



**Department of Energy**  
Southwestern Power Administration  
One West Third Street  
Tulsa, Oklahoma 74103-3502

September 24, 2007

MEMORANDUM FOR THE OFFICE OF CORPORATE SAFETY ANALYSIS  
(HS-32): Natoli-6-1336

FROM: MICHAEL A. DEIHL  
ADMINISTRATOR

A handwritten signature in black ink, appearing to read "M.A. Deihl".

SUBJECT: Calendar Year 2006 Annual Site Environmental Report

The Southwestern Power Administration (Southwestern) Annual Site Environmental Report is attached. Southwestern has continued efforts toward compliance with all applicable environmental regulations during CY2006. Southwestern's success in environmental compliance is documented in the compliance status section of the report. Environmental monitoring at Southwestern facilities has not been required; therefore, no monitoring data is included in the report.

Attachment

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**SOUTHWESTERN  
POWER  
ADMINISTRATION**

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TULSA, OKLAHOMA 74103



**ANNUAL  
SITE ENVIRONMENTAL  
REPORT**

**CALENDAR YEAR  
2006**

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## **EXECUTIVE SUMMARY**

This report provides a synopsis of Southwestern Power Administration's (Southwestern's) effectiveness in managing its operations in an environmentally responsible manner. The Office of Corporate Facilities maintains responsibility for development, oversight, management, and operation of Southwestern environmental programs. Senior management at Southwestern has taken actions to increase environmental awareness throughout the organization.

In 2006, Southwestern recycled over 46 metric tons of iron/steel, mineral oil, copper, aluminum, aluminum cans, mixed scrap metal, tires, batteries, office supplies and fluorescent bulbs.

All of Southwestern's 23 substation/switchyards have SPCC plans that identify measures to prevent spills from harming the environment, such as identifying the need for secondary containment at the facilities. The plans include emergency response and control procedures. Southwestern had no significant spills and/or releases during CY2006.

Southwestern does not have, and has not had, any ongoing monitoring or surveillance programs concerning any hazardous substance. Individual project monitoring for asbestos concerns in maintenance or construction projects have indicated asbestos fiber releases well below the permissible exposure limit, and final cleanup clearance criteria. Southwestern accomplished minor substation/switchyard construction during CY2006 without adverse impacts to the environment.

Southwestern did not engage in an environmental impact statement (EIS) or environmental assessment (EA) during CY2006. Southwestern executed twenty (20) categorical exclusions (CX) for activities related to maintenance and operation of facilities and equipment.

Environmental staff has trained field personnel in the techniques of conducting self-assessments. Maintenance Divisions have responsibility for conducting an environmental self-assessment on an annual basis. Field crews perform bi-monthly environmental site inspections as part of routine maintenance activities. Southwestern's environmental staff performs a system-wide Environmental Appraisal, annually. During CY2006, these annual environmental appraisal reports and recommendations were provided to Southwestern's senior management for review and to ensure corrective action completion.

Southwestern's Environmental Management System (EMS) includes a manual that outlines a systematic process that guides Southwestern activities to ensure implementation of environmental requirements and to encourage the achievement of continuous improvement. Southwestern's Policy Statement states, "Southwestern will strive for excellence in the protection of the environment by conducting operations in a manner that meets Department of Energy (DOE) guidelines and applicable federal, state and local environmental regulations. Southwestern will strive for continual improvement and pollution prevention. The ISO Standard 14001:2004 will be used as a guide." The Policy and EMS manual are endorsed by senior management. Aspects and Impacts have been identified for all agency activities. Legal and other requirements are compiled in a matrix. Southwestern identified objectives and targets to achieve and to meet the commitments of the Environmental Policy. Federal employee position descriptions have been modified to reflect responsibilities to ensure Southwestern's operations are carried out consistent with guidelines and

objectives of the EMS. Required training has been included in the Agency training plan. Internal and external communication is documented in an electronic journal. Annual audits and management reviews are scheduled to ensure continual improvement. During CY2006, Southwestern was not involved in any known programs or activities that had adverse impacts on the environment. The progress of the implementation of an EMS was reported in the DOE quarterly reports. Measurable environmental objectives and targets were previously established and modified as needed. ISO 14001 awareness training was provided to all federal and contract employees with a focus on the standard that specifies the requirements for an EMS. The EMS was internally audited in mid-2006 and gaps were corrected within several months. Southwestern's EMS is in full conformance with ISO 14001 standards. Southwestern continued to function throughout CY2006 in an operations and maintenance posture with minor substation/switchyard projects. Southwestern completed the construction and acquisition of several radio towers and the expansion and construction of an addition breaker bay on one of its existing substations.

