

**APPENDIX A. WATER QUALITY STANDARDS IMPLEMENTATION PLAN
DEPARTMENT OF ENVIRONMENTAL QUALITY [REVOKED]**

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PART I. INTRODUCTION

(a) STATUTORY AUTHORITY.

27A O.S. §1-1-202(B) mandates each of the state's environmental agencies to promulgate a Water Quality Standards Implementation Plan (WQSIP) by July 1, 2001, for its jurisdictional areas of environmental responsibility in compliance with the Administrative Procedures Act and pursuant to the provisions of that section. After initial promulgation, each state environmental agency is required to review its WQSIP at least every three years thereafter to determine whether revisions to the plan are necessary.

(b) DEFINITIONS AND TERMS (not included in OAC 252:690-1-2 or OAC 252:690-1-3).

“40 CFR” means Title 40 of the Code of Federal Regulations.

“Section 106” means Section 106 of the CWA, which provides annual grants for water quality management activities and special projects.

“Section 301” means Section 301 of the CWA, which requires the achievement of EPA-established effluent limitations for industrial and municipal point source dischargers.

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

“Section 303(d)” means Section 303(d) of the CWA, which requires states to identify waters that do not or are not expected to meet applicable water quality standards with technology-based controls alone (sometimes referred to as the 303(d) List). States establish priority rankings for the listed waters, taking into account pollution severity and existing and designated beneficial uses of the waters. States must develop TMDLs for waters on this list according to priority rankings.

“Section 303(e)” means Section 303(e) of the CWA, which requires each state to prepare a CPP document.

“Section 306” means Section 306 of the CWA, which directs the promulgation of effluent limitations and standards of performance for certain categories of industries.

“Section 307” means Section 307 of the CWA, which provides the process for establishing effluent limitations for those pollutants otherwise known as “priority” pollutants, including pretreatment standards of performance for industrial facility discharges to POTWs.

“Section 401” means Section 401 of the CWA, which requires applicants for federal licenses or permits for the construction or operation of facilities which may result in discharges into navigable waters to provide the licensing or permitting agency a certification from the state in which the discharge originates or will originate or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate.

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

“AO” means an Administrative Order.

“ARAR” means appropriate, relevant and applicable requirements, when used in the context of Superfund and Brownfields-related investigations and remediations.

“BMP” means Best Management Practice(s), a technique determined to be the most effective, practical means of preventing or reducing pollutant discharges to achieve water quality goals. The term is generally applied in the context of nonpoint sources.

“BUMP” means Beneficial Use Monitoring Program, a program developed by the OWRB pursuant to 27A O.S. §1-3-101, for monitoring the state’s surface and groundwater quality for the purpose of determining compliance with the OWQS and the effectiveness of water quality management activities.

“CAA” means the Clean Air Act and amendments thereto.

“CEI” means Compliance Evaluation Inspection.

“CERCLA” means the Comprehensive Environmental Response, Compensation and Liability Act, also know as Superfund (see also SARA).

“CFR” means Code of Federal Regulations.

“CO” means Consent Order.

“Conventional Pollutants” means the following five pollutants: 5-day biochemical oxygen demand (BOD₅) or, alternatively, carbonaceous biochemical oxygen demand, (CBOD₅), suspended solids, oil and grease, fecal coliform and pH.

“Corp Comm” means the Oklahoma Corporation Commission.

“CPP” means the Continuing Planning Process document, which describes present and planned water quality management programs and the strategy used by the State in conducting these programs. Procedures for developing OPDES permit limitations utilizing the OWQS and OWQS Implementation Criteria are contained in this document.

“CWA” means the Clean Water Act and amendments thereto.

“DEQ” means the Oklahoma Department of Environmental Quality.

“DMR” means Discharge Monitoring Report, a report submitted to the WQD on a monthly basis via a specialized form by OPDES permittees in accordance with the effluent limitations and

monitoring requirements of such permit and standard conditions thereof. Information provided on the DMR is entered into EPA's Permit Compliance System (see PCS).

"ECLS" means the Environmental Complaints and Local Services Division of the DEQ.

"ELG" means Effluent Limitations Guideline, one of a series of technology-based effluent limitations standards, either for direct discharge to navigable waters or for discharge to a POTW, established for certain categories of industries pursuant to Sections 306 and 307 of the CWA.

"EPA" means the Environmental Protection Agency.

"EPA Region 6" means the EPA Region 6 office in Dallas, Texas.

"Fish and Wildlife Propagation" means the OWQS 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 OWQS beneficial use designation for the protection of human health for the consumption of fish flesh.

"HQW" means High Quality Water, defined as a water of the state which possesses an existing water quality which exceeds that necessary to support the propagation of fishes, shellfishes, wildlife, and recreation in and on the water, and which is designated as such in OAC 785:45, Appendix A.

"IU Permit" means Industrial User Permit, a permit issued in accordance with the National Pretreatment Regulation at 40 CFR Part 403 and, as appropriate, the categorical pretreatment standards at 40 CFR Parts 405 through 499.

"LPD" means the Land Protection Division (formerly the Waste Management Division) of the DEQ.

"LUST" means leaking underground storage tank.

"MCL" means maximum contaminant level.

"MSGP" means an industrial Multi Sector General Permit for the discharge of storm water.

"MS4" means Municipal Separate Storm Sewer System.

"NELAC" means the National Environmental Laboratory Accreditation Council.

"Nonpoint source" means a source without a well defined point of origin.

"Non-pretreatment program POTW" means a POTW receiving industrial wastewater discharges which does not have an approved pretreatment program, is not in the process of

developing a pretreatment program, and has not been directed to develop a pretreatment program.

“NOV” means Notice of Violation.

“NPDES” means the National Pollutant Discharge Elimination System, as authorized by Section 402 of the CWA. The DEQ has received delegation of the NPDES program in Oklahoma, except for certain jurisdictional areas related to agriculture and the oil and gas industry retained by ODA and Corp Comm, for which EPA has retained permitting authority. The NPDES program is implemented in Oklahoma via the OPDES program pursuant to the OPDES Act and in accordance with the Memorandum of Agreement between the DEQ and EPA relating to administration and enforcement of the delegated NPDES program.

“NRC” means the U.S. Nuclear Regulatory Commission.

“OAC” means Oklahoma Administrative Code.

“OBDA” means the Oklahoma Brine Development Act.

“OCC” means the Oklahoma Conservation Commission.

“ODA” means the Oklahoma Department of Agriculture.

“ODM” means the Oklahoma Department of Mines.

“OPDES” means Oklahoma Pollutant Discharge Elimination System (see also NPDES).

“OPDES Act” means the Oklahoma Pollutant Discharge Elimination System Act.

“OPDES Permit” means a permit issued pursuant to the OPDES Act.

“OPDES Permitting Section” means the Wastewater Discharge Permit Section of the DEQ’s Water Quality Division.

“ORW” means Outstanding Resource Water, defined as a water of the state which constitutes an outstanding resource or is of exceptional recreational and/or ecological significance, and which is designated as such in OAC 785:45, Appendix A.

“O.S.” means Oklahoma Statutes.

“OSHA” means the Occupational Safety and Health Act and amendments thereto.

“OWQS” means the Oklahoma Water Quality Standards, established in OAC 785:45, as approved by EPA.

“OWQScreen” means a spreadsheet application package developed by the Wastewater Discharge Permit Section, Water Quality Division, for screening point source discharges against OWQS criteria and developing OPDES permit limitations.

“OWRB” means the Oklahoma Water Resources Board.

“Plan” means Water Quality Standards Implementation Plan.

“Point Source” means any discernible, confined and discrete conveyance or outlet, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged into waters of the state. The term “point source” shall not include agricultural storm water runoff and return flows from irrigated agriculture.

“PPWS” means Public and Private Water Supply, an OWQS beneficial use designation for the protection of human health for the consumption of water and consumption of fish flesh and water. This term is not synonymous with primary and secondary drinking water standards, as defined in OAC 252:631, Appendix A.

“SARA” means the Superfund Amendments and Reauthorization Act (see also CERCLA).

“Scenic River” means a river or stream so designated pursuant to the Oklahoma Scenic Rivers Act. A scenic river is automatically considered an ORW.

“SDWA” means the Safe Drinking Water Act and amendments thereto.

“SEL” means the State Environmental Laboratory of the DEQ’s Customer Services Division.

“SWP3” means Storm Water Pollution Prevention Plan.

“SWS” means Sensitive Water Supply, defined as a water of the state which constitutes a sensitive public and private water supply, and which is designated as such in OAC 785:45, Appendix A.

