

# ANNUAL SITE ENVIRONMENTAL REPORT



Brazos Riverbank Whitney Dam 2019

**2019**

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## EXECUTIVE SUMMARY

Southwestern Power Administration's (Southwestern) Annual Site Environmental Report (ASER) serves as the chief reporting mechanism for site environmental performance information within the Department of Energy (DOE), and as a valuable resource for shared and collaborative environmental protection and performance information to Southwestern stakeholders. The ASER meets the requirements of DOE Order 231.1B and was prepared in general accordance with the April 2019 guidance titled *Guidance for Preparation of the 2019 Department of Energy Annual Site Environmental Reports*. Southwestern is committed to environmental protection, compliance, and sustainability, and has made sincere efforts to ensure that the validity and accuracy of the reported data are correct. Southwestern's key environmental involvement includes an emphasis on the protection of ecological resources. Southwestern accomplishes the protection efforts through the environmental program elements such as protecting water resources, transmission of clean hydropower energy, oil spill prevention practices, reduction of greenhouse gas emissions, and comprehensive project reviews to ensure the protection of living organisms, migratory birds, federally threatened or endangered species, and historic properties. Southwestern continues to strive to minimize effects to natural and cultural resources and continual improvement in the area of environmental compliance and sustainability. Southwestern's mission to market and reliably deliver federal hydroelectric power to its end-use preference customers, and to protect the environment while maintaining reliability in power transmission.

## INTRODUCTION

Southwestern was established in 1943 by the Secretary of the Interior as a Federal Agency that today operates within the DOE as authorized by Section 5 of the Flood Control Act of 1944. As one of four Power Marketing Administrations in the United States, Southwestern markets hydroelectric power in Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas. The dams have a generating capacity of approximately 2,181 megawatts.

Southwestern transmits power from twenty-four of the U.S. Army Corps of Engineers (USACE) multipurpose dams. The dams used in cooperation with USACE for power transmission: Beaver Dam, Blakely Mountain Dam, Broken Bow Dam, Bull Shoals Dam, Clarence Cannon Dam, Dardanelle Lock and Dam, DeGray Dam, Denison Dam, Eufaula Dam, Fort Gibson Dam, Greer's Ferry Dam, Harry S. Truman Dam, Keystone Dam, Narrows Dam, Norfolk Dam, Ozark Lock and Dam, Robert D. Willis Hydropower Project at Town Bluff Dam, Robert S. Kerr Lock and Dam, Sam Rayburn Dam, Stockton Dam, Table Rock Dam, Tenkiller Ferry Dam, Webbers Falls Lock and Dam, and Whitney Dam.

Southwestern's mission is to market and reliably deliver federal hydroelectric power with preference to public bodies and cooperatives. This is accomplished by maximizing the use of federal assets to repay the federal investment and participating with other water resource users in an effort to balance their diverse interests with power needs, within broad parameters set by the USACE, and implementing public policy. By law, Southwestern markets and deliver power to public bodies and rural electric cooperatives. Southwestern has over one hundred preference customers. The preference customers in turn, serve over eight-million end-use customers throughout Kansas, Missouri, Oklahoma, Arkansas, Louisiana, and Texas, as shown in *Figure 1*.

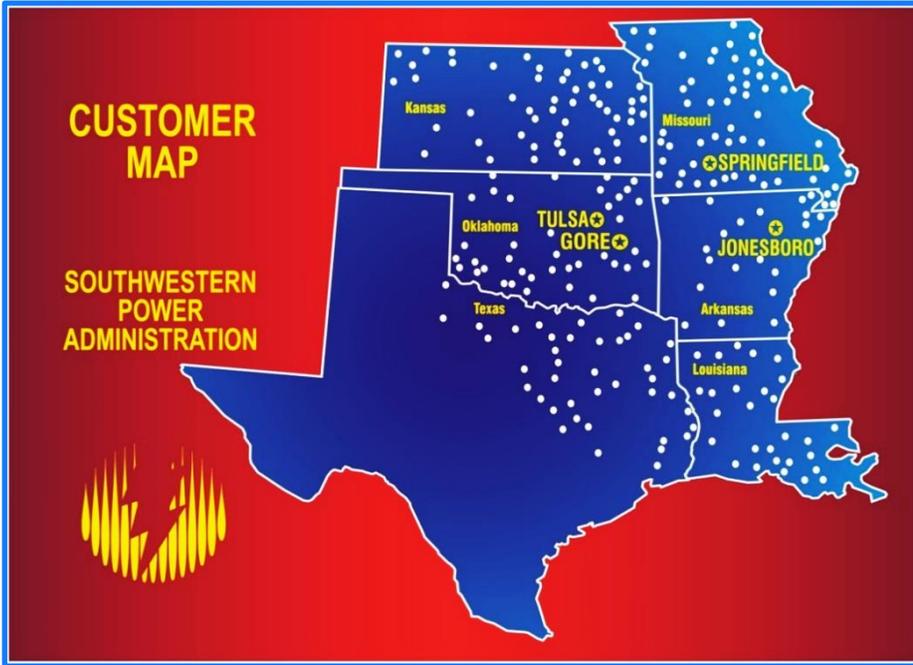


Figure 1. Southwestern's Service Territories and Regions

As shown in Figure 2 below, Southwestern operates and maintains 1,380 miles of high-voltage transmission lines, substations and switchyards, and a communications system that includes microwave, VHF radio, and fiber optics. Offices are located in Jonesboro, Arkansas; Springfield, Missouri and Tulsa, and Gore, Oklahoma.