## **INTRODUCTION**

Southwestern Power Administration (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 from twenty-four (24) U.S. Army Corps of Engineers (COE) multipurpose dams which include: 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, Greers Ferry Dam, Harry S. Truman Dam, Keystone Dam, Narrows Dam, Norfork Dam, Ozark Lock and Dam, Robert D. Willis 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.

By law, Southwestern's power is marketed and delivered primarily to public bodies and rural electric cooperatives. Southwestern has over one hundred such "preference" customers, and these entities ultimately serve another 7.5 million end-use customers.

Southwestern operates and maintains 1,380 miles of high-voltage transmission lines, twenty-four (24) substations and a communications system that includes microwave, VHF radio, and state-of-the-art fiber optics. Staff members work from offices located in Gore, Oklahoma; Jonesboro, Arkansas; Springfield, Missouri; and Tulsa, Oklahoma. Around-the-clock power scheduling and dispatching are conducted by staff in the Springfield Operations Center.

Annual revenue for Southwestern has averaged about \$106 million over the last five years. This revenue is 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.

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 COE, and implementing public policy.

## **COMPLIANCE STATUS**

Southwestern conducted its operations and maintenance activities during the calendar year with few environmental impacts or issues. The following major environmental statutes and Executive Orders impacting Southwestern are discussed below:

-- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

This Act, referred to as Superfund, was designed to help ensure cleanup of inactive hazardous waste sites. CERCLA provided authorization for EPA to respond to and remedy polluted sites. Southwestern contracts with approved electrical equipment disposal facilities for the disposal and recycling of oil and the equipment carcasses. Southwestern had no CERCLA involvement in CY2006. In order to circumvent CERCLA environmental liabilities, Southwestern conducted two (2) environmental Phase I assessments in general accordance with 40 CFR Part 312 and ASTM 1527-05, for the commercial transaction and acquisition of two real estate properties located near Weleetka, Oklahoma and Brown, Oklahoma. There were also several real estate property transfers from the COE to Southwestern. In those instances, an Environmental Baseline Survey is conducted prior to property transfer.

-- Superfund Amendments and Reauthorization Act (SARA)

This Act revised and extended CERCLA. The SARA Title III amendments contain requirements for the Emergency Planning and Community Right-to-Know Act (EPCRA). EPCRA encourages and supports emergency planning efforts at the state and local levels. Additionally, it provides public and local governments with information concerning potential chemical hazards present in their communities by requiring facilities to disclose hazardous substances they use or store. Southwestern did not surpass the regulatory threshold for the Tier I and II reporting and notification requirements.

-- Executive Order 12856, "Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements", SARA Title III, Emergency Reporting and Community Right-to-Know Act

The following Summary compliance information is provided as requested:

EPCRA 302-303: Planning Notification	Yes[ ] No [ ] Not Required [x]
EPCRA 304: EHS Release Notification	Yes[ ] No [ ] Not Required [x]
EPCRA 311-312: MSDS/Chemical Inventory	Yes[ ] No [ ] Not Required [x]
EPCRA 313: TRI Reporting	Yes[ ] No [ ] Not Required [x]

*Sections 302-303:* These Sections are intended to ensure state and local communities are prepared to respond to potential chemical accidents. Southwestern does not store or use extremely hazardous substances (EHS) in amounts equal to or exceeding threshold planning quantities (TPQ). Therefore, Southwestern is exempt from EPCRA emergency planning requirements.