“TBLL” means, in the context of the pretreatment program, Technically Based Local Limits.

“Technology-based limitation” means an effluent limitation based on various levels of technologically-achievable performance.

“UAA” means Use Attainability Analysis.

“UIC” means Underground Injection Control.

“USAP” means Use Support Assessment Protocols, as defined at OAC 785:46.

“USFWS” means the United States Fish and Wildlife Service.

“USGS” means the United States Geological Survey.

“Water quality-based limitation” means an effluent limitation required to attain and maintain water quality standards.

“WQD” means the Water Quality Division of the DEQ.

“WQS Implementation Criteria” means water quality standards implementation criteria, procedures used to implement the OWQS, including mixing zones, regulatory effluent and receiving water flows, determination of effluent wasteload allocations and criteria long term average concentrations, determination of permit limitations and antidegradation policy implementation. Statewide WQS Implementation Criteria of general applicability are found at OAC 785:46. Water quality standards implementation criteria for facilities under DEQ jurisdiction are found in OAC 252:690 and the CPP.

“WQSIP” means Water Quality Standards Implementation Plan.

(c) **REQUIRED WQSIP ELEMENTS.**

Pursuant to 27A O.S. §1-1-202(B), each agency’s WQSIP must include eight elements for each of its jurisdictional areas of environmental responsibility. The eight required elements are:

- (1) **Compliance with antidegradation requirements and protection of beneficial uses.** This element describes the processes, procedures and methodologies utilized to ensure that programs within jurisdictional areas of environmental responsibility comply with antidegradation standards and lead to:
 - (A) Maintenance of water quality where beneficial uses are supported.
 - (B) Removal of threats to water quality where beneficial uses are in danger of not being supported.
 - (C) Restoration of water quality where beneficial uses are not being supported.
- (2) **Application of USAP.** This element describes the procedures to be utilized by the agency in the application of USAP to make impairment determinations. USAP implementation criteria are found at OAC 785:46. The procedure by which a DEQ program area utilizes USAP in making waterbody beneficial use impairment determinations, or the manner in which USAP-derived support/impairment information is utilized in program area functions is described. USAP studies are spatial/temporal waterbody investigations utilizing established numerical criteria and/or implementation guidelines to determine whether existing and designated beneficial uses are being supported or not supported.
- (3) **Description of programs affecting water quality.** This element describes the various agency programs and subprograms within each jurisdictional area of environmental responsibility. A program area is described in sufficient detail to convey the manner and process by which surface water quality standards or groundwater protection implementation is achieved.
- (4) **Technical information and procedures for implementation.** This element includes technical information and procedures to be utilized in implementing the WQSIP.

Technical information, databases, software programs and operational procedures, be they of federal or agency division/program area origin, that are utilized by a program area to implement the DEQ WQSIP are described.

(5) **Integration of WQSIP into water quality management activities.** This element describes how agency administrative rules, program area policies and guidance, and standardized methods of conducting business have been or will be developed to facilitate integration of the WQSIP into the water quality management activities within each jurisdictional area of environmental responsibility.

(6) **Compliance with mandated statewide water quality requirements.** This element describes the manner in which an agency will comply with mandated statewide requirements affecting water quality developed by other state environmental agencies including, but not limited to, TMDL development, point source wastewater discharge permitting activities, and NPS pollution prevention programs. The manner in which a program area utilizes statewide requirements affecting water quality is described in sufficient detail to demonstrate compliance with those requirements.

(7) **Public and interagency participation.** This element requires a summary of written comments and testimony received pursuant to all federal and state interagency reviews and public meetings held by the state environmental agency, and the state environmental agency's response thereto, for the purpose of providing public participation related to its WQSIP. This element applies to both the initial WQSIP promulgation and revisions thereto.

(8) **Evaluation of the effectiveness of agency activities.** This element describes objective methods and means to evaluate the effectiveness of activities conducted pursuant to an agency's WQSIP in achieving water quality standards. BUMP and USAP assessments are the two primary means by which the effectiveness of water quality management activities may be evaluated on a continuing basis. Fish community biotrend monitoring and regulated activity self-monitoring provide additional means of evaluating program effectiveness.

(A) **BUMP.** The OWRB's Beneficial Use Monitoring Program was created in 1998 at the direction of the State Legislature. The program's monitoring is composed of five key elements, as follows:

(i) Periodic river and stream monitoring, itself composed of two components:

(1) Monitoring at a series of fixed locations, determined by the OWRB in consultation with other state environmental agencies.

(2) Monitoring at a series of stations which rotate on an annual basis, the location and monitoring parameters of which are based largely on the state's list of impaired waterbodies (the so-called 303(d) list, established pursuant to Section 303(d) of the CWA).

(ii) Fixed station load (flow) monitoring.

(iii) Fixed station lakes monitoring.

(iv) Fixed station groundwater monitoring.

(v) Intensive investigative sampling involving identified impaired waters, primarily for the purpose of documenting the source of the impairment and determining appropriate restorative actions.

(B) **USAP.** Waterbody impairment and restoration studies, field surveys, monitoring results, or other available data will be assessed utilizing USAP.

(C) **Fish community biotrends monitoring.** This activity provides an additional biologically-oriented measure of the effectiveness of water quality management activities. Together, BUMP data, USAP studies and Fish Community Biotrends monitoring provide the best overall measures of water quality standards compliance and beneficial use support.

(D) **Regulated activity self-monitoring.** Site-specific monitoring of surface waters and groundwater outside the scope of BUMP and USAP is available to the DEQ on a continuing basis from the regulated community through its various regulatory programs.

(i) **OPDES permits.** Self-monitoring required by OPDES permits issued by the Department. Continued compliance of point source dischargers in a waterbody segment with their OPDES permit limitations, as assessed through self monitoring, should correlate with a waterbody's compliance with state water quality standards as assessed through BUMP and USAP investigations. Likewise, self-monitoring of groundwater included in an OPDES permit is useful for assessing groundwater quality management where surface impoundments and/or land application are utilized.

(ii) **Land Protection activities.** Self monitoring of surface waters and groundwater required by solid waste, hazardous waste, underground injection and site remediation regulatory activities yields valuable information for determining compliance with water quality standards and the effectiveness of Land Protection activities.

(iii) **Water supplies.** Self-monitoring of public and private water supplies (both surface waters and groundwater) provides valuable information which may indicate present or impending problems in the maintenance of, or success in the restoration of, the suitability of those surface water supplies and groundwater sources for the public and private water supply beneficial use.

(d) **DEQ JURISDICTIONAL AREAS.**

The jurisdictional areas of the Department of Environmental Quality are listed in 27A O.S. §1-3-101(B), (D) and (E).

PART II. WQSIP ELEMENTS BY JURISDICTIONAL AREA

(a) GENERAL

The eight required WQSIP elements are presented by jurisdictional area, and in some cases individual program areas within the scope of the jurisdictional area. DEQ's WQSIP will evolve to adapt to future changes in the OWQS and WQS implementation criteria.

(b) WATER QUALITY PLANNING

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

The antidegradation policy in the OWQS prohibits an increase in loading that would impair or further impair an existing use. In addition, the policy prohibits degradation of outstanding resource waters and high-quality waters, even if existing and designated uses would still be attained. Current CPP procedures regarding the 303(d) list, TMDL's, and loading allocations for both point and non-point sources of pollution are consistent with these provisions.

(2) **Application of USAP.** Although evaluation of beneficial use support is not a water quality planning responsibility, its TMDL function is closely related and is utilized on a continuing basis to identify water bodies where USAP might be utilized to reevaluate a waterbody's beneficial uses. USAP, water quality standards, and EPA guidance will be considered to set appropriate target end points in the development of TMDLs.

(3) **Description of programs affecting water quality.** The CPP document, developed pursuant to requirements of Section 303(e) of the CWA, provides the basis and guidance for all water quality planning activities at the DEQ. Water quality planning staff are responsible for several water quality planning program elements:

(A) Developing procedures for planning and implementing water quality management programs in the CPP.

(B) Preparing recommendations for the listing and delisting of waterbodies in the 303(d) List.

(C) Establishing TMDLs for 303(d)-listed waterbodies and coordinating TMDLs with other state environmental agencies.