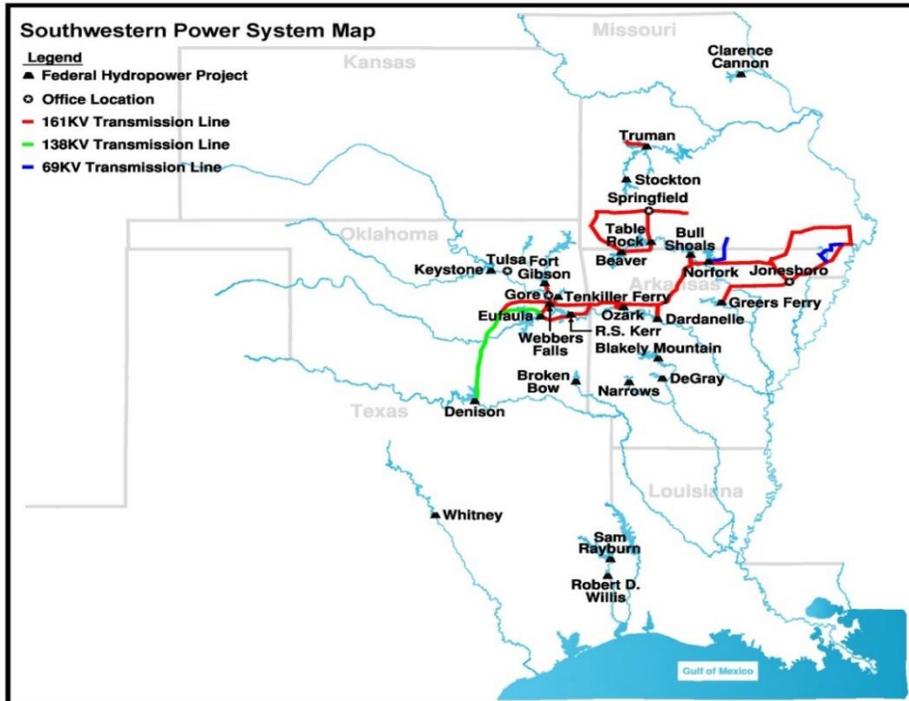


Figure 2. Southwestern Power System Map

Continuous power scheduling and dispatching are conducted by staff in the Springfield Operations Center. Southwestern is managed from the agency headquarters office in Tulsa, Oklahoma. Southwestern employs a total of 171 full-time Federal and contract employees.

In Fiscal Year (FY) 2019, Southwestern marketed and delivered approximately 5.0 billion kilowatt hours of hydropower from the 24 Federal hydroelectric projects in its marketing region. The agency's annual revenue of \$194 million was used to pay the cost of operating and maintaining the generation and transmission facilities, and to repay the principal and interest on the Federal investment.

In FY 2019 Southwestern's hydropower generated enough renewable energy to save the Nation the fossil fuel equivalent of an estimated 2.2 million tons of coal, 32.6 billion cubic feet of gas, or 7.0 million barrels of fuel oil.

Southwestern's environmental responsibility goes beyond renewable energy. Southwestern works with federal, state, and local agencies to ensure that concerns about water quality and quantity are adequately addressed, and coordinates with other public and private entities to minimize hydropower impacts to fish and bird populations, and their habitats.

Southwestern's facilities generate very small amounts of hazardous and non-hazardous industrial waste as a secondary effect to utilizing electrical equipment, maintaining maintenance facilities, and performing radio tower communication maintenance and system upgrades. In addition, small amounts of universal waste, polychlorinated biphenyl (PCB) contaminated oil-filled electrical equipment, used petroleum oils, and greenhouse gas emissions are generated as byproducts of Southwestern's operations. Within Southwestern's facilities, the primary potential pollutants that could affect water, soil, and air resources include unplanned releases of dielectric insulating oil (PCB and non-PCB contaminated), sulfur-hexafluoride gas circuit breaker insulating gas, and herbicides used for vegetation management control along ROW. Standard operating procedures, training, controls and diligent processes are in place and monitored regularly, for successful implementation of pollution prevention controls. To ensure strict quality assurance standards are met, Southwestern utilizes only National Environmental Laboratory Accreditation Program (NELAP) certified laboratories, which utilize quality control standards and policies using Environmental Protection Agency (EPA) standard test methods. Adherence to these methods helps to ensure that the results of any laboratory tests are both accurate and legally defensible.

## COMPLIANCE SUMMARY

This section summarizes Southwestern's Calendar Year 2019 compliance results for the significant environmental statutes and regulations, DOE internal environmental and sustainability orders summarizes any environmental violations or reportable environmental occurrences and provides a listing of active environmental related permits.

## ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

### COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, & LIABILITY ACT (CERCLA)

This Act, referred to as Superfund, was designed to develop an inventory of hazardous disposal sites, reporting of accidental hazardous substance releases, establish liability and protocol for the cleanup of hazardous substance release. To promote planning by Federal and state agencies to clean up hazardous disposal or spill sites, and cleanup of inactive hazardous waste sites. CERCLA imparted authorization to the EPA for response and mitigation of polluted sites. During FY 2019 Southwestern did not implement CERCLA hazardous waste cleanups at their facilities. There are no Southwestern facilities listed on the Federal Agency Hazardous Waste Compliance Docket, or Non-National Priorities List. Southwestern contracts with EPA and State permitted equipment disposal facilities for the disposal of; PCB contaminated equipment, used oil, electrical equipment carcasses, universal waste, hazardous waste, and environmentally sensitive materials. Southwestern maintains a designation of the non-potentially responsible party (NON-PRP) by implementing proper removal and

discarding of hazardous materials, and mitigation of site contaminants. The disposal facilities utilized by Southwestern are audited for due diligence to ensure CERCLA and EPA compliance. CERCLA hazardous substances, in an excess of the reportable quantity, must be reported to the National Response Center within 24 hours of the release. Southwestern facilities did not have an incidence of release, equal to or above the reportable quantity in the Fiscal Year of 2019.

Southwestern conducts facility disposal due diligence audits to comply with Federal, State, and Local hazardous material requirements. Southwestern also conducts Phase I Environmental Site Assessments (ESA) to comply with the *All Appropriate Inquiry* standards for Southwestern real estate interest acquisitions. The Phase I ESA is completed to research the current and historical uses of a property as part of a commercial real estate transaction and identify potential or existing environmental contamination liabilities. The all appropriate inquiry rule applies to any party who seeks to assert protection from CERCLA liability as an innocent landowner, prospective purchaser, or contiguous property owner. Southwestern implemented two (2) Phase I Site Assessment for the Southwestern Tulsa Office Building and the Walnut Grove Tower Facility during the Fiscal Year of 2019.

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#### EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW (EPCRA) AND SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA)

EPCRA encourages and supports emergency planning efforts at the state and local levels. The Act provides public and local governments with information concerning potential chemical hazards present in their communities. Facilities are required to disclose hazardous substances stored in potentially harmful quantities. Southwestern substations and field offices did not surpass the regulatory threshold quantities for each facility of Tier I and II reporting and notification requirements for the Fiscal Year of 2019.