*Section 304:* This Section is designates criteria under which facilities must report the release of certain substances to the environment. The reportable quantity (RQ) for each of the substances is listed in either: a) list of extremely hazardous substances; or b) list of CERCLA hazardous substances. Since Southwestern did not release any of the substances in amounts exceeding the RQ, Southwestern is exempt from reporting to any State Emergency Response Commissions and Local Emergency Planning Committees.

*Sections 311-312:* These Sections are designed to provide the public with information on hazardous chemicals in their communities by establishing certain reporting requirements. These requirements promote community awareness and facilitate emergency planning. However, Southwestern is exempt from these reporting requirements because during CY2006, it did not have onsite, for any one day: a) 10,000 lbs of hazardous chemicals; or b) the lesser of 500 lbs or the TPQ for EHS. Therefore, Southwestern is exempt from Tier I, and Tier II reporting requirements. Southwestern has, however, voluntarily contacted local fire departments and provided courtesy information on Southwestern's operations, as dictated by its Community Right-to-Know Program.

*Section 313:* This Section is intended to inform public and government officials about routine releases of toxic chemicals to the environment. Southwestern is exempt from submitting a Toxic Chemical Release Inventory Form (Form R) to EPA and designated state officials because Southwestern: a) did not manufacture more than 25,000 lbs in CY2006 of a listed toxic chemical; or b) process more than 25,000 lbs in CY2006 of a listed toxic chemical; or c) otherwise use more than 10,000 lbs in CY2006 of a listed toxic chemical.

-- Resource Conservation and Recovery Act (RCRA)

RCRA defines and regulates nonhazardous and hazardous solid wastes. Nonhazardous wastes include municipal solid waste, industrial nonhazardous wastes, commercial nonhazardous wastes, universal waste and some semi-solid and liquid wastes. These solid wastes also include special wastes such as infectious wastes, construction wastes, household wastes, and oil and gas wastes. Hazardous wastes are defined as listed wastes in 40 CFR Part 261 and wastes that exhibit characteristics of reactivity, ignitability, corrosivity, or toxicity. RCRA, later amended by the Hazardous and Solid Waste Amendments (HSWA), regulates hazardous waste operations by establishing standards for hazardous waste generation, transportation, treatment, storage, or disposal.

Southwestern has developed Waste Management, Waste Minimization, and Pollution Prevention Programs to help ensure compliance with RCRA and HSWA regulations. These programs were established and implemented to minimize the volume and toxicity of wastes; monitor the collection, transportation, processing and disposal of solid wastes; encourage recycling; assure the safety, health, and welfare of the public; and prevent pollution of the air, land, and water. Southwestern has inspected and approved a computer-recycling center for computer disposal. Southwestern continues to improve its identification, characterization, quantification, and documentation of RCRA wastes streams. During CY2006, Southwestern has continued the process of re-evaluating its temporary storage

facilities to help ensure appropriate management of its wastes and protection of human health and the environment.

-- Federal Facilities Compliance Act (FFCA)

The FFCA includes explicit authority to the Administrator of the EPA to commence administrative enforcement actions against any department, agency, or instrumentality of the executive, legislative, or judicial branch of the federal government that is in violation of requirements under RCRA. The FFCA also allows states to assess fines against federal facilities for RCRA violations.

-- National Environmental Policy Act (NEPA)

NEPA requires that all federal agencies or agencies spending federal monies, to consider the potential environmental effects of proposed actions during planning stages. Agencies must prepare documentation regarding these considerations and provide recommendations for federal actions that may significantly effect the environment. NEPA documentation includes CXs, Environmental Assessments, Record of Decisions, Finding of No Significant Impact (FONSI) and Environmental Impact Statements.

Southwestern maintained compliance during CY2006 with NEPA requirements. Twenty (20) NEPA CX process reviews were conducted. The CXs are paraphrased from 10 CFR Part 1021, Appendix A or B, and include:

- Electric power marketing rate change
- New electricity transmission and modification to existing transmission arrangement
- Routine maintenance activities for buildings, structures and right-of-way
- Siting/construction/operation of support buildings and structures
- Relocation of onsite roads
- Requests for multiple use of rights-of-way
- Repair or replacement of transformers
- Installation of communication systems
- Construction of electric power substations or modification of existing substation and support facilities
- Transfer of structures for commercial industrial use
- Adding fiber optic cable to existing transmission line and burying cable in existing right-of-way