(4) **Technical information and procedures for implementation.** Technical information and procedures used in water quality planning activities are included in the CPP. Because it is such a significant element in water quality planning, the TMDL development process is described in detail. Proposed adoption of a TMDL is considered a major change to the state's Water Quality Management Plan. Public participation in TMDL development and adoption shall be conducted in accordance with state requirements and the procedures outlined in the CPP. The TMDL loading allocation process culminates in the allocation of pollutant loads among various point sources, nonpoint sources, natural background sources and a margin of safety (MOS), according to the following equation:

$$\text{TMDL} = \text{WLA} + \text{LA} + \text{MOS}$$

TMDL is loading capacity, the maximum amount of pollutant loading a water body can receive without violating water quality standards. WLA is wasteload allocation, the portion of a receiving water's loading capacity that is allocated to existing and future

point sources. LA is load allocation, the portion of a receiving water's loading capacity that is allocated to existing and future nonpoint sources and to natural background sources. MOS is margin of safety, the prescribed mechanism to account for the uncertainty in determining the amount of pollutant load and its effect on water quality. MOS is typically considered implicitly with conservative assumptions within calculations or models, explicitly during allocation of loads, or both. The major components of TMDL development are assessment of existing conditions, determination of maximum allowable loading, and allocation of loadings.

(A) Assessment of Existing Conditions

(i) Water Quality

The first step in assessing the current conditions is to gather available data and information on the water body. At a minimum, the water quality data (if available) that was used for listing the water body (re: 303(d) List) should be reviewed. The sufficiency and adequacy of existing data is evaluated and described. The DEQ will consider data to be sufficient and adequate when the data accurately characterizes the conditions of the water body, watershed, pollutant, and pollutant sources throughout typical geographic and temporal conditions with reasonable certainty. Some TMDL projects will require additional watershed information relating to particular water quality conditions, as existing data alone may be insufficient to support the analytical needs of TMDL projects. Data on low-flow conditions, storm-flow conditions, and seasonal variations are gathered when appropriate to the situation. Data will be evaluated considering USAP, water quality standards, and EPA guidance.

(ii) Pollutant Load

Before pollutant loads are allocated among sources, the location and types of sources, and the current and projected pollutant load for each source are identified. Current loading and source contributions are established by measuring pollutant loads directly, calculating or estimating loads from water quality and flow data, estimating loads with mathematical models, or using a combination of these methods. Examples of data utilized for pollutant source analysis include:

- watershed and sub watershed boundaries
- hydrologic interaction between surface water and groundwater
- locations of stream segments
- locations of pollutant sources
- types of pollutant sources
- anticipated growth of discharges
- meteorological/rainfall data and runoff coefficients
- land uses and land cover
- soil types.

An inventory is developed of all known factors in the watershed which influence water quality. These factors might include

permitted industrial and municipal wastewater discharges, concentrated animal feeding operations (CAFOs), waste application sites, cropland, forestry operations, industrial storm water runoff, urban runoff, construction activities, and other sources such as natural background. This information will be collected and maintained by sub-watershed where possible to enhance the identification of cause-and-effect relationships. The watershed inventory is compiled from land use data, special investigations, DEQ complaint investigations, DEQ permit databases, surface water monitoring data, input from other agencies, and watershed stakeholder input through an outreach process.

(B) Maximum Allowable Loading

A water body's loading capacity is an estimate of the maximum amount of pollutant loading the water body, considering critical conditions (i.e. flow, temperature, etc.), can receive over time without exceeding water quality standards. Hydrological, biological, chemical, and pollutant fate and transport data are required to calculate a water body's loading capacity. The maximum loading capacities of a waterbody are determined in most cases using a water quality model or models adapted specifically for the waterbody in question. The model used is selected on a case by case basis and is based on available resources, the identified pollutant source(s) and the availability of water quality data.

(C) Allocation of Loadings

Future growth, spatial and temporal variations in flows and loadings, antibacksliding, antidegradation and pollutant sources and source categories must be considered and incorporated when developing a loading, unless it is demonstrated that one or more of these factors is not relevant to the particular load allocation.

(D) Pollution Allocation Strategies

There are three common methods for allocating loads; equal percent removal, equal effluent concentrations, and a hybrid method. Other methods are considered if necessary.

(i) Equal Percent Removal

Equal percent removal exists in two forms. In one, the overall removal efficiencies of the sources are set so that they are all equal. In the other, the incremental removal efficiencies beyond the current discharge are equal.

(ii) Equal Effluent Concentration

This method is self-evident. It is similar to equal percent removal if influent concentrations at all sources are approximately the same.

(iii) Hybrid Method

With this method, the criteria for waste reduction may not be the same from one source to the next. One source may be allowed to operate unchanged while another may be required to provide the

entire load reduction. More generally, however, a proportionality rule may be assigned that requires the percent removal to be proportional to the input source loading or flow rate.

(iv) Other Methods

Any other method contained in EPA guidance. The DEQ shall approve the use of the method on a case-by-case basis.

(E) Pollutant Trading

Where appropriate and technically feasible, tradeoffs among wasteload allocations are considered. Technological feasibility, economic issues, and regulatory authority are evaluated when trading allocations. Pollutant trades are acceptable so long as water quality standards (including antidegradation regulations and policies) and minimum applicable technology-based controls are met.

(F) Margin of Safety

The margin of safety (MOS) is the prescribed mechanism to account for the uncertainty associated with TMDL projects. Guidelines for appropriate margins of safety are included in the CPP. The MOS can be included in more than one of the TMDL analytical steps. To represent the MOS, conservative assumptions should be used in completing one or more of the following steps:

- (i) derivation of numeric water quality targets
- (ii) determination of pollutant sources
- (iii) representation of pollutant fate and transport relationships
- (iv) determination of the degree of pollutant reduction achievable through management measures and control actions

(5) Integration of WQSIP into water quality management activities. DEQ administrative rules and WQD policies are currently in place which integrate the requirements of the WQSIP into water quality planning. Should WQSIP revisions be necessary in future years, rule changes and policy changes will be made to address and incorporate such requirements.

(6) Compliance with mandated statewide water quality requirements. TMDL activities comply with the procedures established in the CPP. Coordination of TMDL activities among state agencies is the primary responsibility of the TMDL Work Group, which is chaired by the DEQ and includes the state environmental agencies with water quality responsibilities.

(7) Public and interagency participation. Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) Evaluation of effectiveness of agency activities. The 303(d) listing/delisting process, which in turn utilizes USAP, will be used to evaluate the effectiveness of all DEQ programs related to surface water quality.

(C) POINT SOURCE DISCHARGES - OPDES PERMITTING

The primary mechanism for controlling pollution from point source discharges to waters of the state is through the OPDES permitting, compliance monitoring and enforcement processes. OPDES permits include such effluent limitations as are necessary to protect water

quality and existing and designated beneficial uses of the receiving water(s). OPDES permit enforcement activities are described in Part II(r) of the Plan.

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

(A) **General.** The OWQS provides a three-tiered antidegradation policy designating levels of protection. An OPDES permit and the pollutant limitations therein must, at a minimum, serve to protect the existing and designated beneficial uses of the receiving surface water, thereby affording it protection from degradation at the most basic level (Tier 1). In those cases where existing or proposed discharges are to a designated HQW, SWS, or to waters of ecological and/or recreational significance or endangered/threatened species habitat (OAC 785:46, Appendix B waters), a higher degree of protection from degradation (Tier 2) must be afforded the waterbody. In no case will any discharge be permitted which would, if it occurred, lower existing water quality in an SWS or HQW, regardless of the date of its original existence. A designated Scenic River and/or Outstanding Resource Water (ORW) and their watersheds must be afforded the highest degree of protection (Tier 3), which may even involve denial of a permit to discharge or denial of an increased pollutant loading in the discharge, depending on whether the discharge existed on or prior to June 11, 1989 (non-storm water), or June 25, 1992 (storm water)

(B) **Fact Sheet/Statement of Basis.** An OPDES permit's Fact Sheet/Statement of Basis must address how permit limitations are developed, which in turn assures compliance with the OWQS and WQS implementation criteria for protecting existing and designated beneficial uses. To ensure that compliance with antidegradation requirements is addressed in an individual OPDES permit, the permit's Fact Sheet or Statement of Basis shall specifically describe the antidegradation level applicable to the receiving water and any permitting considerations necessary to afford that level of protection. In cases where permit issuance is denied based on Tier 2 or Tier 3 antidegradation criteria, the statement of basis for the permit denial shall so state. Authorizations issued under a General Permit do not require separate fact sheets. As General Permits expire and are reissued, the associated fact sheets will incorporate a discussion of antidegradation requirements and protection of beneficial uses.