EPCRA and SARA revised and extended CERCLA to include SARA Title III amendments, 40 CFR 355, Subpart C. The new revisions dictate reportable quantity releases of SARA extremely hazardous substances or CERCLA hazardous substances must be reported immediately to the local and state emergency response planning commissions. Southwestern did not have reportable quantity releases that required notice to the public during the Fiscal Year of 2019. EPCRA Subpart 313 requires facilities to complete and submit (Form R), Toxic Chemical Release Inventory form report. Form R should include the toxic chemicals manufactured, processed, or used in quantities exceeding the toxic chemical threshold for the calendar year. Southwestern classification with the North American Industry Classification System (NAICS) is NAICS CODE 22112. The EPA regulation for utilities states: All 2211 codes for Electric Utilities, six-digit industry codes are covered, with the following caveat for all covered codes: Reporting is only required for facilities that combust coal, oil or both to generate power for distribution in commerce.

Southwestern does not combust or use fossil fuels to generate power nor manufacture, process or use toxic chemicals listed in 40 CFR 372.65 or 40 CFR 372.28 above their threshold quantity. Southwestern does not have mandatory reporting of the Toxic Release Inventory (TRI) to the EPA for the Fiscal Year of 2019.

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#### RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

RCRA governs and manages hazardous wastes materials. Hazardous waste identification is a dynamic process. A stand-alone, updated comprehensive list of hazardous waste is not available. In compliance with 40 CFR Part 261.2A, hazardous waste material must be classified as a solid waste initially and subsequently classified as a hazardous waste substance. The EPA defines solid waste as garbage, refuse, sludge, or other discarded material (including solids, semisolids, liquids, and contained gaseous materials). If waste is not a solid waste,

then it is not regulated under RCRA. EPA defines hazardous waste by four characteristics; ignitability-flammable, corrosivity- rust or decompose, reactivity-explosive, toxicity-poisonous.

Southwestern's primary waste streams consist of; used transformer oils, recyclable conductor or electrical equipment metals, construction debris, used wood poles, batteries, electronics equipment, light bulbs, and miscellaneous small amounts of materials utilized to maintain equipment or office facilities. Electrical equipment and oils may be contaminated by PCBs. Southwestern has implementation procedures to eliminate PCBs from Southwesterns' facilities and transmission system. In compliance with RCRA regulatory statutes, Southwesterns' Environmental Protection Program has been integrated with the Environmental Management System (EMS) as SWPA 450.2, during the 2019 Fiscal Year. SWPA 540.2 is established and implemented to minimize the volume and toxicity of wastes. Including monitoring the collection, transportation, processing and disposal of solid wastes. The SWPA 540.2 is utilized to encourage recycling; assure the safety, health, and welfare of the public; protect natural resources. Southwestern continues to improve the identification, characterization, quantification, and reporting of RCRA waste streams.

The majority of Southwestern's Hazardous wastes are classified and managed as Universal Wastes. No RCRA related Notices of Violations were issued against Southwestern facility during the Fiscal Year of 2019. Southwestern's facilities generate, store, and dispose of small quantities of waste, and were not subject to universal waste, RCRA reporting or notice requirements for the Fiscal Year of 2019. Southwestern is classified by the EPA as a very small quantity generator (VSQG).

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#### FEDERAL FACILITIES COMPLIANCE ACT (FFCA)

The FFCA is the primary mechanism EPA uses to address violations at Federal facilities for statutes EPA does not have penalty or order authority. The particular violation(s) determines the specific type, scope, and effect of the FFCA. EPA and the affected facility would jointly sign a Federal Facilities Compliance Agreement, and, will provide that the violating facility take specified steps to achieve full compliance with the underlying statute.

The RCRA (Subtitle C/Hazardous Waste, Subtitle D/Solid Waste, and Subtitle I/Underground Storage Tanks), the Safe Drinking Water Act, and the Clean Air Act impart penalty or order authority to the EPA at variance with federal facilities. The FFCA authorizes EPA to assess penalties or issue orders. There were no FFCA agreements, penalties, and fines or violations issued against Southwestern or Southwestern Federal employees during the Fiscal Year of 2019.

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#### NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The NEPA of 1969 was enacted by Congress to establish a framework for environmental review of actions carried out by the Federal government. NEPA imposes certain responsibilities on the Federal government including an obligation to assure a safe and healthy environment free from degradation and to achieve a wide range of beneficial uses without risk to health or safety. NEPA was enacted for two principal purposes: to ensure that Federal agencies carefully consider significant environmental impacts arising from projects under agency jurisdiction, and to establish a procedure by which members of the public are afforded an opportunity for meaningful participation in the agency's consideration of the proposed action. The 10 CFR Part 1021 DOE NEPA Implementing Procedures are utilized to implement the procedural provisions of NEPA and are adapted to the DOE and Power Marketing Administration activities. Southwestern must implement NEPA regulations upon project actions, documenting the 10 CFR Part 1021 considerations, and providing recommendations for Federal actions that may significantly affect the environment. NEPA documentation includes categorical exclusions (CX), Environmental Assessments (EA), Records of Decisions (ROD), Finding of No Significant Impact

(FONSI), Environmental Impact Statements (EIS), and Final Environmental Impact Statements (FEIS). A summary of the 2019 Southwestern NEPA classes of actions, is shown in Table 1.

**Table 1: 2019 Summary of Classes of NEPA Actions**

NEPA Action		NEPA Action	
CXs Completed	5	FEISs Completed	0
EAs Completed	1	EISs in Process	0
EAs In Process	0	RODs Issued	0
FONSI Issued	1	<b>Total Number of NEPA Actions</b>	7

A summary of Southwestern's 2019 NEPA CXs, are listed in Table 2 below.

**Table 2: NEPA Categorical Exclusions**

Project Name (10 CFR Part 1021, Appendix B Reference)
<b>2019</b>
<ul style="list-style-type: none"> <li><a href="#">Weleetka Substation Grounding and Drainage Improvement Project (B1.3)</a></li> </ul>
<ul style="list-style-type: none"> <li><a href="#">Springfield Backroad Project (Part B 1.3(i))</a></li> </ul>
<ul style="list-style-type: none"> <li><a href="#">Nixa Primary Control Center Garage Construction Project (B1.15)</a></li> </ul>
<ul style="list-style-type: none"> <li><a href="#">Jonesboro Substations and Radio Tower Buildings Paint Project (Part B1.3)</a></li> </ul>
<ul style="list-style-type: none"> <li><a href="#">Redfork Radio Station Repairs and Improvements Project (Part B1.3 and B1.23)</a></li> </ul>

#### TOXIC SUBSTANCES CONTROL ACT (TSCA)

The TSCA regulations prohibit the manufacture, processing, and distribution of PCB in commerce, except as exempted by EPA. TSCA established chemical reporting requirements and standards that apply to manufacturers, importers, and processors. The EPA, through TSCA regulations, regulate the use, labeling, and disposal of PCBs. Some states, such as Arkansas, regulate PCB disposal and handling through their state RCRA Programs. The TSCA regulations also prescribe elements of requirements for Southwestern's radon, lead-based paint, and asbestos aspects. Southwestern has an ongoing reduction and elimination initiative for oil PCB concentrations in the testable electrical equipment. Reduction goals consist of < 50 parts per million (ppm) PCB measurable content.