-- Clean Air Act (CAA)

The CAA was promulgated “to protect and enhance the quality of the Nation’s air resources so as to promote public health and welfare and the productive capacity of its population. The EPA is required to set National Ambient Air Quality Standards (NAAQS) that define clean air levels. The EPA set standards for six “criteria” pollutants: carbon monoxide, lead, ozone, nitrogen oxides, sulfur dioxide, and particulate matter. The EPA also established New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air

Pollutants (NESHAPs), and standards for mobile sources. NESHAPS have been established for beryllium, mercury, vinyl chloride, benzene, arsenic, asbestos, radon, and other radio nuclides. Air quality standards are achieved by the states through State Implementation Plans (SIPs). The SIPs establish emission limits and compliance schedules for pollution sources.

Southwestern has facilities in four (4) states: Missouri, Arkansas, Texas and Oklahoma. In all states, the air pollution control regulations and individual pollutant levels apply to each facility separately, not to Southwestern operations as a whole. None of Southwestern's facilities are located in non-attainment areas. Southwestern does not have any radioactive sources used for its DOE operations and therefore, does not perform any radiation dose limit or radio nuclide monitoring. Based on the regulations and possible emission sources, Southwestern has determined, after reviewing applicable regulations and SIPs, that its facilities are not required to permit, monitor, or report air emissions.

Southwestern's Asbestos Management Program (AMP) governs its compliance with potential asbestos fiber release. Southwestern's AMP is in agreement with both NESHAPs and Occupational Safety Health Administration (OSHA) asbestos regulations. The AMP 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 area office Administrative Officers. All maintenance employees receive Class IV Annual Asbestos Awareness training. Those employees who are involved in activities in which disturbance occurs, receive Class II, III and IV as applicable. Southwestern contracts out most Class I and II work activities.

-- Clean Water Act (CWA)/Safe Drinking Water Act (SDWA)

The CWA regulates the discharge of pollutants into waters of the United States from any point source including industrial facilities and sewage treatment facilities. The CWA also regulates storm water runoff from certain industrial sources, requires reporting and cleanup of oil and hazardous substance spills in waters of the United States, protects waters of the United States, requires a permit to adversely affect wetlands, and requires spill prevention plans for sites that store oil and other petroleum products. The Environmental Protection Agency (EPA) established a requirement to have a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of storm water from facilities with point sources.

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. At six unmanned sites, there are five non-potable wells and one potable well; these are tested by the applicable state. Southwestern has closed two of these wells and continues to consider the need for the remaining wells. During CY2006, Southwestern maintained compliance with both the SDWA and CWA.

As part of a Preliminary Assessment/Site Investigation study conducted in 1993, it was determined that a full-scale groundwater monitoring program is not required to meet the objectives of Southwestern's Groundwater Protection Management Program. 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.

As mentioned before, 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 Standard Industrial Classification codes or North American Industry Classification System codes, into waters of the United States.

The majority of Southwestern substation/switchyard facilities have not been required to apply for NPDES permits because Southwestern's activities do not involve industrial operations as defined in the 40 CFR Part 122, and because oil is enclosed in electrical equipment and does not come into direct contact with storm water. The state of Missouri views secondary containment structures, such as oil/water separators, as wastewater treatment devices and requires such facilities to obtain a Missouri NPDES general operating permit. Facilities requiring NPDES permits have obtained the general operating permits and maintain the oil/water separators in accordance with their provisions. Annual NPDES monitoring reports are required for the sites with NPDES permits. There were no NPDES permits required for construction activities during CY2006. All construction projects involved land disturbance of less than five (5) acres. This included areas that may have been part of a larger common plan of development or sale.

Southwestern maintains a Spill Prevention, Control, and Countermeasures (SPCC) plan for oil storage/usage applications at each of its electrical substations/switchyards. Routine inspections, secondary containment, and proper maintenance reduce the likelihood of oil discharge into navigable waters.

