

TITLE 460. DEPARTMENT OF MINES
CHAPTER 12. WATER QUALITY STANDARDS IMPLEMENTATION PLAN

SUBCHAPTER 1. GENERAL PROVISIONS

460:12-1-1. Purpose and scope

Title 27A O.S., §§ 1-1-202 and 1-3-101, establishes the Department of Mines as a State Environmental Agency and requires the Oklahoma Mining Commission to develop and promulgate a Water Quality Standards Implementation Plan for its jurisdictional areas of environmental responsibility. The elements of the plan are dictated by 27A O.S. § 1-1-202. This Chapter 12 and the Subchapter describe the elements of the Plan.

460:12-1-2. Authority

Oklahoma law, 27A O.S. Supp. 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. The Plan must be developed in compliance with the Administrative Procedures Act. After initial promulgation, the Department must review its plan at least every three years thereafter to determine whether revisions are necessary.

460:12-1-3. Definitions

In addition to the terms defined in Title 27A O.S. § 1-1-201 and O.S. Title 45, Mines and Mining, the following words, terms, or acronyms, when used in this Subchapter, shall have the following meanings unless the context clearly indicates otherwise:

"40 CFR" means Title 40 of the Code of Federal Regulations.

"BMP" means Best Management Practice.

"CAM" means Coal Advisory Memorandum.

"CCB" means Coal Combustion By-Product.

"CHIA" means Cumulative Hydrologic Impact Assessment.

"CKD" means Cement Kiln Dust.

"CORPS" means United States Army Corps of Engineers.

"CWA" means Federal Clean Water Act.

"CWAC" means Cool Water Aquatic Community.

"DEQ" means Oklahoma Department of Environmental Quality.

"EPA" means United States Environmental Protection Agency.

"F&W" means Fish and Wildlife.

"HLAC" means Habitat-Limited Aquatic Community.

"NPS" means Non-Point Source.

"OAC" means Oklahoma Administrative Code.

"ODM" means Oklahoma Department of Mines.

"OPDES" means Oklahoma Pollutant Discharge Elimination System.

"OWRB" means Oklahoma Water Resources Board.

"PAP" means Permit Application Package.

"PBCR" means Primary Body Contact Recreation.

"PHC" means Probable Hydrologic Consequences.

"PPWS" means Public and Private Water Supply.

"SBCR" means Secondary Body Contact Recreation.

"SEDCAD" means Sediment, Erosion, Discharge by Computer Aided Design.

"TDS" means Total Dissolved Solids.
"TMDL" means Total Maximum Daily Load.
"TSS" means Total Suspended Solids.
"UAA" means Use Attainability Analysis.
"USAP" means Use Support Assessment Protocols.
"USLE" means Universal Soil Loss Equation.
"WQS" means Water Quality Standards.
"WQSIP" means Water Quality Standards Implementation Plan.
"WWAC" means Warm Water Aquatic Community.

460:12-1-4. Oklahoma's Water Quality Standards

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

(1) Beneficial uses are designated to apply to specific water bodies or defined water body segments, as listed in Appendix A to OAC 785:45, and which generally address the goals of the CWA. Certain default beneficial uses are assumed for waters not listed in Appendix A until a UAA may indicate otherwise. The subset of beneficial uses which address water quality (as opposed to quantity) 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)
- (C) Agriculture (Ag) (OAC 785:45-5-13);
- (D) Primary Body Contact Recreation (PBCR) (OAC 785:45-5-16);
- (E) Secondary Body Contact Recreation (SBCR) (OAC 785:45-5-17);
- (F) Aesthetics (OAC 785:45-5-19)
- (G) Fish Consumption (OAC 785:45-5-20)

(2) Numerical and narrative criteria found in 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 Appendix G.

- (A) Excess sediment impacts may be addressed through the numeric turbidity standards established for F&W.
- (B) Heavy metal numerical WQ standards have been set by OWRB for many beneficial uses.

