program can affect groundwater and surface water beneficial uses if facilities are not designed and operated properly. The application process is targeted at removing the possible threat of pollution to the waters of the State by not allowing any discharge to surface water, except in limited circumstances, by promoting recycle and beneficial reuse of wastewater, by not permitting any hydrologic connection between waste storage facility and groundwater, by preparing or reviewing animal waste management plans, nutrient management plans, or equivalent documents, emphasizing best management practices and conservation measures, and by routine inspections of regulated CAFOs, LMFOs, and poultry feeding operations.

(d) Technical information and procedures for implementation.

(1) All programs are involved in regulating the animal and poultry feeding operations to assure that facilities meet the minimum requirements. The programs evaluate facility location, watershed, soils, groundwater data, stream data, flood information, water samples, manure and litter samples, and other pertinent information. The application process evaluates the potential effects of the proposed operation on the waters of the State to insure ~~that~~ both groundwater and surface water are not polluted. Potential impacts on beneficial uses designated in water quality standards will be further evaluated during the license application process to assist elimination of the threat to nutrient vulnerable groundwaters and nutrient impaired waters. Data collected from monitoring wells or soil test reports submitted by regulated operations will be evaluated to assess the potential impact on waters of the state. If noncompliance with operating requirements is found, technical assistance or appropriate enforcement measures will be used to bring regulated facilities into compliance with state laws and rules.

(2) The CAFO and poultry programs utilize a number of databases, software programs and models for implementation. These include: stream gage data from the U.S. Geological Survey; ~~Microsoft Access database and Microsoft Excel spreadsheet software~~ SQL databases for water quality data information; ArcInfo and ArcView GIS, MapWindows+MMP Tool software data analysis and mapping; precipitation and evaporation data from the National Weather Service and Oklahoma Climatological Survey; maps and hydrologic information from the U.S Geological Survey, Oklahoma Geological Survey, and Oklahoma Water Resources Board; USDA NRCS Soil Surveys and Technical Standards; OSU Oklahoma Cooperative Extension Service Fact Sheets; and other tools, software, and other guidance related to manure management planning developed by EPA, universities, and professional organizations, the MMP (Manure Management Plan) developed by Purdue University. Models may be obtained or developed to analyze information and data to assist in meeting WQS as necessary.

(e) Integration of WQSIP into water quality management activities - ODAFF rules for these programs require compliance with WQS pursuant to 2 O.S. § 20-10 (B) (4) (c) and 20-48(B)(4)(c) ensure that watersheds and groundwater are adequately protected pursuant to 20-10 (B)(4)(h) and 20-48(B)(4)(f). Future changes in Water Quality Standards may require additional rules and policies. Amendments will be made as necessitated by those changes.

(f) Compliance with mandated statewide water quality requirements - ODAFF will comply with other statewide water quality requirements by participating in the update of WQS, and in updates of the state's Continuing Planning Process document, Integrated Report, water quality management plan and other planning efforts. ODAFF will continue to participate in the Nonpoint Source Working Group and will cooperate with the Oklahoma Conservation Commission and others involved in NPS pollution prevention programs. ODAFF will participate in the TMDL process as resources permit, and will make use of the Beneficial Use Monitoring Program data compiled in cooperation with other state environmental agencies to modify its water quality program as necessary.

(g) Public and interagency participation.

(1) ODAFF interacts with other environmental agencies through the Water Quality Standards Implementation Advisory Committee. The agencies review and comment on each agency's plan and consult with each other as needed.

(2) Public participation requirements of the Oklahoma Administrative Procedures Act are followed in promulgating rules that integrate water quality standards into these program areas.

(h) Evaluation of effectiveness of agency activities.

(1) The effectiveness of these programs in the protection of designated beneficial uses for designated stream segments will be evaluated utilizing the following processes: review and integration of CAFO monitoring well sampling, soil analysis, stream gage data from the U.S. Geological Survey, U.S. Army Corps of Engineers, Oklahoma Conservation Commission, and Oklahoma Water Resources Board, and all other available data.