Southwestern's oil-circuit breakers and their associated bushings have been replaced with gas-circuit breakers. The remaining oil containing electrical breakers and transformers have tested < 50 ppm PCB content. A portion of the older bushings attached to these breakers are assumed to contain > 50 ppm PCB and are not able to be tested until the end of the equipment lifespan. Testing would render the equipment unusable.

Southwestern does not have equipment that contains 500 ppm or greater PCB concentration of oil or related substance. Southwestern disposes of PCB-contaminated equipment within 30 days of removal from service or when it has been declared not necessary for service to Southwestern. The items will be stored or reused if it has been designated as a spare piece of equipment that is still fit for service.

PCB-contaminated equipment stored past 30 days from the initial out-of-service date is stored in one of Southwestern's two approved PCB Activity Database PCB Storage Facilities located in Gore, Oklahoma, and Springfield, Missouri. Southwestern's disposal facility audit criteria are used to evaluate and select an appropriate and qualified facility (or facilities) to accept Southwestern's PCB-contaminated electrical equipment or mineral oil. These disposal requirements limit Southwestern's long-term risk, promote environmental stewardship, encourage the recycling or reuse of products when possible, and facilitate disposal requirements at reasonable costs.

Federal agencies are required by the Indoor Radon Abatement Section of TSCA to conduct studies of radon levels in Federal buildings. Radon is an odorless, invisible radioactive gaseous element formed in the decay of radium. Radium occurs naturally in the air, water, and soil. The Springfield Maintenance Facility complex had previous instances of levels above the mitigation action level of 4 picocuries per liter (pCi/l) concentrations.

Engineering and administrative control measures have been implemented, for Springfield, including periodic radon monitoring and sample testing. Test results have indicated lower levels of exposure to personnel. Radon has been reduced and maintained well below permissible exposure limits. Southwestern facilities were not found to have radon levels at or above the radon action levels for the Fiscal Year of 2019.

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## FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)

FIFRA directs EPA to register pesticides to ensure usage according to label instructions, they will not present unreasonable risks to human health or the environment. Pesticides include insecticides, antifoulants, fungicides, rodenticides, disinfectants, and plant growth regulators. Depending on pesticide properties and use patterns, pesticides can leach through soils and contaminate groundwater. This is especially true where the water table is close to the surface, and/or soils are highly permeable. Appropriately, state-licensed personnel and contracted firms accomplish all vegetation ROW herbicide applications per regulations.

Southwestern management of the use of pesticides, provides a conservative methodology for safety and ecological protection. Southwestern contracts pest management local vendors for the maintenance facilities. Guidance for the use of herbicides at substation/switchyards, pole yards, microwave/radio sites, and along the transmission line ROW is managed according to Southwestern's Vegetation Management EAs and subsequent FONSI stipulations. The EAs and FONSI are reviewed periodically for continued effectiveness and conformance. An updated EA and FONSI were implemented for the Vegetation Management for Southwestern in 2019. A review of the pesticide and herbicide list was upgraded with a more effective and less intrusive chemical list. Only herbicides approved through the EA and FONSI selection criteria are utilized. Southwestern facilities and Rights of Way areas did not have any pesticide or herbicide misuse claims initiated by the state or federal regulators during the FY of 2019.

## AIR QUALITY AND PROTECTION

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### CLEAN AIR ACT (CAA)

The CAA was promulgated "to protect and enhance the quality of the Nation's air resources to promote public health and welfare, and the productive capacity of its population." The EPA is required to set National Ambient

Air Quality Standards that define clean air levels. The EPA set standards for six "criteria" pollutants: carbon monoxide, lead, ozone, nitrogen oxides, sulfur oxides, and particulate matter. The EPA also established New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants (NESHAPs), and standards for mobile sources. Air quality standards are achieved by the states through State Implementation Plans (SIP). The SIPs establish emission limits and compliance schedules for pollution sources. The majority of Southwestern's sites are located in rural areas that are attainment or non-maintenance areas for criteria air pollutants. Air pollution control regulation and pollution levels for Southwestern facilities within Oklahoma, Missouri, Arkansas, and Texas apply to the individual operating facilities. The facility's air pollutant levels are not combined.

The General Conformity Rule (GCR), established under the CAA (section 176(c)(4)), plays an important role in helping states and tribes improve air quality in those areas that do not meet the National Ambient Air Quality Standards (NAAQS). GCR applicability analysis must be performed for sites located within a non-attainment or a maintenance area for a criteria air pollutant. Southwestern's maintenance and operations actions are exempt from the CAA conformity requirements as these projects result in "no or de minimis emissions" and have emissions that are not "reasonably foreseeable." Additionally, DOE Power Marketing transmission activities involve routine maintenance and repair activities and routine operation of facilities, mobile assets, and equipment which are exempt activities under the GCR.

Southwestern's Asbestos Maintenance Standard (AMS) governs its compliance with potential asbestos fiber release and is following both NESHAP and Occupational Safety and Health Administration (OSHA) asbestos regulations for employee worker protection. The AMS requires that exposure assessments, including personal and area air monitoring, be conducted for all OSHA Class III and IV work activities performed by trained maintenance personnel unless Southwestern can provide evidence that a work activity would have fiber releases below the permissible exposure limit of 0.1 fibers/cubic centimeter. Records of exposure assessments are retained by the applicable area maintenance office and corporate office. Applicable maintenance employees receive the appropriate level of annual Asbestos Awareness training. Those employees who participate in activities in which disturbance occurs receive Class II, III, and IV asbestos training. Southwestern hires contractors for Class I and II asbestos removal and remediation activities. Southwestern conducted a Site-Wide Asbestos Containing Materials and Lead Paint Inventory for 24 facilities in 2012. Since the inventory, Southwestern has mitigated the buildings located at communication sites and area offices of asbestos building materials.