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

- (A) Attainment or maintenance of existing or designated beneficial uses (Tier 1).
- (B) Maintenance of beneficial uses and water quality in higher quality waters and sensitive water supplies of the state, as well as in waters of ecological and/or recreational significance (Tier 2).
- (C) Prohibition of any water quality degradation from new point source discharges or increased loading from existing discharges into waters designated as outstanding resource waters (Tier 3).

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

(1) **Beneficial uses, designated by the classification listed below in 2b. 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 and domestic use)**
- (B) **Agriculture (including irrigation and non-irrigation use)**
- (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) is groundwater:**

- (i) **Where exceptional water quality exists;**
- (ii) **Where there is an irreplaceable source of water;**
- (iii) **Where it is necessary to maintain an outstanding groundwater resource; or**
- (iv) **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 located within the boundaries of a state-approved wellhead protection area for public water supply.**

(B) **Class II (General Use Groundwater) consists of groundwaters capable of being used as a drinking water supply either with no treatment or with conventional treatment methods, which have the potential for multiple beneficial uses, and with mean TDS levels <3000 mg/L.**

(C) **Class III (Limited Use Groundwater) consists of poor quality groundwaters caused by naturally occurring contaminants, which require extensive treatment for use as a drinking water source, having mean TDS levels 2: 3000 mg/L but < 5000mg/L.**

(D) **Class N (Highly Mineralized Treatable Groundwater) which is very poor quality groundwater due to natural conditions, which require extensive treatment for use as a drinking water source, having a mean TDS 5000 mg/L but < 10,000 mg/L.**

(3) **Protective measures and corrective actions, composed of:**

(A) **Numerical criteria for any synthetic substance or substance not naturally occurring greater than concentrations found in background conditions, as well as practically measurable levels of toxics listed pursuant to Section 307(a) of the CWA, which, if exceeded, constitute groundwater pollution and may require corrective action.**

(B) **Narrative criteria requiring that protective measures 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.**

(C) **Development of prescriptive measures by each state environmental agency**

in their WQSIP, and subsequent use of such measures, to prevent, control or abate groundwater pollution caused by any person or entity within their jurisdictional area of environmental responsibility.

(D) Consideration by each state environmental agency of a hydrogeologic basin's vulnerability level, as developed in OWRB Technical Report 99-1, Statewide Groundwater Vulnerability map of Oklahoma, Noel I. Osburn and Ray H. Hardy, for surface activities with the potential to contaminate groundwater.

460:12-1-5. Required elements of the Water Quality Standards Implementation Plan

(a) The WQSIP must reflect the following:

(1) Program compliance with antidegradation requirements; and

(2) Protection of beneficial uses by providing a general description of the processes, procedures and methodologies utilized to ensure that programs within the agency's jurisdictional areas of environmental responsibility:

(A) Comply with anti-degradation standards;

(B) Lead to maintenance of water quality where beneficial uses are supported;

(C) Remove threats to water quality where beneficial uses are in danger of not being supported; and

(D) Restoration of water quality where beneficial uses are not being supported.

(b) The WQSIP must follow the Use Support Assessment Protocols (USAP) which are the Procedures to be utilized in the application of use support assessment protocols (OAC 785:46-15) to make impairment determinations.

(c) The WQSIP must describe the programs affecting water quality with a description of pertinent programs within each jurisdictional area detailing the effect on surface and/or groundwater quality.

(d) The WQSIP must contain technical information, databases, and procedures to be utilized by the Department in compliance with WQSIP.

(e) The WQSIP must provide a description of how the plan is and/or will be integrated into the water quality management activities of the Department by including rules, program area policies and guidance, and/or standardized methods of conducting business.

(f) The WQSIP must describe how the Department 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, point source wastewater discharge permitting, and nonpoint source (NPS) pollution prevention programs.

(g) The WQSIP must indicate public participation by summarizing written comments and testimony received relative to all public meetings held for the purpose of providing public participation related to the WQSIP.