~~(C) **Transfer of WQS implementation criteria to DEQ.** Pursuant to SB 549, portions of the OWRB's WQS implementation rule for surface waters, OAC 785:46, are being reallocated to the DEQ for inclusion in the DEQ's WQS implementation rule, OAC 252:690. In general, the OWRB is retaining WQS implementation regarding regulatory receiving water flows, mixing zones and reasonable potential to exceed water quality criteria. The DEQ is assuming responsibility for wasteload allocation, developing criterion long term averages and permit limitations, and effluent and background monitoring requirements. These criteria are found at OAC 252:690, Subchapter 3.~~

(2) **Application of USAP.** The making of beneficial use support/impairment determinations for surface waters is not a component of this program area, but such determinations of beneficial use support or impairment may directly affect the OPDES permitting process in terms of the level of pollutant control technology that may need to be employed for discharges to an impaired waterbody and compliance with the anti-

backsliding provisions in Section 402(o) of the CWA. This becomes particularly important when a facility's effluent contains the pollutant(s) causing or contributing to the impairment of a waterbody. For this reason, OPDES permitting procedures will include a review of the 303(d) list and available USAP data applicable to the receiving water.

(3) Description of programs affecting water quality.

(A) **Direct discharges.** Municipal POTWs and industrial facilities under DEQ jurisdiction which discharge process wastewaters directly to waters of the state are required to obtain OPDES permits from the Department. Included are discharge authorizations under a General Permit for those facility classes for which general permits have been developed, discharges from water treatment plant wastewaters (OAC 252:631, Subchapter 1), and discharges generated by groundwater remediation activities (OAC 252:611, Subchapter 5). These OPDES permits limit the concentration and loading of specified pollutants in such discharges and require periodic self-monitoring and reporting of levels of the limited pollutants in the facility's discharge(s). Numeric limitations result from the application of the more stringent of technology or water quality-based criteria. OPDES permits may include narrative limitations, effluent or receiving water background monitoring, schedules of compliance and such other special conditions as may be necessary to prevent, control or abate pollution.

(B) **Indirect discharges.** OPDES permits may also take the form of individual IU permits for industrial facilities which discharge to a non-pretreatment program POTW.

(4) Technical information and procedures for implementation.

(A) **Permitting procedures.** OPDES permit limitations are developed using the more stringent of technology-based limitations (secondary treatment standards for municipal POTWs and industrial category-specific ELGs for industries) or water quality-based limitations derived utilizing the OWQS and WQS implementation criteria in OAC 785:46 and OAC 252:690, Subchapter 3. Where technology-based limitations for conventional pollutants are not sufficient to maintain OWQS-prescribed criteria a WLA is developed, approved by EPA Region 6, and publicly noticed. Where technology-based limitations for conventional pollutants are not sufficient to maintain OWQS-prescribed DO criteria for fish and wildlife propagation, a DO-based WLA for oxygen demanding substances (ammonia plus either BOD₅ or CBOD₅) and DO is generated, approved by EPA Region 6, and publicly noticed. DO-based monthly average ammonia limits, as well as technology-based ammonia limits for certain categories of industries, are compared against the toxicity-based monthly average ammonia limit derived from the 6 mg/l chronic screening value for ammonia at the edge of the chronic mixing zone. Where the toxicity-based ammonia limit is more stringent than either a DO-based limit or a technology-based limit, the toxicity-based limit is established in the permit. Where a DO-based ammonia limit applies for a portion of the year, but not the entire year, a toxicity-based limit applies during the season for which the DO-based WLA is silent. For pollutants with numerical criteria in the OWQS, water quality-based permit limitations are required where a measurable pollutant in an effluent exhibits

reasonable potential. WLAs and criterion LTAs are calculated, and permit limits are developed from the criterion LTAs. The most stringent monthly average limit and its associated daily maximum limit are established in the permit. Where reasonable potential is exhibited to exceed an NRWQC human health/fish consumption criterion in the absence of a promulgated state criterion, effluent monitoring, rather than a limitation, is required and OWRB is notified so that they may consider the need for a water quality criterion. Permit limits are developed in accordance with OAC 252:690, Subchapter 3. Where an industrial technology-based limitation applies to a pollutant and reasonable potential is not exhibited for the effluent to exceed an applicable water quality criterion for that pollutant, the technology-based limitation is itself screened to determine whether it would, if the pollutant were present in the effluent at a concentration equal to the technology standard's monthly average limit, exhibit reasonable potential. If so, a water quality-based permit limitation is required for that pollutant.

(B) **OWQS criteria screening.** Because of the complexity of the mathematical and statistical computations necessary to screen for reasonable potential, calculate WLAs and limiting criterion LTAs, and develop permit limits, the WQD has developed two spreadsheets for this purpose, one for discharges to streams and the other for discharges to lakes. Together they are referred to by the DEQ as OWQScreen. The Permitting Section will utilize, maintain and update OWQScreen, as necessary, to remain current with the OWQS and WQS implementation criteria in OAC 785:46 and OAC 252:690, Subchapter 3. Site specific OWQScreen spreadsheets will be developed on an as-needed basis for receiving waters for which site-specific metals criteria are developed and adopted into the OWQS in accordance with OAC 785:45, Appendix E. Should TBLLs be required in DEQ-issued IU permits or in municipally-issued IU permits, OWQScreen also provides the capability to calculate the entire array of (theoretical) water quality-based permit limits for pollutants with numerical criteria in the OWQS (i.e., limits that would be established in a given OPDES permit were reasonable potential demonstrated to exceed an applicable water criterion).

(C) **Effluent and background monitoring.** Ten data points are required to properly characterize the standard deviation of an effluent or background data distribution. Often there are no background data available and only a single effluent data point. Where the use of such limited effluent and background data does not result in reasonable potential for a pollutant, a permit writer must determine whether additional effluent or background monitoring is warranted as a permit condition. Procedures are established at OAC 252:690, Subchapter 3, to objectively and uniformly evaluate where additional monitoring is warranted where less than 10 data points are available.

(5) **Integration of WQSIP into water quality management activities.** Because of the SB 549-mandated reallocation of a major portion of the WQS implementation criteria to the various state environmental agencies, the DEQ has promulgated WQS implementation criteria for point source discharges and groundwater protection in OAC 252:690, based on the OWQS and the foundational statewide implementation criteria in OAC 785:46.

(6) **Compliance with mandated statewide water quality requirements.** Procedures for the development of individual and general OPDES permits issued to municipal POTWs and industrial facilities utilize and are in compliance with all applicable statewide surface water quality requirements. Compliance with statewide groundwater quality requirements in OPDES permits is described in Part II(q). OPDES permits require that environmental laboratories utilized in fulfilling analytical monitoring requirements be certified by the SEL (see Part II(n)). In the permitting of surface coal mine discharges, the WQD must interface with the ODM, since surface coal mine discharge permit limitations and monitoring requirements are tied to the status of the mine (active, Phase I SMCRA bond release awaiting Phase II release, of post-Phase II release). The WQD must also interface with Corp Comm in the permitting of LUST groundwater remediation-related discharges. The WQD must receive notification from Corp Comm when a LUST remediation project is terminated so that the OPDES permit may be terminated.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** For surface waters, BUMP data and beneficial use support/impairment studies utilizing USAP are capable of providing long term evaluations in selected areas of whether OPDES permitting activities (as well as OWQS water quality criteria, WQS implementation criteria and permitting procedures upon which the water quality-based portion of the program is based) adequately protect assigned beneficial uses and maintain or improve water quality on site-specific, segment and basin-wide levels. Where existing and designated beneficial uses are not being met according to Tier 1 antidegradation requirements or where water quality degradation is experienced counter to Tier 2 or Tier 3 antidegradation requirements, the program's point source permitting procedures, as well as the OWQS and WQS implementation criteria, may need reexamination. Background pollutant levels, where used in the OPDES permitting process, may be compared against BUMP and USAP data where permit limitations appear not to protect and maintain beneficial uses as intended. The use of unrepresentative background information may over- or under-estimate the assimilation capacity of a receiving water. Likewise, BUMP and USAP procedures may need to be reexamined.

(9) **Nutrient limited watershed.** A permittee shall monitor monthly for total nitrogen and/or total phosphorus if the discharge is to a nutrient limited watershed as designated in OAC 785:45.

(d) POINT SOURCE DISCHARGES – PRETREATMENT

(1) **Compliance with antidegradation requirements and protection of beneficial uses.** Incorporation of the general pretreatment regulations at 40 CFR Part 403 into OPDES permits for POTWs with approved pretreatment programs or POTWs developing such pretreatment programs provides an additional means of compliance with antidegradation requirements and protection of beneficial uses.