Southwestern is regulated under the Mandatory Greenhouse Gas (GHG) Reporting Rules per 40 CFR Part 98 Subpart DD. Southwestern utilizes SF<sub>6</sub> gas, a GHG agent, as an insulation gas within its gas-circuit breakers throughout its substations and switchyards. The rule requires that owners and operators of electric power system facilities, with a total system-wide nameplate capacity exceeding 17,820 pounds of SF<sub>6</sub>, report emissions of SF<sub>6</sub>, annually, on EPA's electronic Greenhouse Gas Reporting Tool (eGGRT). An Air Applicability Determination is performed to assess applicability to the rule. For 2019, Southwestern had a total of 14,579 pounds, system-wide, name-plate capacity of SF<sub>6</sub> containing equipment. Southwestern is not required to report 2019 SF<sub>6</sub> emissions through the eGGRT. However, the emissions data was collected and reported through DOE reporting mechanisms to help track and achieve DOE mandated GHG reduction targets in conjunction with the requirements of Executive Order (EO) 13693.

Southwestern began tracking SF<sub>6</sub> emissions in 2008 and after the implementation of an aggressive repair and replacement program for leaking and aging SF<sub>6</sub> containing equipment. Millions of pounds of carbon dioxide emission equivalents have been diverted from being emitted into the atmosphere. Implementation of aggressively addressing aging leaking gas-circuit breaker equipment, repairing leaks, and performing preventative maintenance.

### CLEAN WATER ACT (CWA)

The CWA regulates the discharge of pollutants into Waters of the U.S. from any point source, including industrial facilities and sewage treatment facilities. The CWA also regulates stormwater runoff from certain industrial sources, requires reporting and cleanup of oil and hazardous substance spills in Waters of the U.S., protects Waters of the U.S., requires that a permit be obtained when a project has the potential to adversely affect wetlands and requires spill prevention plans for sites that store oil and other petroleum products. The EPA has established a requirement to have a National Pollutant Discharge Elimination System permit for the discharge of stormwater from facilities with point sources.

Southwestern has determined that a full-scale groundwater monitoring program is not warranted. However, Southwestern will continue to identify existing and potential sources of groundwater contamination. Should any information indicate that any Southwestern activities might adversely affect the groundwater, Southwestern will implement a site-specific groundwater monitoring program. Southwestern tested two (2) non-potable wells at Missouri Substations for herbicides during the Fiscal Year of 2019.

Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into Waters of the U.S., including wetlands. Proposed activities are regulated through a permit review process. An individual permit is required for compliance of working within a waterway of the Waters of the US. Individual permits are reviewed by the U.S. Army Corps of Engineers (USACE), which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) guidelines, regulations promulgated by EPA. States may assume this permitting authority and regulate 404 activities. For most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or state basis for categories of activities.

September of 2019, Southwestern applied for a 404 permit with the Tulsa District USACE for construction activity within Moore Creek in Okmulgee County, Oklahoma. Southwestern constructed a temporary riprap bridge, for the replacement of transmission structure 711.

### NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

The NPDES is the primary mechanism used by EPA to manage point source discharges. NPDES permits are required for the discharge of pollutants from certain point sources, which are categorized by the North American Industry Classification System codes, into Waters of the U.S. Permitting of Southwestern's substation facilities are required under 40 CFR Part 122 at facilities located in Missouri containing oil and water separator devices. Southwestern's Oklahoma and Arkansas substation facilities do not meet the definition of an "industrial activity" and are excluded as defined in 40 CFR Part 122.26(b) (14). The *1992 EPA Frequently Asked Questions #16 and #17* provides clarification regarding the applicability electrical substation facilities. Southwestern's substations are not located within facilities that have generation units. Southwestern will comply with stormwater discharge regulations per the NPDES permitting rules, as modified and updated for stormwater compliance mandates in each state.

The State of Missouri views oil/water separators as mechanical treatment devices and requires facilities to obtain a Missouri NPDES General Operating Permit MOG14 for Oil/Water Separators. Southwestern's facilities oil water separators are considered secondary containment structures surrounding electrical power transformers. The Permit authorizes the discharge from oil/water separators and similar wastewater treatment devices whose sole function is the treatment of stormwater or water without detergents or additives used to rinse or wash down

pavements. This Permit applies to establishments such as vehicle repair shops, transformer stations, and pipeline compressor stations. Southwestern has four such facilities in Missouri that require NPDES coverage. Annual Discharge Monitoring Reports are required for the sites with NPDES permits. There were no reported exceedances or nonconformance issues for Southwestern facilities during the reporting period of the Fiscal year of 2019.

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#### SAFE DRINKING WATER ACT (SDWA)

The SDWA requires EPA to establish primary drinking water standards for any contaminants that may have an adverse effect on public health. As a result, EPA developed primary drinking water maximum contaminant levels (MCLs) and secondary MCLs. Southwestern utilizes city water at its manned facilities and rural water at many of its unmanned electrical substation control building facilities. Southwestern has nine continuously unoccupied electrical substation control buildings with non-potable wells that serve to provide only facility toiletry functions. The wellheads are protected by locks that are routinely inspected to protect the integrity of the groundwater system. During 2019, Southwestern maintained compliance with the SDWA.

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#### OIL POLLUTION ACT

The Oil Pollution Act of 1990 amended the Clean Water Act and addressed the wide range of problems associated with preventing, responding to, and paying for oil pollution incidents in navigable Waters of the U.S. The act created a comprehensive prevention, response, liability, and compensation regime to deal with vessel- and facility-caused oil pollution to the United States navigable waters. The regulation requires these facilities to develop and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans and establishes requirements for procedures, methods, and equipment requirements. Several of Southwestern's substation facilities contain large volumes of transformer oil and are sited near *navigable waters* or *Waters of the U.S.* Southwestern has developed and implemented effective SPCCs at 11 of its applicable facilities. Annually, all SPCCs are reviewed, updated as needed, and signed by management. Table 3 provides an overview of SPCC Plans and their review and renewal cycles.