(h) The WQSIP must provide a description of methods and means to evaluate the effectiveness of activities conducted pursuant to WQSIP to achieve water quality standards.

(i) To the extent the required elements or items listed above will not result in a rule as defined by the Administrative Procedures Act, that information will be listed in the WQSIP.

460:12-1-6. Jurisdictional areas by statute

Title 27A O.S. Supp. 1998, Section 1-3-101 (G) states the Department's jurisdictional areas are as follows:

(1) Mining regulation;

(2) Mining reclamation of active mines;

(3) Groundwater protection for activities subject to the jurisdictional areas of

environmental responsibility of the Commission; and

(4) Development and promulgation of a Water Quality Standards Implementation Plan pursuant to Title 27A Section 1-1-202 for its jurisdictional areas of responsibility.

460:12-1-7. Agency jurisdictional areas

(a) The extraction of earth minerals occurs in every county of the state. Minerals mined in Oklahoma include coal, limestone, sand & gravel, granite, gypsum, clay & shale, salt, chat, tripoli, bentonite, and volcanic ash.

(b) Prior to commencement of mining operations, a permit must be obtained from ODM. A permit is issued when the mine operator submits an acceptable application and posts the required bond to cover reclamation costs. The mining operator's permit application must contain plans to safeguard environmental resources.

(c) The Department regulates the reclamation of these permitted lands with respect to mining for both coal and non-coal minerals. The Department also regulates the effects of mining as outlined by statutory authority Senate Bill 250 and 341 allowed for the placement of coal combustion by-product (CCB), which includes fly ash and cement kiln dust, in any active or inactive coal and non-coal mining operations.

(d) To assure that water pollution does not occur or that water is handled properly, The Department has extensive plans for all mining and reclamation operations. Requirements for this program are set forth in Title 45 of the Oklahoma Statutes. In all jurisdictional areas, the Department will require compliance with mandated statewide water quality requirements found in OAC 460:12-1-8(a) (6) of this Chapter. The Department will not approve permit applications for activities under its jurisdiction until the responsible party has applied for all necessary water quality permits related to mining activities from other agencies.

460:12-1-8. Regulation elements of Water Quality Standards Implementation Plan by jurisdictional area.

(a) **Coal mining and reclamation.** Coal mining and reclamation operations regulatory elements are as follows:

(1) The program must comply with antidegradation and protection of beneficial uses as follows:

(A) Pursuant to Subchapters OAC 460:20-27, 20-31, 20-43, and 20-45, all surface drainage and groundwater seeps from areas disturbed by coal mining and reclamation activities shall be passed through a siltation structure before leaving the permit area. Discharges of water shall also be made in compliance with all applicable State and Federal water quality laws and regulations and with effluent limitations for coal mining promulgated by DEQ under the OPDES permitting process.

(B) Each coal mining permit is issued based upon the review of the information submitted by the applicant in the Permit Application Package. The Permit Application Package contains a comprehensive review of surface and groundwater resources, including extensive baseline data, and overburden analyses for the proposed mining site and adjacent areas. This information is used by the applicant to estimate the probable hydrologic consequences (PHC) of the proposed mining. If the PHC are adverse, the applicant is required to set forth a plan to prevent or minimize disturbance to the hydrologic balance. That plan includes a proposed monitoring scheme to verify its effects.

(C) Additional water quality protection measures shall include: timely

construction of drainage control structures and diversions, timely reclamation and re-vegetation, proper disposal of any acid forming and toxic forming materials, mulching, adequate channel lining to prevent erosion, reduce the rate and volume of runoff by reclaiming the land to gentle slopes, pass all surface drainage from the disturbed areas through sedimentation ponds, and monitor surface and groundwater during mining and reclamation activities until final bond release.