(2) **Application of USAP.** The making of beneficial use support/impairment determinations for surface waters is not a component of this program area.

(3) **Description of programs affecting water quality.** IU permits for industrial discharges to POTWs in approved pretreatment program municipalities are issued by the designated municipal control authority. General oversight is provided by the DEQ's State Pretreatment Coordinator, who acts as the pretreatment program approval authority. The Pretreatment Coordinator reviews pretreatment program submittals, revisions to previously approved pretreatment programs, and pretreatment program annual reports for compliance with the National Pretreatment Regulations found at 40 CFR Part 403. The DEQ issues IU permits for industrial discharges to non-pretreatment program POTWs. Inspection and enforcement oversight for both approved pretreatment programs and IU permits for industries discharging to non-pretreatment program POTWs is provided by the WQD ~~M&I~~ Industrial Enforcement Section.

(4) **Technical information and procedures for implementation.** OWQScreen spreadsheets provide the capability to calculate potential effluent limits for TBLLs. The State Pretreatment Coordinator will disseminate this information to municipalities with approved pretreatment programs for their use.

(5) **Integration of WQSIP into water quality management activities.** Integration of the WQSIP into water quality management activities is accomplished through the OPDES permitting process.

(6) **Compliance with mandated statewide water quality requirements.** Pretreatment program procedures utilize and are in compliance with all applicable statewide surface water quality requirements.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** The effectiveness of pretreatment program water quality management activities is directly monitored on a statewide basis by Pretreatment Compliance Inspections and Pretreatment Audits of POTW pretreatment programs, as well as through a POTW's compliance with its permit limitations, as tracked by PCS.

(e) **POINT SOURCE DISCHARGES – WHOLE EFFLUENT TOXICITY (WET)**

(1) **Compliance with antidegradation requirements and protection of beneficial uses.** Compliance with antidegradation requirements and protection of beneficial uses is provided through incorporation of WET testing procedures and, if necessary, WET limits into OPDES permits. A narrative toxicity criterion implementation strategy for ammonia was developed cooperatively between the DEQ, OWRB and EPA Region 6 permitting staff in November 2000 and was revised in January 2001.

(2) **Application of USAP.** The making of beneficial use support/impairment determinations for surface waters is not a component of this program area.

(3) **Description of programs affecting water quality.** Toxics staff reviews OPDES permit WET testing requirements during the permit drafting process. In addition to reviewing draft permits, the Toxics staff reviews WET testing summary reports submitted by the regulated community in accordance with the conditions of their OPDES permits to ensure that the information input to PCS via DMRs accurately reflects actual test results and the completion of valid testing. Where persistent lethality has been demonstrated through repeated WET testing, the permittees are required to conduct a TRE. TREs or TIEs may be required for intermittent lethality or persistent sublethality. Permits may

also contain provisions for management practices to control toxicity. The Toxics staff reviews TRE/TIE progress, provides general oversight to the TRE/TIE process, and coordinates DEQ involvement regarding corrective actions and related WET or pollutant-specific limitations to be incorporated into affected OPDES permits.

(4) **Technical information and procedures for implementation.** OWQScreen provides the capability to determine the appropriate type of WET test, critical dilution and dilution series for an OPDES permit. Toxics staff, through critical review of submitted WET test reports, will assist permitting staff in determining whether WET limits are necessary and whether performance-based monitoring frequency reductions are warranted.

(5) **Integration of WQSIP into water quality management activities.** Integration of the WQSIP into water quality management activities is accomplished through the OPDES permitting process.

(6) **Compliance with mandated statewide water quality requirements.** The Toxics staff reviews OPDES permit WET testing requirements during the permit drafting process to ensure that appropriate WET testing is prescribed in the permit and is in accordance with the requirements of OAC 785:45 and OAC 252:690, Subchapter 3.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** The effectiveness of biomonitoring permitting procedures, the review of WET testing results and the oversight of TRE/TIE activities is evaluated to a considerable extent through the affected facilities achieving compliance with the OWQS narrative toxicity criterion. BUMP and fish community biotrend information may also provide valuable feedback on the effectiveness of biomonitoring activities.

(f) POINT SOURCE DISCHARGES – STORM WATER MANAGEMENT

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

(A) **General.** In a manner similar to that for individual OPDES permits, requirements for sector-specific industrial facilities, regulated construction sites, and MS4s must protect the existing and designated beneficial uses of the receiving surface water at the Tier 1 level. Tier 2 and Tier 3 levels of protection apply to storm water discharges as well. Where Tier 3 level protection is necessary (except for storm water discharges from temporary construction activities), only storm water discharges existing as of June 25, 1992, may be permitted. In no case will any discharge be permitted which would, if it occurred, lower existing water quality in an SWS or HQW, regardless of the date of its original existence.

(B) **Storm water construction permit.** The DEQ's Storm Water Construction Permit was issued on ~~September 9, 1997, and was modified on February 1, 1999~~ September 13, 2007, pursuant to 27A O.S. § 2-14-101 *et seq.*, and in accordance with OAC ~~252:002, Subchapter 15~~ 252:004. The ~~modified~~ permitting process utilizes a watershed-specific sensitive area identification system for endangered species rather than the more general county-indexed identification system developed by EPA. Applications for a construction storm water permit for a development site within a sensitive area are scrutinized in

greater depth by the USFWS. Stricter erosion control methods and best management practices may be required where Tier 3 level protection is required.

(C) **Storm water Industrial stormwater multi-sector general permit.** The DEQ Multi-Sector General Permit for storm water discharges associated with industrial activities was issued on ~~October 2, 2000~~ April 7, 2006. Where no additional storm water-related pollutant loading is permitted in a Scenic River watershed, an applicant for an MSGP may either utilize an existing discharge or provide the capability to capture and totally retain all storm water that enters or is incident upon such property.

(D) **Small MS4 general permit.** The DEQ Final Small MS4 General Permit for small municipal separate storm sewer system discharges was issued on February 8, 2005.

(2) **Application of USAP.** The making of beneficial use support/impairment determinations for surface waters is not a component of this program area.

(3) **Description of programs affecting water quality.** Regulated construction sites must obtain a Storm Water Construction Permit authorization. Sector-specific industrial facilities under DEQ jurisdiction which discharge storm water directly to waters of the state are required to obtain an OPDES Industrial MSGP authorization. The Department used the NPDES (EPA) Multi-Sector Industrial Permit (issued on September 29, 1995 by EPA) until October 2, 2000, when the OPDES (State) MSGP was issued. Storm water permits may also take the form of individual industrial OPDES permits for facilities discharging to waters of the state directly or via discharge to the storm water collection system of an MS4 municipality.

(4) **Technical information and procedures for implementation.** Application, authorization and termination procedures, and coverage limitations are specified in the permits. Information provided by the USFWS is utilized in determining where more restrictive conditions are required in storm water general permits to protect sensitive habitat areas identified by the USFWS. Inspections are conducted when termination of coverage under a storm water permit is requested in order to verify that the site is stabilized and/or storm water discharges have ceased.

(5) **Integration of WQSIP into water quality management activities.** The State MSGP requires an annual Site Compliance Evaluation Report to be completed by facility owners, managers or operators. The report will describe reportable spills and storm water-related events which may have affected surface water or groundwater quality. Changes or amendments to SWP3s or BMP documents will also be documented through this report. This new reporting method replacing the use of reporting storm water monitoring activities by DMR will require facility owners, managers and/or operators to become directly involved with permit compliance.

(6) **Compliance with mandated statewide water quality requirements.** Storm water permitting activities utilize and are in compliance with all applicable statewide surface water quality requirements.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** The State MSGP requires facility owners, managers and/or operators to become directly involved with permit compliance and will ensure a more effective storm water management program. Storm water

discharges from certain industrial sectors are subject to numeric effluent limits and monitoring requirements. DMRs submitted by these facilities are evaluated for compliance with effluent limits. Municipalities with an MS4 permit must submit an annual report describing stormwater control activities and improvements.

(g) NONPOINT SOURCE POLLUTION

The WQD is the focal point for assessment and consideration of loads from nonpoint sources. The effect of nonpoint source pollution is an integral part of TMDLs and basin-wide planning.

(1) Compliance with antidegradation requirements and protection of beneficial uses. To the extent possible through site investigations and cooperation with other state agencies, the TMDL process takes into account nonpoint sources of pollution in establishing point source wasteload allocations and nonpoint source load allocations which will comply with antidegradation requirements and protect existing and designated beneficial uses.