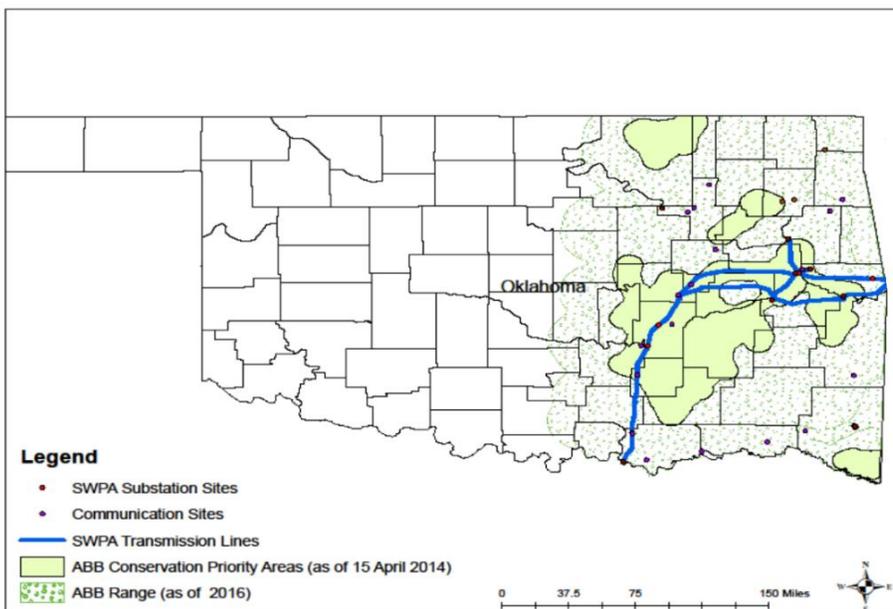
**Table 3: SPCC Facility Plans**

SPCC Plan Expiration	SPCC Plan Review & Substation Facility Location(s)	Annual Review/Maintenance Division Director Signature
December 8, 2023	5 Year Recertification/Review SPCC Plans- Professional Engineer (PE) Signature Required: (Table Rock, Nixa MO; Springfield, MO)	November, Every 5 Years
November 9, 2020	5 Year Recertification/Review SPCC Plans- Professional Engineer (PE) Signature Required: (Carthage, MO, Paragould, AR, New Madrid, MO, Poplar Bluff, MO, Nixa, MO, Norfolk, AR, Kennett, MO, Weleetka, OK, Eufaula, OK)	November, Every 5 Years

There were no reportable instances of spills at any of Southwestern's facilities during 2019. SPCC official plans are located onsite at the substation facility, and reference copies are located at the nearest lead maintenance office. Spill clean-up kits are located at the substation facilities to ensure the quick control of a spill and minimize effects to the nearby environment.

ENDANGERED SPECIES ACT (ESA)

The ESA was established to protect aquatic and terrestrial animals, and plant species that may become endangered or threatened (T&E). Federal agencies are required to ensure that their associated actions do not adversely impact T & E species. The agency must consult with the United States Fish and Wildlife Service (USFWS) or National Marine Fisheries Wildlife Service, for negative effects to species and habitat from Southwesterns operations. All maintenance and engineering construction projects, as well as real property transfers, are evaluated for potential adverse impacts to known T&E species. Southwestern has cooperated with the USACE and the USFWS to manage releases from Keystone, Eufaula, and Denison dams for the protection of the endangered interior least tern, a migratory shore bird that nests on sand bars and islands in the rivers downstream from those projects. The interior least tern was listed as an endangered species by the USFWS in 1985. Since then, Southwestern has worked with the Tulsa and Little Rock Districts of the USACE, USFWS, and other entities to preserve and build habitat, and support interior least tern reproduction while preserving hydropower benefits. After the issuance of a final Biological Opinion, signed in 2016, Southwestern has achieved compliance with protection measures. Utilizing the combined agency least tern nesting goals. Southwestern is working with entities nationwide on a Conservation Plan and Monitoring Plan as part of the species delisting efforts that were recommended by the USFWS in 2013. Southwestern is committed to providing the resources necessary for T&E species habitat protection and least tern habitat maintenance work for applicable projects and undertakings.



**Figure 3 Southwestern's Transmission System and ABB Range in Oklahoma**

Southwestern has acquired an updated Programmatic Biological Assessment (PBA) for the vegetation management operations. And a Biological Opinion (BO), through the Oklahoma USFWS, Tulsa Field Office, 2019. This PBA and BO enable Southwestern to utilize the ability to expedite, minimize, or simplify the Section 7 ESA consultation protocol for selected, proposed Southwestern initiated vegetation maintenance and operation activities within the State of Oklahoma. Before March 2019, Southwestern's Oklahoma project activities and undertakings were conducted under the previous PBO, in which, the American Burying

Beetle (ABB) was identified as the primary Federally Endangered species of concern for Southwestern's Oklahoma project activities. See Figure 3 for an overlay of Southwestern's Transmission System as compared to the ABB habitat range. Southwestern will continue to work closely with the USFWS in Oklahoma to preserve ABB habitat and to minimize adverse effects to this species during affected project activities. Southwestern has developed a Stepwise Bat Field Guide in 2018 for determinations of the 4 endangered bats located along the transmission lines and rights of ways. The field guide has been developed to provide instruction to

the field crews, environmental staff and managers to obtain a preliminary determination for Southwestern's construction project within bat range locations and probable habitats. Southwestern used the field guide for five (5) construction projects during the FY 2019.

Southwestern reviewed or consulted in five (5) projects which were processed and managed through the procedures required in Section 7 of the ESA. There were no known adverse impacts or incidences regarding direct "take" to any known T&E species during 2019.

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## NATIONAL HISTORIC PRESERVATION ACT

Federal agencies, including Southwestern, have responsibilities under the National Historic Preservation Act (NHPA) of 1966. Federal agencies, in compliance with Section 106 of the act, will implement the significance of cultural resources within agency project planning. The intent is to ensure that agency actions do not inadvertently disturb or destroy significant cultural resources. Cultural resources can include but are not limited to, prehistoric and historic archaeological materials and sites located on the surface or subsurface of the land, historic structures (buildings, sites, structures, or objects more than 50 years old), cultural and natural places, traditional cultural properties, and sacred objects important to a group or groups of Native Americans. For protection of historic properties, a compliance process was established by the President's Advisory Council on the Historic Preservation, (36 CFR 800). Southwestern will ensure compliance with provisions of the Act. The Act and the regulations do not mandate an outcome, the agency must consider the effects its actions may have on significant resources.