(D) All of the beneficial uses itemized in Section 460:12-1-5 of this Chapter could be impacted by surface or groundwater at a mining site. Since ODM does not deal with toxic contaminants at a site, ODM does not have specific water quality discharge standards other than the technology based water quality standards as established by the DEQ or EPA. Typically, the discharge standards follow the effluent limitations of 40 CFR 434 as seen in Appendix A.

(2) The procedures for Application of Use Support Assessment Protocols (USAP) are:

(A) Each operator conducting coal mining and reclamation activities is responsible for complying with water quality standards as established by the OWRB. If an investigation of a complaint by ODM personnel shows that coal mining and reclamation activities may be having an adverse impact on water quality, ODM shall notify the permittee. ODM and or the permittee may investigate the water body in question to determine whether the water body has been impaired.

(B) As established by ODM Coal Advisory Memorandum (CAM) #16, each coal mine site shall have its own unique surface and groundwater monitoring plan subject to ODM approval. Sample frequency, location, parameters analyzed, and reporting requirements are detailed in this CAM. Laboratory procedures, methodologies, and requirements have been established by the DEQ and EPA. As previously mentioned, ODM follows DEQ sediment discharge standards as implemented through the OPDES program.

(3) Programs affecting water quality pursuant to the plan are regulated as follows:

(A) The act of mining displaces overburden and soils that were previously undisturbed. Previously protected strata will be exposed to oxygen and water. These elements may come into contact with iron disulfide, oxidize and release acidity. Erosion or sediment flow may further cause an impact to water quality during the removal of vegetation & topsoil or the construction of ponds & drainage diversions. Drainage diversions direct mine runoff into approved sedimentation ponds. Water discharge from the sedimentation pond must be in compliance with the state and federal water quality standards.

(B) ODM Inspection and Enforcement Division administer compliance oversight of all water quality standards. This section is responsible for compliance with all water discharge standards established under the OPDES permit. Sediment control measures affecting water quality, are established by ODM Technical Services Division. All designs and standards are approved on a site specific basis through the permitting process through the sediment, erosion, and discharge by computer aided design (SEDCAD) program.

(4) The technical information and procedures used for the plan are as follows:

(A) Soil loss and sediment yield due to mining activities as well as vegetation establishment are estimated through the use of the Universal Soil Loss Equation (USLE) or through the computer model SEDCAD. Adequate data should be collected and evaluated in order to derive the needed input information on the soil losses and sediment yield.

- (B) The SEDCAD program used in designing sediment ponds predicts the amounts of sediment to be washed into the ponds and the sediment volumes exiting the ponds. The predicted sediment values are based upon worst-case situations simulating active mining and reclamation operations within the watersheds of sediment ponds. The worst case scenario utilized is a barren and tilled soil exposed to sheet runoff erosion. The SEDCAD results include predicted sediment pond efficiencies, sediment volumes trapped in the ponds, and suspended solids not trapped in the pond but carried downstream during pond discharge.
- (C) Geologic and overburden information is identified, collected, and analyzed. Surface and groundwater baseline information is also collected to predict the impact of the proposed operation on the water quality of the mine permit and adjacent areas.
- (D) A Cumulative Hydrologic Impact Assessment (CHIA) is subsequently prepared. Following reclamation, the baseline data can be compared with the post-mining data to demonstrate the effectiveness of the reclamation procedures and help evaluate the water quality impacts prior to release of a performance bond.
- (5) To integrate the plan rules, regulations may be added or amended. Other methods to integrate the plan may include internal Policies & Procedures or Coal Advisory Memorandums (CAMs). The operator as well as the regulatory agency may utilize these options. Close communication and cooperation between regulatory authorities are always encouraged.
- (6) The program must comply with statewide water quality requirements pursuant to OAC 460:20-27-11 (i) and (j) which addresses the minimum requirements of surface and groundwater monitoring plans. Therefore, ODM has to comply with statewide water quality requirements through the monitoring program. Discharges of water from areas disturbed by mining activities shall be made in compliance with all applicable statewide water quality requirements in Section 460:20-43-9. If coal mining activities are found to be contributing to water quality problems in a stream or watershed, ODM shall cooperate with the TMDL standards of other state agencies and/or increase its own enforcement activities.
- (7) Public participation requirements are as follows:
- (A) Upon submission of an administratively complete application, the applicant of a coal mining permit shall place an advertisement in a local newspaper of general circulation in the locality of the proposed coal mining and reclamation operation. The advertisement shall be published at least one a week for four (4) consecutive weeks with an additional 30-day comment period to follow. Any person having an interest which is or maybe adversely affected, 460:20-15-5 (c), or any public agency or body shall have the right to protest and request a hearing on an application.
- (B) An additional public participation avenue follows after an operator requests a reclamation release and ODM conducts a field inspection. The public has a right to protest this action prior to bond release. A formal review is conducted after complaint investigations and promulgation of ODM rules and regulations.
- (C) Public participation requirements of the Oklahoma Administrative Procedures Act will be followed in promulgating rules that integrate water quality standards into this program area.
- (8) In evaluation, ODM utilizes surface and groundwater monitoring information to evaluate the effectiveness of mining activities in complying with state water quality standards. The final data is compared to data collected before, during, and after mining activities as well as post-reclamation activities to determine the impacts of the operation