(2) Application of USAP. Although evaluation of beneficial use support is not a water quality planning staff responsibility, its surface water quality-related programs, particularly the TMDL program, will be utilized on a continuing basis to identify water bodies where USAP might be utilized to reevaluate a waterbody's beneficial uses as affected by nonpoint sources. USAP, water quality standards, and EPA guidance will be considered to set appropriate target end points in the development of TMDLs.

(3) Description of programs affecting water quality. Water quality planning staff are responsible for two water quality planning program elements, both of which involve the need to account for nonpoint sources of pollution:

- (A) Procedures for planning and implementing water quality management programs in the CPP.
- (B) Preparing recommendations for the listing and delisting of waterbodies in the 303(d) List, and development of TMDLs.

(4) Technical information and procedures for implementation. Technical information and procedures used in water quality planning activities, including accounting for nonpoint sources of pollution, are included in the CPP.

(5) Integration of WQSIP into water quality management activities. Federal and state rules and WQD policies are in place that integrate the requirements of the WQSIP into water quality planning. Should WQSIP revisions be necessary in future years, rule changes and/or policy changes will be made to address and incorporate such new requirements.

(6) Compliance with mandated statewide water quality requirements. TMDL activities require consideration of nonpoint sources of pollution and must comply with the procedures established in the CPP which involve consideration thereof. Coordination of TMDL activities among state agencies is the primary responsibility of the TMDL Work Group, which is chaired by the DEQ and includes the state environmental agencies with water quality responsibilities.

(7) Public and interagency participation. Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** The 303(d) listing/delisting process, which in turn utilizes USAP, will be used to evaluate the effectiveness of DEQ programs related to nonpoint source aspects of surface water quality.

(h) **SECTION 106 POLLUTION CONTROL PROGRAM**

This program area is not directly applicable to WQS implementation.

(i) **WATER QUALITY PROTECTION AND CERTIFICATION**

Surface water and groundwater quality protection are described under the various program areas in the Plan. Water quality certification under Section 401 of the CWA is a specific responsibility of the WQD.

(1) **Compliance with antidegradation requirements and protection of beneficial uses.** Section 401 water quality certifications are the vehicle that a state uses to ensure that Federal permits comply with State antidegradation requirements and existing and designated beneficial uses are not compromised. These water quality certifications are DEQ documents that impose conditions in federal permits or licenses that are specifically intended to ensure attainment of the specific antidegradation requirements and protection of beneficial uses assigned in the OWQS.

(2) **Application of USAP.** The making of beneficial use support/impairment determinations for surface waters is not a component of the Section 401 certification process, although beneficial use support/non-support determinations and resulting listing/delisting of waterbodies on the 303(d) List may affect Section 401 certifications.

(3) **Description of programs affecting water quality.** Applicants for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, dredge or fill, or other activities which may result in any discharge into, or pollution or alteration of, waters of the state must obtain a Section 401 water quality certification from the DEQ. Applications for Section 401 certifications are submitted to the DEQ in accordance with OAC 252:611, including mitigation plans when required by the federal permitting entity.

(4) **Technical information and procedures for implementation.** Technical information and procedures used to implement water quality protection are located at OAC 252:611. The DEQ maintains a database of all water quality certifications issued to projects on waters of the state.

(5) **Integration of WQSIP into water quality management activities.** Existing Section 401 certification procedures are consistent with the purpose and content of this Plan.

(6) **Compliance with mandated statewide water quality requirements.** Compliance with statewide water quality requirements is an inherent part of the Section 401 certification process. Water quality certification uses permit review, permit conditions, and the expertise of other state agencies to accomplish the task of ensuring compliance with statewide water quality requirements.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** The effectiveness of Section 401 water quality certification can be observed in the attainment and maintenance of existing and designated beneficial uses by the affected facilities or operations.

(j) **OPERATOR CERTIFICATION**

This program area is not directly applicable to WQS implementation.

(k) **LAND PROTECTION**

Several jurisdictional areas (UIC, hazardous waste, solid waste, Superfund, Brownfields and radiation management) are subsumed under Land Protection.

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

All permits and approvals issued by the LPD include technical provisions to protect groundwater and/or surface water. Should releases occur, the owner/operator of a regulated facility will be required to take appropriate measures to protect fresh water sources, and conduct remedial actions as necessary.

(A) **UIC.** UIC permits provide a technically sound basis to ensure that injected fluids do not migrate from the permitted zones of injection and compromise the protection of underground sources of drinking water. Financial assurance is required for closure (plugging and abandonment) and post-closure care (groundwater monitoring) is required as applicable.

(B) **Hazardous waste/solid waste.** For all land-based hazardous waste disposal facilities, existing rules require that the owner/operator monitor for releases to groundwater. Surface water is generally only monitored if a release is suspected. Monitoring wells are the usual method of release detection. Plans for closure and post-closure and any appropriate monitoring or remedial actions are required in the permit. Financial assurance is required for closure and post-closure care (maintenance and monitoring). The Solid Waste program issues permits for technically complete applications that ensure protection of groundwater and prevention of surface water contamination from runoff. Financial assurance for post-closure care and monitoring of groundwater are included in Municipal Solid Waste Management permits.

(C) **Superfund/Brownfields.** LPD is charged with Superfund responsibilities of the state under CERCLA except for SARA Title III planning requirements. The Brownfields Redevelopment/Voluntary Cleanup program is included in this jurisdictional area.

(D) **Radiation management.** Radiation protection permitting and licensing requirements ensure that antidegradation requirements are met and protection of beneficial uses of both surface waters and groundwaters are maintained.

(2) **Application of USAP.** The making of beneficial use support/impairment determinations for surface waters is not a component of this program area. However, in voluntary cleanups, use support assessments obtained through the USAP process will be considered in final remedy decision-making during the risk assessment and exposure scenario development.

(3) **Description of programs affecting water quality.**

(A) **UIC.** UIC permits are issued to private and commercial facilities wishing to inject fluids underground for disposal or mineral extraction purposes under OAC 252:652 and 40 CFR Parts 144 through 146 and 148.

(B) **Hazardous waste/solid waste.** Hazardous and solid waste permits are issued to treatment, storage and disposal facilities (TSDs) and municipal and commercial solid waste facilities. The hazardous waste program issues permits

for TSDs pursuant to OAC 252:205 and 40 CFR Parts 260 through 270. Solid waste permits are issued under OAC 252:510 and OAC 252:520. Facilities wishing to close solid or hazardous waste management facilities must comply with all the post-closure care and groundwater monitoring requirements of the above-cited regulations.

(C) **Superfund/Brownfields.** This program identifies, investigates, designs, and conducts remediation of uncontrolled hazardous waste sites and conducts groundwater remediation where feasible. The Superfund program acts in a support role to EPA and other state emergency response entities in emergency response actions. This program has a positive effect on water quality by identifying and remediating waste sources that have significant potential to affect water quality, and by containing, monitoring or remediating affected groundwater and surface water. Brownfields authority is found at 27A O.S. §2-15-101 *et seq.*, and Superfund authority is found at 40 CFR Part 300.

(D) **Radiation management.** Licensing activities for the use and management of byproduct material, special nuclear material, and sources of radiation, except for activities pertaining to diagnostic x-ray systems, are controlled by the LPD's Radiation Management Section since completion of delegation of these authorities from the NRC.

(4) **Technical information and procedures for implementation.**

(A) **UIC.** UIC permits specify the conditions under which a UIC well will be permitted. Considerations include zone(s) of injection, rates, pressures, temperatures and annulus monitoring requirements. Monitoring locations, frequencies, parameters and reporting are specified. A detailed closure plan including financial assurance is also required in the permit.

(B) **Hazardous waste/solid waste.** Hazardous waste and solid waste permits specify conditions for facility construction and operation, groundwater monitoring, and reporting specific parameters that indicate releases to groundwater. The location and frequency of monitoring wells are designed to detect releases should they occur. Action levels are specified in the permit. Risk-based remediation would consider protection of aquifers in the decision-making process. Surface water monitoring occurs when potential releases to surface water exist, or when impacted groundwater interfaces with surface water. Closure, post-closure and corrective action plans, as well as financial assurance, are required by the permits.