In compliance with Section 110 of the Act, agencies are required to develop and carry out a systematic program to inventory all cultural resources on lands which they own and submit to the National Register of Historic Places any properties that meet the eligibility requirements. In 2006, Southwestern completed a Section 110 analysis, titled "National Register of Historic Places (NRHP) Evaluation for Electrical Stations and Maintenance Facilities within Southwestern Power Administration", for existing facilities, owned in-fee, in the three primary states for which Southwestern conducts its activities. In this analysis, there were no properties identified for eligibility on the NRHP.

Southwestern will conduct additional Section 110 analyses for groups of new properties at appropriate intervals. Following the cultural resource Programmatic Agreements, Section 110 reports were sent for review and consultation with the Arkansas, Oklahoma, and Missouri State Historic Preservation Offices, the state Archeological Survey Offices, and associated Native American Tribes. Southwestern's buildings, associated structures, or transmission lines are not eligible for listing in the NRHP. Additional cultural resource investigations were recommended for the Southwestern facilities located in the New Madrid Fault Line Seismic region. This region will require deep disturbances archaeological monitoring and surveys, during future project disturbance activities.

Southwestern began modification of the three states (Oklahoma, Arkansas and Missouri) Programmatic Agreements into a Multi-State Programmatic Agreement (PA), August 2014. The negotiations between Southwestern Power Administration, the Osage Nation, Delaware Nation, Quapaw Tribe, Thlopthlocco Tribal Town, the Arkansas Historic Preservation Program, Oklahoma and Missouri State Historic Preservation Offices, the Oklahoma Archeological Survey, and the Advisory Council on Historic Preservation are still ongoing. The Programmatic Agreement is being developed to provide relationships between agencies for Southwestern maintenance and operations activities. The Multi-State PA would supersede the three individual state PA's established at this time. Continuous consultation and meetings have been in process for the Multi-State PA, during 2014 to 2019. Southwestern will continue to work with the agencies involved in the process to derive a cooperative agreement for all parties.

Southwestern's Arc GIS Cultural Resources Inventory Database provides a comprehensive repository of known cultural resources or artifacts, on lands owned or administered by Southwestern (and within a one-half mile radius) which serves as the foundation of a proactive cultural resource management program that will ensure compliance with local, state, tribal, and federal regulations. Southwestern updates the ArcGIS Cultural Resources Inventory database every three years, as stated in the Programmatic Agreement. The latest update was in 2018, the next update will be implemented in 2021. Cultural resource sites are inventoried and provided to project managers within Southwestern. The 2019 inventory is listed in Table 4 of this report. To date, there are 1,423 archeological sites and historic properties within the given research corridor. The majority of these cultural resources are undetermined, 69 are eligible, and 22 are listed on the NRHP.

**Table 4: Recorded Sites Near Southwestern Facilities**

<b>Inventory of Recorded Sites (within ½ mile radius of ROW/Facilities)</b>				
<b>NRHP Eligibility</b>	<b>AR</b>	<b>MO</b>	<b>OK</b>	<b>Total</b>
Not Eligible	157	50	16	<b>223</b>
Undetermined	528	388	193	<b>1109</b>
Eligible	42	17	10	<b>69</b>
Listed	5	12	5	<b>22</b>
Total Number of Sites:	745	474	231	<b>1423</b>

Southwestern does not qualify as a federal land management agency due to privately-owned, easements along the transmission line ROWs. Therefore, would not be obligated to manage or maintain historic properties found within these locations. If historic properties are identified during Section 110 or 106 analysis, Southwestern's normal practice is to avoid adverse effects and subsequent impacts by modifying a project's design or the planned activity and follow the stipulation outlined in the PA's.

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#### MIGRATORY BIRD TREATY ACT

The Migratory Bird Treaty Act prohibits the taking, possessing or transporting of any migratory bird, nest, egg, or part of a migratory bird without a permit. The protected avian species are listed in CFR Part 50, Subpart 10.13. This list consists of over 1,000 distinct types of avian species. Southwestern considers the effects of migratory birds as part of the NEPA project analysis process for each new proposed activity or project.

During 2018, Southwestern developed and implemented an Avian Protection Plan Maintenance Standard that is based upon Avian Powerline Interaction Committee (APLIC) Guidelines, and other avian species regulatory laws. During 2019, the Avian Protection Plan has been updated with the prospect of codification of the Solicitor General's Opinion M-37050, of intention take. The Plan outlines general guidelines to reduce avian mortality risks that result from avian interactions with electrical transmission utility facilities and to demonstrate compliance with laws relating to the protection of avian species and establishes a policy to minimize avian injury and mortality. Southwestern field employees received avian protection training including causes and prevention of avian collisions and electrocutions, avian biology, avian-safe electrical equipment re-

configuration, migratory bird laws, Bald and Golden Eagle Protection Act, the Endangered Species Act, and avian reporting procedures.

Due to the nature and configuration of high-voltage equipment (increased distance between current-carrying conductors, and the conductors to a ground contact potential), Southwestern experiences very few avian collisions, perching, or nesting incidences. Southwestern does have documented raptor nests as of 2019, of two (2) known transmission structures, located near dams or large bodies of water.

These nests are left undisturbed unless they cause an emergency safety concern. In this case, Southwestern would contract-out the removal or relocation of the nest, chicks, or eggs to an individual or firm with an appropriate USFWS permit in accordance with Southwestern's Avian Protection Plan.

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## SUSTAINABILITY

In conjunction with the DOE Order 436.1, *Departmental Sustainability*, Southwestern has established several sustainability Environmental Management System Objectives and Targets which are implemented, maintained, and monitored through the *Environmental Management System* program. The sustainability Targets and Objectives are measured and recorded annually. Southwestern remains on track to meet goals that apply to DOE Power Marketing Administrations.

Southwestern, along with other competing water user groups, depends on water to meet its contractual obligations to its customers. Some of the competing uses include municipal water supply, hydroelectric power, fish and wildlife, tourism, navigation, flood control, irrigation, swimming, and boating. Although water is a renewable resource, water is dependent upon nature. It varies in its amount and timing. And now more than ever there are demands upon the earth's water. Southwestern dedicates significant effort in coordinating operating activities with groups such as the USACE, state fish and wildlife agencies, USFWS, organized recreational groups, and other water user groups to find ways to accommodate each user's needs and still meet electrical generation requirements. Making the best use of water resources requires an understanding of each user's specific needs. In the years and generations to come, Southwestern desires not only to continue to serve its customers with America's cleanest source of renewable energy but also to work cooperatively with the competing users to conserve the natural resources.