upon the water quality.

(b) Non-Coal Mining and Reclamation. Non-coal mining and reclamation operations regulatory elements are as follows:

(1) The non-coal mining program must comply with Antidegradation and Protection of Beneficial Uses as follows:

(A) Activities in the state with a potential to affect surface water beneficial uses include the mining of: limestone, sand & gravel, granite, gypsum, clay & shale, salt, chat, tripoli, bentonite, and volcanic ash.

(B) According to OAC 460:10-17-14(3), all discharges to State waters shall meet the requirements of the Oklahoma water quality standards. The permittee must comply with the storm water runoff control plan and obtain the appropriate discharge permit as required by the DEQ. The DEQ has jurisdiction over all point source discharges of pollutants and storm water to waters of the State which originate from mining activities. ODM has no regulations regarding sediment control or turbidity standards for streams. Future plans possibly may expand the regulations of gravel mining in Scenic Rivers to various waters of the state.

(B) Each permit application must contain a list of all licenses and permits needed to conduct the proposed mining operation as required by 45 O.S. 724 (I). This includes a list of specific regulatory agencies to be contacted for their respective permitting and enforcement guidelines. If an operator fails to follow the established DEQ or other regulatory agency permitting requirements, the non-coal permit may be suspended, revoked, or modified by ODM.

(2) The Department has specific regulations governing gravel mining operations located on Oklahoma's Scenic Rivers located at OAC 460:10-13-3 and 460:10-13-4. These regulations establish more stringent operational requirements for permitting as outlined in Title 82 O.S., Section 1452. Some of the operational requirements detailed in Section 460:10-13-4 includes:

(A) Reference other state required permits pertaining to the site.

(B) Comply with all state water quality environmental laws when removing or stockpiling gravel.

(C) Mining in or driving into the wetted portion of the river bed is prohibited.

(D) Changing the course of the river is prohibited.

(E) Maintain a 100 foot buffer of natural vegetation between the river's edge and any processing plant site other than normal access to the stream. If no plant is located on the property, the operator shall take precautions to preserve stream bank integrity.

(F) Where appropriate, Best Management Practices (BMP) such as sediment traps and fences shall be installed and maintained to minimize sediment and spoil return to a stream.

(3) Requirements have been added by the Department which include promulgated rules (Effective August 1, 2001) to Subchapter 460:10-13 requiring stricter operational guidelines for High Quality Waters and Outstanding Resource Waters. Prior to ODM permit issuance the applicant must submit approved copies of other state, federal, and local government permits or licenses as required in OAC 460:10-13-4. These permits include but are not limited to:

(A) Storm Water Permit Pollution prevention plan NPDES & OPDES.