(2) The swine LMFO monitoring well sampling and laboratory analysis project began in 2000. All LMFOs with more than 1,000 swine animal units were required by Senate Bill 1175 of 1998 [Title 2 O.S. § 20-12(F)] to install and maintain a leak detection system or sufficient monitoring wells both upgradient and downgradient around the perimeter of each waste retention structure. ODAFF is required by Title 2 O.S. § 20-12(F) to sample and laboratory analyze the samples from the LMFO monitoring wells at least annually. The LMFO monitoring well samples are required in Title 35, Chapter 17, Subchapter 3 of the CAFO Permanent Rules [35:17-3-11.(6)(H)] to be sampled and laboratory analyzed for electrical conductivity, pH, ammonium-nitrogen, nitrate-nitrogen, total phosphorus

and fecal coliform bacteria. The information and data collected under this program is published in a report annually by ODAFF.

~~(3) Groundwater samples from other wells are also taken from LMFO facilities during each annual inspection by ODAFF environmental specialists. These samples and some surface water samples are analyzed in accordance with procedures and protocol developed by ODAFF. Water well samples are also taken and analyzed on a voluntary basis from residents located in the vicinity of animal feeding operations. The latter sampling project has been in place since 1992.~~

(4) In the event groundwater problems are identified, ODAFF will take steps to identify the sources of the problems. If CAFOs or LMFOs are identified as the source, appropriate remediation activities will be implemented.

35:45-1-8. Pesticide program

(a) ODAFF regulates spills and misuse of pesticides associated with facilities and activities of licensed pesticide applicators, homeowners and farm applications. This includes improper storage and disposal of pesticides and pesticide containers.

(b) Compliance with antidegradation requirements and protection of beneficial uses.

(1) All pesticide programs and regulatory activities require no degradation of surface or groundwater by pesticide use. Pesticide labels contain warnings that the pesticide could contaminate surface and groundwater if misused or improperly disposed. ODAFF regulates spills and misuse of pesticides associated with facilities and activities of licensed pesticide applicators, homeowners and farm applications. This includes improper storage and disposal of pesticides and pesticide containers.

(2) Beneficial uses that could be impaired by improper handling and application of pesticides include Fish and Wildlife Propagation, Private and Public Water Supply, Recreation, and Agriculture. The potential for pesticides to enter ground water and surface water exist and is supported by the fact that several water bodies are classified as impaired by pesticides on the current 303(d) list. Pesticide residue in fish could render them unfit for human consumption. Antidegradation is automatically implemented because the presence of pesticide in any water is a violation of the standards no matter how the water body is classified.

(3) Recent spills and newly located polluted sites are remediated by the responsible party, or by the use of EPA superfund monies to the extent necessary to meet ODAFF goals. Pesticide remediation brings any impaired surface or groundwater back to the quality prior to the pesticide spill, including restoration of all beneficial uses pursuant to the WQS. Procedures for groundwater protection are covered in the ODAFF Generic Pesticide Management Plan in Groundwater.

(4) The certification of persons to become pesticide applicators involves training and testing of the individual in the safe use and handling of pesticides. Training includes information on how to read a pesticide label, pesticide storage, pesticide container disposal and proper procedures to follow in the event of a pesticide spill. The protection of surface water and groundwater is an integral part of the certification process.

(c) Application of USAP - The procedures for pesticide monitoring are outlined in the Quality Assurance Project Plan, the pesticide operating procedures and the Generic Pesticide Management Plan in Groundwater. USAP will be utilized in assessing beneficial uses of all monitored surface waters. USAP does not apply to groundwater at this time.

(d) Description of programs affecting water quality.

(1) The Consumer Protection Services Division of ODAFF is responsible for the licensing and certifying of pesticide applicators. ODAFF registers all pesticides

distributed in the state and has authority to restrict the use of pesticides to prevent unreasonable risk to the quality of Oklahoma's water.

(2) Under the Generic Pesticide Management Plan, ODAFF will develop and implement point and non-point source prevention measures, participate in relaying use information, carry out monitoring, develop and implement response to detection, keep records of action taken and provide progress reports to EPA.