-- Toxic Substances Control Act (TSCA)

The TSCA regulations prohibit the manufacture, processing, and distribution of polychlorinated biphenyls (PCB) in commerce, except as exempted by EPA. The EPA, through the TSCA regulations, also regulates the use, marking, and disposal of PCBs. Some states, such as Arkansas, regulate PCB disposal and handling through their state RCRA Programs. The TSCA regulations also prescribe requirements for Southwestern's radon, lead-based paint, and asbestos concerns.

Southwestern has an on-going initiative to reduce PCB concentrations in its electrical equipment to < 50 ppm. All high voltage oil-circuit breakers and associated bushings are scheduled to be replaced incrementally with gas-circuit breakers by 2012. All oil-circuit breakers have tested < 50 ppm PCB content. Most of the bushings attached to these oil-circuit breakers are assumed to contain > 50 ppm PCB. Southwestern has no known equipment that contains 500 ppm or greater PCB concentration of oil. Southwestern strives to recycle or dispose of any PCB-contaminated equipment within 30 days of removal from

service or when it has been declared excess to Southwestern's needs. Equipment stored past thirty (30) days from the initial out-of-service date is stored in one of Southwestern's PCB Storage Facilities. Facility audit criteria, developed as part of the study, are used to evaluate and select an appropriate facility (or facilities) to accept Southwestern's PCB-contaminated waste. The purpose of this effort is to limit Southwestern's long-term risk, promote environmental stewardship, recycle/reuse of products, and facilitate its 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, and to provide the results to the EPA for its consolidated report to Congress. Radon is an odorless, invisible radioactive gaseous element formed in the decay of radium. Radium occurs naturally in the air, water, and soil. Congress may provide additional requirements for federal agencies as part of a comprehensive radon abatement program.

The Springfield maintenance facility location has had previous instances of levels above the recommended concentrations. In CY2002 and CY2003, both engineering and administrative control measures were implemented which significantly reduced the level of exposure to employees. Periodic sampling will be conducted to monitor the effectiveness of these controls. Southwestern last conducted radon sampling in CY 2005 at this location. Southwestern plans to conduct radon sampling at its Springfield location during Fiscal Year 2008.

-- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

FIFRA directs EPA to register pesticides to ensure that, when used according to label instructions, they will not present unreasonable risks to human health or the environment. Pesticides include insecticides, anti-foulants, 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.

Southwestern has managed these concerns through conservative means. Southwestern contracts pest management needs at its maintenance facilities through local vendors. In addition, Southwestern contracts portions of its vegetation management needs involving herbicide application on the transmission line rights-of-way (ROW) through state licensed application contractors. 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 Environmental Assessment and consequent FONSI, which was signed on April 28, 1995 by J. Reeves at Southwestern's headquarters in Tulsa, Oklahoma. State licensed personnel accomplish all vegetation right-of-way herbicide spraying. Only FONSI approved herbicides are utilized. The 2006 National Energy Reliability Council (NERC) Reliability Standard, *FAC-003 Transmission Vegetation Management*, will mandate the development and implementation of a Southwestern Maintenance Standard in CY2007, which will further address agency vegetation management practices and improve the reliability of the Southwestern's electrical system.

-- Endangered Species Act (ESA)

The ESA was established to protect aquatic and land animals, and plant species that are likely to become endangered in the foreseeable future (threatened) or are in danger of extinction (endangered). Federal agencies are required to ensure that any of their associated actions do not adversely impact threatened or endangered species (T&E). If listed species may be affected, then the agency must consult with the U.S. Fish and Wildlife Service (USFWS), or National Marine Fisheries Wildlife Service, whichever is appropriate. State-listed species should also be considered when contemplating an action.

Southwestern has had few projects that would be impacted by this Act. A complete T&E species update survey was conducted for the system-wide Vegetation Management Environmental Assessment, as well as, a review and update for approved chemicals for use in vegetation control. 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 COE 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 COE biological assessment resulted in a “may effect” determination that was confirmed in the USFWS’ biological opinion issued in June 2004. The COE and Southwestern have operated those projects in accordance with the measures prescribed in the biological opinion. The biological opinion requires the construction/enhancement of island habitat estimated to cost multiple millions of dollars, a portion of which may be assigned to Southwestern for repayment. A population of Missouri bladderpods, an endangered plant species located near Williams Glade in Springfield, Missouri, was surveyed by Southwestern in previous years and is monitored by field personnel periodically. Surveys concluded that Southwestern’s routine activities in this region encourage proliferation of the species. Southwestern maintains a close working relationship with the Missouri Department of Conservation to protect and enable growth of these plants. There were no adverse impacts identified for Southwestern actions to any other known T&E species during CY2006.