(B) Floodplain permit Stream Water Permit.

(C) Copies of notifications sent to state and federal fish and wildlife agencies.

(D) Army Corps of Engineers notification.

- (E) Closure plan.
- (F) Prohibitive practices have been established to protect water quality. These practices include:
- (i) Operations are prohibited from mining in, or driving in the wetted portion of the river bed.
 - (ii) Operations are prohibited from changing the course of the river.
 - (iii) A minimum 100-foot border of natural vegetation between the water's edge and any plant site on the permitted area shall be left undisturbed.
- (4) A provision has been added that will require a stream water monitoring plan to be submitted and implemented prior to and during mining operations. This rule allows for the use of any plan filed with other agency jurisdictions as long as the plan satisfies the parameters referenced in Section 460:10-13-3. ODM defaults to OWRB water quality standards when determining the impact of mining activities to a stream. State enforcement procedures with respect to violations and citations issued by the Department are set in Subchapter 460:10-37.
- (5) Use Support Assessment Protocols procedures must be complied with by every operator conducting non-coal mining and reclamation activities. The operator is responsible for complying with state water quality standards.
- (A) If an investigation of a complaint by ODM personnel shows that non-coal mining and reclamation activities may be having an adverse impact on water quality, ODM shall notify DEQ and the operator. ODM, DEQ, or the operator may investigate the water body in question. The DEQ, Corps, or other authorized regulatory agency will determine whether the waterbody has been impaired.
 - (B) The operator must submit to ODM proof from the jurisdictional agency that the violation has been corrected or is being corrected as required in OAC 460:10-17-9(c).
 - (C) A new permit or a permit renewal cannot be issued if the applicant or operator has any outstanding violations or issues which would place the site out of compliance with any other respective jurisdictional arena.
- (6) The Department follows DEQ sediment discharge standards as established through the OPDES program. All standards are implemented through the OPDES program. All water quality investigations performed by ODM will follow USAP procedures to determine if applicable beneficial uses are maintained.
- (7) Non-coal mining and reclamation programs affecting water quality elements are as follows:
- (A) The act of mining displaces overburden and soils that were previously in a stable and consolidated state. Previously protected strata will be exposed to oxygen and water during excavation. This activity can result in erosion and sediment movement. The construction of diversion berms and terraces will assist in erosion control and containment of sediment at most non-coal sites. Generally, sites are required to implement a DEQ Storm Water Run Off Control Plan and include a DEQ approved Pollution Prevention Plan. Vegetation established at the earliest possible time also assists in water runoff, erosion, and sediment control. All these reclamation practices will limit erosion effects.
 - (B) The Department does have jurisdiction over impoundment or sediment pond closure and reclamation at a non-coal mine site. However, since ODM does not deal with toxic contaminants at a site, ODM does not have specific groundwater

protection requirements. An operator must secure construction design and operation approval from the DEQ under the appropriate Storm Water General Construction Permit.

(C) Regulations regarding the "dredging" method (usually conducted contiguous to a river or stream in sand & gravel mining) stipulate that the operator excavate only to the water table. At this point, a dredge must be placed to pump sand from the formation below the area water table. This method is utilized in the Arkansas River beds of Tulsa, Wagoner, Bryan, Canadian, and Oklahoma Counties. These locations are required to secure permits and/or authorizations for continued activities. This includes a flood plain permit and approval from the local Army Corps of Engineers Administrator.

(8) The technical information and procedures used with the plan are as follows:

(A) The non-coal rules and regulations found in Chapter OAC 460:10 and 45 O.S. Section 721 et seq. require reclamation of each mine site. Permitting reclamation plan guidelines are established in Section OAC 460:10-15-3. The technical review for this plan is the primary tool in evaluating land use issues. The review of procedures for maintaining water quality will be handled by the appropriate agency with the required permits and operational controls.