(3) ODAFF will also develop and maintain a statewide agriculture chemical database and a pesticide concerns list in regard to water quality standards.

(4) ODAFF licenses all commercial applicators of pesticides and requires the certification of private applicators before they can use restricted pesticides. When spills or other environmental problems, resulting from current or historic practices, are found, ODAFF's goal is to prevent impairment of the surface water and groundwaters of the state. This includes preventing significant risk to humans, livestock, or ecological receptors from inhalation of fumes, direct contact, or ingestion.

(5) The Consumer Protection Services Division assists AEMS Division with disseminating information related to AgPDES permit requirements for pesticides applicators and with reviewing permit applications or notices of intent submitted by permit applicators.

(6) Pesticide labels contain warnings that the pesticide could contaminate surface and groundwater if misused or improperly disposed. All ODAFF activities related to pesticides are geared toward maintaining WQS. Specific programs include the following:

- (A) Certification of individuals and the licensing of companies to apply pesticides;
- (B) Investigation of pesticide spills and misuse;
- (C) Inspection of pesticide producer establishments;
- (D) Inspection of pesticide applicator facilities for proper pesticide storage;
- (E) Audit records of restricted use pesticide dealers;
- (F) Conduct private applicator record keeping inspections;
- (G) Monitor pesticide application at new construction sites;
- (H) Requiring backflow prevention devices on chemigation wells, as well as requiring every applicator of pesticides to employ an appropriate method to prevent the backflow of spray materials during filling, mixing, or application operations. The method shall include, but not be limited to, the employment of a check valve or similar in-line device, or positive mechanical method, such as an air gap, designed to insure that backflow shall not occur;
- (I) Monitoring the irrigation tailwater return flow on several large container nurseries on the Illinois River in Cherokee County; and
- (J) Groundwater monitoring.

(e) Technical information and procedures for implementation - The pesticide program utilizes a number of databases, software programs and models for implementation. These include: Microsoft Access database and Microsoft Excel spreadsheet software for water quality data information; ArcInfo and ArcView GIS software data analysis and mapping; and pesticide leaching models from EPA to map and analyze data. EPA standards are used to calibrate laboratory equipment when analyzing for specific pesticides. Many cases will require samples to be taken. The Pesticide Inspectors Manual covers the procedures for taking, sealing and shipping pesticide samples to the lab. Sampling results become a part of the complaint file. Notice of violations, stop work orders, informal or formal hearings, cleanup orders, fines and referral to US EPA for federal prosecution are some of the enforcement actions available to the ODAFF in the event a water quality or other violation is found. The Oklahoma Combined Pesticide Law and

Rules set the standards used in the storage, use and disposal of pesticides, pesticide containers, and pesticide waste.

(f) Integration of WQSIP into water quality management activities - Future changes in WQS may require additional rules and policies. Amendments will be made as necessitated by those changes.

(g) Compliance with mandated statewide water quality requirements - Compliance with statewide water quality requirements is the primary goal of the pesticide certification program, pesticide facility inspections, pesticide spill and misuse investigations and pesticide monitoring programs.

(h) Public and interagency participation.

(1) ODAFF has been charged with the regulatory responsibilities of agricultural activities that could impact the WQS of the waters of Oklahoma. The "Agricultural Resources Protection and Management Operation" document outlines standard operating procedures to fulfill this charge for the present and provides guidance for future needs. This document contains no new or modified authorities not subject to legislative approval.

Should subsequent events call for law, rule or regulation changes or additions, these shall be subject to approvals in accordance with the APA or the legislative process.

(2) Public participation requirements of the APA were followed in promulgating rules that integrate water quality standards into this program area. Section III of this document contains a summary of comments received and responses relating to the promulgation of ODAFF's WQSIP.

(i) Evaluation of effectiveness of agency activities - The effectiveness of the pesticide programs will be evaluated through the routine monitoring of surface water and groundwater. Special monitoring may be initiated if potential sources of contamination are identified. USAP will assist in dictating surface water monitoring.