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## FLOODPLAIN MANAGEMENT AND WETLAND MANAGEMENT

Southwestern conforms to the DOE Floodplain and Wetland Regulations per the requirements outlined in 10 CFR Part 1021 and 1022 and EO 11988. As part of the NEPA project analysis protocol, any proposed action or project that may potentially impact floodplains or wetlands is carefully evaluated according to regulations. During 2019, Southwestern did not have any floodplain or wetland action projects which warranted a floodplain assessment. Southwestern does have a facility, the Jonesboro Office and Substation located within a floodplain or floodway. Transmission lines are sometimes located in floodplain areas. Rebuilding transmission structures in these areas will require floodplain surveys. No wetlands or floodplain surveys were performed in the FY 2019.

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## POLLINATOR INITIATIVES

Pollinators are vital to keeping fruits, nuts, and vegetables in our diets. Honeybee pollination alone adds more than \$15 billion in value to crops each year in the United States. Over the past few decades, there has been a significant loss of pollinators, including honeybees, native bees, birds, bats, and butterflies. The problem is serious and requires immediate attention to ensure the sustainability of our food production systems, avoid

additional economic impact on the agricultural sector, and protect the health of the environment. As a result, in 2014, President Obama issued a [Presidential Memorandum](#) directing an interagency Task Force to create a *Strategy to Promote the Health of Honey Bees and Other Pollinators*.

Since the issuance of the Memorandum, Southwestern, along with other Power Marketing Administrations, have assessed their activities and work practices to see how they may be able to effectively and reasonably contribute to the protection of pollinator species while maintaining their agency's Federal mission. The ROW managed by the Power Marketing Administration organizations crosses urban, suburban, and agricultural land sometimes not suitable for pollinator best management practices (BMP). The PMAs have BMPs, effective at promoting pollinator activity and proliferation for many of the pollinator species, which are already in place on suitable ROW land. These BMPs include removing invasive species, using native seeds and species, and managing vegetation to create low to mid-height sustainable native plant communities.

## SUMMARY OF ENVIRONMENTAL PERMITS & IDS

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### GORE, OKLAHOMA, MAINTENANCE UNIT GEOGRAPHICAL AREA

- Gore Substation and Maintenance Facility -RCRA Very Small Quantity Generator- EPA ID# OK2891632463
- Gore Substation and Maintenance Facility -Small Quantity Handler of Universal Waste- EPA ID# OK2891632463
- Gore Substation and Maintenance Facility PCB Activity Database (Generator/Storage)- EPA ID# OK2891632463
- Oklahoma Department of Agriculture, Food, & Forestry- Pesticide Applicators License #6652-000

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### SPRINGFIELD, MISSOURI, MAINTENANCE UNIT GEOGRAPHICAL AREA

- Springfield Maintenance Facility and Substation-RCRA Very Small Quantity Generator- EPA ID# MO8891632467
- Springfield Maintenance Facility and Substation-Small Quantity Handler of Universal Waste - EPA ID# MO8891632467
- Springfield Maintenance Facility and Substation PCB Activity Database (Generator/Storage)- EPA ID# MO8891632467
- Permit #MO-G140036, Missouri Dept. of Natural Resources  
NPDES Discharge Permit, Table Rock Substation Oil/Water Separator
- Permit #MO-G140037, Missouri Dept. of Natural Resources  
NPDES Discharge Permit, Nixa Substation Oil/Water Separator
- Permit #MORA07212, Missouri Dept. of Natural Resources  
Land Disturbance NPDES Storm Water Construction Permit, Nixa Control Center

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### JONESBORO, ARKANSAS, MAINTENANCE UNIT GEOGRAPHICAL AREA

- Jonesboro Maintenance Facility and Substation-RCRA Very Small Quantity Generator- EPA ID# AR0143120681

- Jonesboro Maintenance Facility and Substation-Small Quantity Handler of Universal Waste- EPA ID# AR0143120681
- Jonesboro Maintenance Facility and Substation-PCB Activity Database (Generator)- EPA ID# AR0143120681
- Permit #MO-G140032, Missouri Dept. of Natural Resources NPDES Discharge Permit, New Madrid Substation Oil/Water Separator
- Permit #MO-G140033, Missouri Dept. of Natural Resources NPDES Discharge Permit, Kennett Substation Oil/Water Separator

## ENVIRONMENTAL MANAGEMENT SYSTEM

Southwestern's Environmental Management System (EMS) outlines a systematic process that guides Southwestern activities to ensure implementation of environmental requirements and to encourage the achievement of continuous improvement. Southwestern's EMS Policy states:

*"Southwestern will strive for excellence in the protection of the environment by conducting operations in a manner that meets DOE guidelines and applicable Federal, state and local environmental regulations, and other requirements to which the agency subscribes. Southwestern will strive for continual improvement and pollution prevention. The ISO Standard 14001:2015 will be used as a guide."*

The EMS Policy and Manual are endorsed by Southwestern's senior management. EMS Aspects and Impacts have been identified for all agency activities and are reviewed annually. Legal and other requirements are compiled in a matrix.

Southwestern has identified Objectives and Targets to assist in achieving and meeting the commitments of the Environmental Policy. Performance of the Objectives and Targets are measured periodically and recorded publicly on the [www.SWPA.gov](http://www.SWPA.gov) website. The Objective and Targets are reviewed and updated as needed. Federal employee position descriptions include job-specific responsibilities to ensure Southwestern's operations are performed consistently within the guidelines and objectives of the EMS. Annual EMS and job specific environmental training has been included in the agency training plan. Communication from external parties or stakeholders is documented in an electronic journal. Annual environmental audits and management reviews are scheduled to ensure continual improvement.

By an internal audit performed in 2019, Southwestern re-confirmed, that its EMS conforms to the International Organization for Standardizations (ISO) 14001:2015 standard, based on the results of an internal audit by internal qualified auditors. The scope of the EMS audit included employee interviews, a physical examination of facilities, and a review of environmental records. The progress of Southwestern's implementation of the EMS was reported in a Fedcenter DOE EMS Annual Report in which Southwestern achieved a "Green" score. This score is the equivalent to meeting all DOE EMS implementation requirements. For 2019, Southwestern's EMS continued to remain in full conformance with the ISO 14001:2015 Standard and proved to be an effective tool in implementing and integrating environmental requirements throughout the Agency.

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