(B) Areas outside established ODM jurisdictional areas or expertise will be forwarded to the appropriate agency(s) for review assistance or information. This should include any copies of permits or authorizations issued by the agency with jurisdiction.

(9) Integration of the WQSIP may require the Department to revise its general, current, or future policies and regulations. Technology-based controls as well as water quality standards are evaluated by the DEQ for non-coal sites. As always, close communication and cooperation between regulatory authorities are encouraged for permitting and enforcement purposes.

(10) The non-coal program and the mining operators must comply with statewide water quality requirements. As previously referenced in Element 1, the non-coal rules of OAC 460:10 require all discharges to State waters meet the requirements of Oklahoma water quality standards. Compliance with these standards is enforced by the DEQ through the OPDES program. Ultimately all water quality standards are based on OAC 785:45, OWRB rules and regulations.

(11) Public participation requirement are as follows:

(A) All proposed non-coal rules will allow public comments through the participation requirements of the Oklahoma Administrative Procedures Act prior to promulgation.

(B) In addition, 45 O.S. Section 721 et seq., outlines the public participation requirements for permitting of non-coal mining operations and pursuant to 460:10-10, any person having an interest which is or may be affected by a decision on an application or any public agency or body shall have the right to protest and request a hearing on an application. The applicant is required to publish a notice of intent four (4) consecutive weeks with an additional two (2) week comment period to follow. If a request for a hearing is received, an informal conference will be held in the vicinity of the mine site. In addition, non-coal rules allow for an appeal of an informal conference to a formal hearing held in the Oklahoma City office. An additional public participation avenue follows after an operator requests a reclamation release and ODM conducts a field inspection. The public has a right to

protest this action prior to bond release. A formal review is conducted after complaint investigations and promulgation of ODM rules and regulations pursuant to OAC 460:3-1 and 460:10-17.

(12) In evaluation, the implementation of non-coal mining water quality standards rely upon other regulatory agencies and the permits issued under their respective jurisdiction. Guidelines used by other agencies for mining evaluations are not part of the program approval under Title 45 O.S. Section 721 et seq. Close communication between ODM and other jurisdictional agencies will be pursued.

(c) **Coal combustion by-product standards.** The Coal combustion by-product standards placement regulatory elements are:

(1) The program must comply with antidegradation and protection of beneficial uses are as follows:

(A) A permit for CCB placement and reclamation is issued based upon the review of the information submitted by the applicant. This issuance is reviewed for compliance with the requirements set forth in Chapter OAC 460:30, Coal Combustion By-Standards, for mining operations which include the regulation of CCB placed in active or inactive coal or non-coal mines under 45 O.S. Section 940. Chapter 460:30 was enacted by the Oklahoma Legislature in 2003 and is included in its entirety in Appendix B of this document. The permit application contains a comprehensive review of surface and groundwater resources which includes baseline data. Permeability test results of the in-situ liner material to be used must also be reported. This information is used to estimate the probable hydrologic consequences (PHC) of the proposed placement and reclamation plan.

(B) All excess surface runoff from the active face of CCB placement areas shall be directed into a sedimentation pond. Off permit drainage shall be diverted away from any active placement areas. Water discharge shall be in compliance with all applicable State water quality standards.

(C) All water quality protection measures shall include, but not be limited to: timely construction of drainage control structures and diversions, timely reclamation and revegetation, mulching, adequate channel lining to prevent erosion, reducing the rate and the volume of runoff by reclaiming the land to gentle slopes, pass all surface drainage from the disturbed areas through sedimentation ponds, and monitor surface and groundwater during excavation/placement/reclamation activities until final bond release.

(D) Technology-based or engineering controls are required to protect water quality. The permeability of the sides and bottom of CCB placement cells cannot exceed 10-5 cm/sec. Soils that are to be used as a natural or reconstructed liner for groundwater protection shall be tested for permeability using an ODM approved ASTM test.