To promote further protection and awareness of T&E species for Southwestern’s field maintenance staff, in CY2006, a Southwestern Power Administration Threatened and Endangered Species Field Guide was developed and placed in each field vehicle. The guide shows pictures of each T&E species, its potential location along Southwestern’s property, habitat, description, life history, and causes of decline. The guide will be updated periodically to reflect changes in T&E species.

-- National Historic Preservation Act

All federal agencies, including Southwestern, have responsibilities under the National Historic Preservation Act (NHPA) of 1966. Under Section 106 of the Act, all federal

agencies will take cultural resources into account during 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 or below the ground surface, historic structures (buildings, sites, structures, or objects) that are more than 50 years old, cultural and natural places, and sacred objects important to a group or groups of Native Americans. A compliance process was established by the President's Advisory Council on Historic Preservation (36 CFR 800) that, if followed, ensures compliance with provisions of the Act. The Act and the regulations do not mandate an outcome, only that an agency considers the effects its actions may have on significant resources.

Under Section 110 of the Act, each agency is required to develop and carry out a systematic program to inventory all cultural resources on lands which they own, and nominate to the National Register of Historic Places properties that meet the eligibility requirements. During CY2006, a Section 110, *National Register of Historic Places Evaluation for Electrical Stations and Maintenance Facilities within Southwestern Power Administration* was developed for three (3) states in which Southwestern conducts its activities. In accordance with the Programmatic Agreements for each state stakeholder, these documents were submitted to the Arkansas, Oklahoma, and Missouri State Historic Preservation Offices, their state Archeological Survey Offices and applicable federal Indian Tribes/Nations. None of Southwestern's buildings, associated structures or transmission lines were found to be more than fifty (50) years old or to have unique or significant architectural qualities. No additional cultural resource investigations are recommended for any of the facilities, except for monitoring of deep disturbances at certain Southwestern facilities.

The DOE has issued, to all facilities and program offices, a formal directive and separate guidance to develop a Cultural Resource Management Program (CRMP). The intent is to ensure that DOE complies with the NHPA requirements. The CRMP also serves the purpose to consolidate these requirements into a single resource guide.

Southwestern began development of its CRMP to better evaluate potential project impacts to cultural, historical, or archaeological resources. Implementation of the CRMP will help Southwestern ensure compliance with the NHPA by integrating these considerations into the planning process. During CY2006, Southwestern had no actions that affected properties that were on or eligible for the National Register of Historic Places.

Southwestern has streamlined the cultural resources review process. There are three (3) Programmatic Agreements that enable a revised Section 106 review process for Southwestern. A cultural resources training module is being used to train employees.

-- Executive Order 11988, "Floodplain Management"

Southwestern had few projects that would have been impacted by Executive Order 11988. However, a few Southwestern facilities and structures are located in or near floodplain areas. All maintenance and engineering construction projects, as well as real property transfers, are

evaluated for potential adverse impacts to floodplain areas. There were no adverse impacts to any known floodplain areas during CY2006.

-- Executive Order 11990, "Protection of Wetlands"

Executive Order 11990 directs federal agencies to avoid, to the extent possible, adversely impacting wetlands. This includes adverse impacts associated with the destruction or modification of wetlands, or the support (direct or indirect) of new construction in wetlands when practical alternatives exist. The EPA and COE have joint administrative duties for federal wetlands regulations. The discharge of dredges and fill materials into waters of the U.S., including some wetlands, are regulated through a permit program largely administered by the COE. Numerous state and local governments have enacted regulations for the protection of wetlands.