(C) **Superfund/Brownfields.** Superfund/Brownfields include determinations of ARARs for remedial decision-making or risk-based closure for protection of surface water and groundwater. Groundwater uses will be considered to determine cleanup and remediation decisions. Emergency response actions will also include protection of public water supplies, surface water and groundwater. The remediation of sites in the Superfund/Brownfields program sometimes requires the treatment and discharge of wastewater and/or stormwater. The program coordinates with WQD to identify the appropriate discharge and permitting requirements. These requirements would be evaluated as ARARs in any cleanup decisions. Many sites in these programs have historic groundwater and surface water contamination. Cleanup decisions are risk-based and generally

include MCLs or other criteria to protect groundwater or surface water. Antidegradation and beneficial uses are considered for cleanup. Cleanup for some sites may include containment of contaminants to prevent further degradation of groundwater or surface water. A systematic monitoring program may verify natural attenuation of contamination in groundwater.

(5) **Integration of WQSIP into water quality management activities.** The Department currently has rules (both federal and state) and agency policies in place that fully implement applicable portions of the OWQS. Departmental rule or policy changes will be made as necessary to implement new or modified aspects of the OWQS.

(6) **Compliance with mandated statewide water quality requirements.** Siting of new facilities and regulated units must be permitted in such a manner that sensitive surface water and groundwater supplies are protected. In addition, operators of permitted facilities are required to perform appropriate monitoring so that releases can be detected and contained in a timely manner and corrective action, if necessary, can be implemented to remediate an impacted water body.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** The effectiveness of LPD activities to protect water quality is evaluated by the routine monitoring of permitted facilities for both groundwater and surface water impacts. On-site inspections of permitted facilities and site visits to voluntary cleanup efforts ensure compliance with applicable rules and regulations. In addition, the environmental indicators reporting requirements provide a suitable evaluation methodology for the permitted and voluntary remediation sites within the jurisdiction of the LPD.

(1) **WATER AND WASTEWATER TREATMENT SYSTEMS (NON-INDUSTRIAL)**

This program area includes the construction permitting of municipal and other publicly-owned water and wastewater treatment systems, including the land application of wastewater and non-industrial sludge (biosolids) therefrom, as well as the approval of private individual and small on-site sewage treatment and disposal systems.

(1) **Compliance with antidegradation requirements and protection of beneficial uses.** There is an inherent presumption that adherence to minimum design and construction standards will achieve the objectives of water quality maintenance and support of existing and designated beneficial uses of surface waters and groundwaters. On occasion, water quality-based considerations associated with the attainment and maintenance of higher quality waters, especially relating to dissolved oxygen depletion in receiving waters, may be established through TMDLs requiring a level of sewage treatment more stringent than "secondary." In such cases, construction permitting procedures will ensure that construction permits issued for such systems provide the required level of treatment. Applications for construction permits are reviewed to ensure that new facilities or modifications to existing facilities are not inconsistent with treatment requirements and size restrictions contained in the Water Quality Management Plan.

(2) **Application of USAP.** The making of beneficial use support/impairment determinations for surface waters is not a component of this program area.

(3) **Description of programs affecting water quality.** Minimum water and wastewater system construction standards and biosolids/water plant residuals reuse and disposal

standards are found at OACs 252:606 252:621, 252:626, 252:631, 252:641, ~~252:648~~ and 252:656. These minimum standards have been demonstrated to achieve water treatment and distribution objectives and sewage collection, treatment and disposal objectives on a widespread geographical basis, including the State of Oklahoma. Construction permit applications and sludge management plan applications are required to contain engineering reports, plans, specifications and sludge management or residuals disposal plans sufficient to demonstrate compliance with these minimum standards for construction or advanced levels of sewage treatment. Local DEQ offices approve the design of private individual and small on-site sewage disposal systems in accordance with OAC 252:641. These systems are inspected and installations are approved by the ECLS Division through its local offices.

(4) **Technical information and procedures for implementation.** Minimum water and wastewater system construction standards and biosolids/water plant residuals reuse and disposal standards are found at OACs 252:606 252:621, 252:626, 252:631, 252:641, ~~252:648~~ and 252:656.

(5) **Integration of WQSIP into water quality management activities.** The Department will from time to time revise or amend rules concerning construction standards or operational requirements to better protect the quality of waters of the state. Internal policies and guidelines will also be used to integrate the Plan into water and wastewater treatment system permitting activities.

(6) **Compliance with mandated statewide water quality requirements.** Applicable rules for construction permitting and biosolids/residuals beneficial reuse provide for consideration of and compliance with statewide water quality requirements.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** The Department will review groundwater and surface water quality information obtained through monitoring activities conducted by DEQ, OWRB, OCC, USGS, and others as well as site specific information to determine whether groundwater and surface water quality is being impacted.

(m) **EMERGENCY RESPONSE**

This program area is not directly applicable to WQS implementation.

(n) **ENVIRONMENTAL LABORATORY SERVICES**

(1) **Compliance with antidegradation requirements and protection of beneficial uses.** The SEL provides analytical support for DEQ and other state agency programs that seek to define compliance with antidegradation requirements and protection of beneficial uses. The Fish Community Biotrends monitoring program and the Toxics and Reservoirs program may be used to evaluate long-term trends, both positive and negative, in fish population and toxic contaminant concentrations in fish flesh.

(2) **Application of USAP.** The SEL may play a supporting role for other state agency functions which are charged with USAP-related activities. One of the SEL's most significant contributions to USAP efforts is its Fish Community Biotrends monitoring program.

(3) **Description of programs affecting water quality.** The SEL provides essential support for Section 106 pollution control activities, and data produced by the SEL is used

extensively in programs funded under Section 106 for areas within DEQ's jurisdiction. It provides support and review of QA Project Plans for all program areas. Laboratories which report results for compliance with NPDES/OPDES permit requirements are required to hold certification from the SEL's laboratory certification unit. The Fish Community Biotrends monitoring program and the Toxics and Reservoirs program may be used to evaluate effects of both point source and nonpoint source discharges on fish populations and the human health aspects of eating fish flesh. The SEL provides support in developing sampling designs, sample analysis, and data analysis for DEQ monitoring activities as well as for private citizens and other state agencies. The SEL provides analytical support, when needed, for special purpose point source compliance monitoring and evaluation, nonpoint source pollution studies, as well as for the TMDL process. The SEL provides analytical support to the WQD for compliance determination, investigations, remediation-related monitoring and other monitoring related to actual or suspected groundwater pollution by water and wastewater treatment facilities, as well as the land application of both municipal and industrial wastewaters and sludges. The SEL provides analytical support to the LPD for compliance determination, investigations, remediation-related monitoring and other monitoring related to identification of hazardous substances, hazardous waste and solid waste disposal sites, Superfund and Brownfield sites and residuals from past practices of radioactive waste disposal. The SEL provides analytical support to both the LPD and Corp Comm in the regulation of UIC wells. The SEL also provides analytical support to the DEQ and other state environmental agencies for emergency response situations.

(4) **Technical information and procedures for implementation.** The SEL assesses the health of aquatic communities via the formal protocol established in its Fish Community Biotrends monitoring program. It conducts its Toxics and Reservoirs program according to an established sampling and analytical protocol. The SEL is also working towards becoming accredited by NELAC.

(5) **Integration of WQSIP into water quality management activities.** The Laboratory Certification Program and the SEL's move towards NELAC certification will ensure that data of known quality and comparability is available for environmental programs.

(6) **Compliance with mandated statewide water quality requirements.** The Toxics and Reservoirs program is administered as a direct implementation of and is in compliance with the toxics in fish tissue criteria found at OAC 785:45. The SEL also provides a Section 106 supporting role for other DEQ functions which have direct responsibilities for implementing the OWQS and WQS implementation criteria.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** The effectiveness of SEL-rendered services to other Section 106-funded activities is measured largely through the effectiveness of those individual programs. The effectiveness of the Toxics and Reservoirs program, in terms of both initiating and terminating fish tissue consumption alerts, is measured largely by its ability to be communicated to affected consumers and the public at large. Evaluation of the effectiveness of interdivisional and interagency cooperation in investigating possible nonpoint sources and evaluating point source dischargers to determine if they cause or contribute to the alert levels of toxics in fish tissue is provided in part by BUMP data and in part by the effectiveness of the individual

programs involved. The effectiveness of the Fish Community Biotrends Monitoring Program is likewise measured in terms of BUMP data as well as the effectiveness of the individual programs involved in investigating causes of changes in aquatic communities.

(o) **HAZARDOUS SUBSTANCES**

Aspects of DEQ's water quality standards implementation related to the regulation of hazardous substances is described in Part II(k), Land Protection.

(p) **WELLHEAD AND SURFACE SOURCE WATER PROTECTION**

This jurisdictional area is subsumed under the WQD's source water protection program, which includes both surface waters and groundwaters.