(2) The procedures for the Application of Use Support Assessment Protocols (USAP) are as follows:

(A) Each operator conducting CCB placement and reclamation activities is responsible for complying with all state water quality standards. If an investigation of a complaint by ODM personnel discloses that these activities may be having an adverse impact on water quality, ODM shall notify the permittee and the agency with jurisdictional authority over these standards. ODM and/or the operator may investigate the water body in question to determine whether the water body has been impaired.

- (B) Water sample frequency, location, parameters analyzed, reporting requirements, and laboratory methods will be evaluated by ODM on a site specific basis.
- (3) Pursuant to the WQSIP, programs affecting water quality are regulated as follows:
- (A) Placement of CCB, construction of drainage diversions, and sedimentation pond construction may impact water quality. Drainage diversions will direct mine runoff into approved sedimentation ponds. Water discharge from the sedimentation pond shall be in compliance with the State and Federal water quality standards through the DEQ OPDES permitting process. Since the constituents of CCB, i.e. CKD and fly ash, are not highly mobile in the subsurface, it does not readily leach to groundwater.
- (B) Prior to placement, CCB combines with water. This mixture solidifies to a consistency of concrete making the material more immobile. ODM requirements for the liner and cover material further inhibit leaching. See Element 1.
- (4) The technical information and procedures used for the WQSIP are:
- (A) Geologic and overburden information is identified, collected, and analyzed.
- (B) Surface and groundwater baseline information is also collected to predict the impact of the proposed placement operation on the water quality of the permit and adjacent areas.
- (C) An impact assessment is subsequently prepared. Following reclamation, the baseline data can be compared with the post mining placement data to demonstrate the effectiveness of the reclamation procedures and help evaluate the water quality impacts prior to release of a performance bond.
- (5) Integration of the WQSIP may require the Department to revise its general current or future policies and regulations. This is completed in accordance with the required public participation process adhered to by ODM.
- (6) The program must comply with statewide water quality requirements. The CCB placement permit applications address the requirements of a surface and groundwater monitoring plan. ODM will comply with statewide water quality requirements throughout the monitoring program:
- (A) Water discharges from areas disturbed by CCB placement and reclamation activities shall be in compliance with all other applicable state agencies water quality standards.
- (B) Groundwater monitoring is required for operators of CCB placement sites.
- (C) Well locations are subject to ODM approval.
- (7) Public participation requirements are as follows:
- (A) Public participation requirements of the Oklahoma Administrative Procedures Act will be followed in promulgating rules that integrate water quality standards into this program area.
- (B) Additionally, O.S. Title 45, outlines the public participation requirements for permitting. Any person having an interest which is or may be adversely affected or any public agency or body shall have the right to protest and request a hearing on an application. The applicant is required to publish a notice of intent four (4) consecutive weeks with an additional two (2) week comment period to follow. If a request for a hearing is received, an informal conference will be held in the vicinity of the mine site. In addition, an appeal of the informal conference to a formal hearing may be held in the ODM's Oklahoma City office.
- (C) An additional public participation avenue follows after an operator requests

a reclamation release and ODM conducts a field inspection. The public has a right to protest this action prior to bond release. A formal review is conducted after complaint investigations and promulgation of Departmental Rules and Regulations.

(8) In evaluation, ODM utilizes surface and groundwater monitoring information to evaluate the effectiveness of CCB placement, to ensure compliance with state water quality standards. The final data is compared to data collected before, during, and after excavation, placement and reclamation activities as well as post reclamation activities to determine the impacts of operations upon the water quality.

APPENDIX A. EFFLUENT LIMITATIONS DISCHARGE STANDARDS [NEW]

Pollutant	Daily Maximum (mg/L)	Maximum 30-Day Average (mg/L)
Iron, total	7.0	3.5
Manganese, total	4.0	2.0
pH	6.0-9.0 range at all times	6.0 – 9.0 range at all times
Settable Solids	0.5 not to be exceeded	0.5 not to be exceeded
Total Suspended Solids	70.0	35.0