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

The DEQ source water protection program provides for a focus on water quality antidegradation and protection of beneficial uses for both surface waters and groundwaters.

(2) **Application of USAP.** The making of beneficial use support and impairment determinations for surface waters is not a component of this jurisdictional area.

(3) **Description of programs affecting water quality.** The DEQ's source water protection program has a surface source water protection program which parallels the concept of the existing EPA-approved wellhead protection program, as well as a continuation of the existing wellhead protection program. The delineation process will follow the same format in identifying three protection zones for both surface sources and groundwater sources. Similar procedures and guidelines are used to encourage local participation and implementation.

(4) **Technical information and procedures for implementation.** The WQD Source Water Protection Plan provides the technical guidance and procedures for implementation of this program.

(5) **Integration of WQSIP into water quality management activities.** Integration of the Plan will be through rules and internal WQD policies and guidelines, as well as coordination with other state and federal agencies.

(6) **Compliance with mandated statewide water quality requirements.** The groundwater portion of the Source Water Protection Plan provides a basis for delineation of special source groundwaters. Coordination with other affected entities is addressed in the Source Water Protection Plan.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** Special monitoring may be initiated if potential sources of contamination of groundwater or surface water are identified.

(q) **GROUNDWATER PROTECTION**

(1) Descriptions of groundwater quality protection procedures in the various DEQ program areas are provided in the subsections dealing with Land Protection, Water and Wastewater Treatment Systems, and Wellhead and Surface Source Water Protection.

(2) For those locations identified in OAC 785:45, Appendix H as a limited use groundwater, and there is a request for the use of said groundwater, certain limitations on the extraction and the use of the groundwater apply.

(f) UTILIZATION AND ENFORCEMENT OF OWQS AND WQS IMPLEMENTATION

This subsection describes compliance inspection and enforcement activities of permitted point source dischargers and other wastewater treatment facilities conducted by the local ECLS offices and the WQD Municipal and Industrial ~~Inspection and Enforcement Section~~ Sections (hereafter referred to as the ~~M&I Section~~). Utilization of the OWQS and WQS implementation by other DEQ program areas is described under the other jurisdictional areas of this Plan.

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

The ~~M&I WQD Municipal and Industrial Enforcement Section~~ Section ensures that antidegradation requirements and protection of beneficial uses is maintained by performing inspections of and, if necessary, taking enforcement action for significant permit violations against OPDES permit holders. Required inspections, bypass reporting requirements, and procedures for investigating and resolving complaints are directed towards removing threats to water quality, restoration of water quality where beneficial uses are threatened, and maintaining water quality where beneficial uses are supported. Noncompliance with administrative rules and OPDES permits subjects the facility to enforcement action. The ~~M&I WQD Municipal and Industrial Enforcement Sections~~ ensure ~~Section~~ ensures that wastewater treatment systems comply with antidegradation requirements and protect beneficial uses by monitoring such systems and initiating enforcement action against treatment systems that violate OPDES permit conditions. Total retention (non-discharging) lagoon systems are inspected by ECLS to ensure the systems are being properly maintained. Systems that land apply wastewater or sludge are inspected to ensure the systems follow the technical requirements and criteria in their land application permits and/or sludge management plans. Systems which are not properly maintaining and operating their systems based on these inspections are subject to enforcement action.

(2) Application of USAP. The making of beneficial use support/impairment determinations for surface waters is not a component of this jurisdictional area.

(3) Description of programs affecting water quality. All OPDES permittees are subject to inspections of facilities to ensure that they are being properly operated and maintained. Additionally, permit holders are required to implement a self-monitoring program and submit analytical results to the DEQ as required by each facility's OPDES permit. These results are received monthly, logged into the PCS database, and reviewed to ensure compliance with the OPDES permit. All unpermitted system bypasses are required to be reported in order to track which facilities may be experiencing collection system or treatment facility overloading problems. The ~~M&I WQD Municipal and Industrial Enforcement Sections~~ are ~~Section~~ is an integral part of the environmental complaint process, bearing the responsibility of investigating and carrying out enforcement action when necessary, often in conjunction with environmental specialists from the ECLS Division's local county offices. ECLS Division environmental specialists in the local DEQ offices conduct inspections of all permitted wastewater facilities at a prescribed frequency. When significant violations are identified, notices to comply are issued by the local DEQ office and follow up inspections are conducted within two

weeks. If the violation persists, the facility is referred to the WQD to initiate formal enforcement procedures. Violations of on-site sewage regulations (OAC 252:641) are identified both through the inspection of system installations and through the investigation of complaints of surfacing or discharging sewage. In both cases, the ECLS Division and the WQD have implemented standard enforcement procedures including NOV, COs and AOs designed to ensure prompt return to compliance by violators. Methods of monitoring systems include inspections, review of bypass reports and review of discharge monitoring reports. Additionally, the environmental complaint process is effective in determining systems which may pose threats to water quality. Systems which do not discharge wastewater are routinely inspected and enforcement action is taken if the system is not properly maintained. All treatment systems are required to comply with their OPDES permit and failure to comply subjects the system to enforcement action.

(4) **Technical information and procedures for implementation.** Facility performance is monitored through inspections, DMRs, bypass reports and the filing of environmental complaints. One or more of these systems may be used to initiate enforcement action against a facility as they may identify a failure of the facility to comply with permit requirements and state or federal regulations. Enforcement actions may include an NOV, CO or AO. Enforcement actions may involve compliance schedules, which are tracked through a database and reviewed monthly to ensure compliance with the tasks required to bring the system into compliance. The ECLS Division has established procedures for facilities found not in compliance with applicable regulations. Typically, when the ECLS environmental specialist identifies a critical violation, he/she issues the facility a written warning to correct the situation within two weeks. If the facility remains non-compliant after two weeks, the facility is referred to the Water Quality Division to initiate formal enforcement action. ECLS has developed a procedure to ensure compliance with on-site sewage regulations. Non-compliance may result from either installation deficiencies found during the construction inspection or from cases of surfacing sewage found during investigations of complaints. In either case, if an NOV and followup inspection do not result in the system coming back into compliance, the owner of the system may be subjected to other enforcement actions.

(5) **Integration of WQSIP into water quality management activities.** To the extent integration of the Plan requires the Department to establish policies of general applicability and future effect, that implement statutory language, or that describe the procedure and practice before the DEQ, the DEQ will promulgate such policies through the rule making provisions of the Administrative Procedures Act. Rules will be added or amended as appropriate to the various chapters of the DEQ's existing rules.

(6) **Compliance with mandated statewide water quality requirements.** The M&I WQD Municipal and Industrial Enforcement Sections' ~~Section's~~ water quality management activities comply with applicable statewide water quality requirements by enforcing adherence to the effluent limitations and other special conditions contained in OPDES permits, which are based on the WQMP, CPP, OWQS and WQS implementation criteria.

(7) **Public and interagency participation.** Part III of this appendix contains a summary of comments received and responses thereto relating to promulgation of DEQ's WQSIP.

(8) **Evaluation of effectiveness of agency activities.** EPA Region 6 oversees the water quality management activities of the M&I WQD Municipal and Industrial Enforcement

Sections ~~Section~~ for major dischargers, including CEIs, enforcement activities and compliance schedules.

(s) ENVIRONMENTAL REGULATION, POLLUTION CONTROL AND ABATEMENT.

This program area is related to the assumption of jurisdiction by the DEQ of surface water and groundwater pollution issues not subject to the statutory authority of other state environmental agencies. Such issues would be subsumed under other program areas in this Plan. Thus, this program area is not directly applicable to WQS implementation.

(t) PUBLIC AND PRIVATE WATER SUPPLIES.

This program area is related to drinking water supplies and treatment and thus is not directly applicable to WQS implementation.

(u) AIR QUALITY.

This program area is not directly applicable to WQS implementation.

(v) COMPUTERIZED WATER QUALITY DATA INFORMATION SYSTEM.

This program area is not directly applicable to WQS implementation.

PART III. PUBLIC AND INTERAGENCY PARTICIPATION

(a) **GENERAL.**

(1) **Initial promulgation of Plan.** The initial promulgation of the Plan will receive public and interagency review and comment. This required element will be completed when the public participation period has been completed and a response to all comments received as a result of the public participation process has been appended to the Plan.

(2) **Revisions to Plan.** As with initial promulgation, triennial reviews of and revisions to the Plan, as well as any intermediate revisions thereto, shall undergo public and interagency review, and the response to all comments received shall be appended to the Plan.

(b) **SUMMARY OF COMMENTS RECEIVED AND RESPONSE TO COMMENTS.**