Southwestern has had few projects that would be impacted by Executive Order 11990. However, a few Southwestern facilities and structures are located in or near wetland areas. All maintenance and engineering construction projects, as well as real property transfers, are evaluated for potential adverse impacts to wetland areas. There were no adverse impacts identified to any known wetland areas in Southwestern's system during CY2006.

-- Radiological Information

Southwestern has no radiological source emissions and, therefore, has no radiological information to provide for this report.

-- Non-Radiological Information

Southwestern is exempt from any monitoring requirements in addition to those already discussed. Southwestern does not have continuous release reporting requirements under CERCLA because Southwestern does not store, use, or release hazardous substances in quantities equal to, or greater than the reportable quantities. In addition, Southwestern had no unplanned reportable releases of pollutants or hazardous substances to the environment during CY2006.

-- Groundwater Monitoring and Protection

Southwestern does not have an ongoing groundwater monitoring program. The objectives of Southwestern's Groundwater Protection Management Program for groundwater monitoring are: a.) identify existing and potential sources of groundwater contamination, and b.) establish guidelines for implementing groundwater monitoring.

Historical and current site information concerning potential groundwater contamination sources indicates that active groundwater monitoring is not warranted at this time. However, should Southwestern become aware of any information that would indicate groundwater could be adversely affected by Southwestern's activities, or if a major spill occurs and groundwater contamination is probable, then Southwestern would implement a site-specific



groundwater monitoring program at that facility. The site-specific program would consist of monitoring well siting and installation, groundwater sampling, and reporting.

-- Quality Assurance

Southwestern's Quality Assurance Program provides Headquarters and field units the capability to assure quality data is obtained during Southwestern's environmental monitoring activities. Southwestern conducts paper audits of its contracted analytical laboratory services to help ensure permits, licenses, certifications are current, applicable for required analyses. Southwestern ensures contracted analytical laboratories participate in inter-laboratory crosscheck programs.

## **OTHER MAJOR ENVIRONMENTAL ISSUES AND ACTIONS**

Southwestern's *Annual Progress Report on Implementation of Greening the Government*, Executive Order 13101 and 13148, was reported on December 30, 2006. During CY2006, \$9,070 of \$14,475, or sixty-three percent of money spent was used to purchase non-GSA recycle content product supplies. Environmentally Preferable Procurement (EPP) attained 100% conformance for recycled purchases in the categories of construction, non-paper office supplies, paper and paper products, and the miscellaneous category. The vehicular category, consisting of vehicle tires, oil, coolant, was 0%. These recycled/reclaimed products present a safety and performance issue under Southwestern's standard operating conditions. Vehicles are operated off-road and in rugged terrain, therefore, recycled/reclaimed products are not ideal for the operation and maintenance of Southwestern's vehicles.

### **-- Waste Generation**

During this period Southwestern reported two types of waste (Routine State Regulated Waste, and Routine Sanitary Waste). Provided below is a brief summary of waste generated by Southwestern during FY2006 as compared to FY2005.

#### *State Regulated*

For the year FY2006 Southwestern reported a 100% reduction in Routine State Regulated Waste, with a decrease from 0.49 metric tons (mt.) in 2005 to 0 mt. reported in 2006.

#### *Routine Sanitary Waste*

For the year FY2006 Southwestern reported a slight increase in Routine Sanitary Waste with an increase from 125 mt. in FY2005 to 126 mt. reported in FY2006.

During 2006 Southwestern recycled 100 % of its potential waste stream utilizing the following listed recycling activities:

<b>Recycled Materials</b>	<b>2005*</b> <b>mt</b>	<b>2006*</b> <b>mt</b>
Office/Mixed Paper	10.8	7.54
Copper	0.75	0.02
Iron/Steel	6.96	32.4
Aluminum	0.00	3.94
Aluminum Cans	0.05	0.00
Aqueous Parts Washer Solution	0.21	0.14
Bulk Electrical Oil	0.03	0.03
Toner Cartridges	0.15	0.16
Batteries	0.69	0.59
Tires	2.01	0.99
Fluorescent Bulbs	0.09	0.05
Ballasts	0.00	0.00
Computer/Electronics	2.54	1.00
<b>Total Recycled =</b>	<b>25.3</b>	<b>46.9</b>

\* Fiscal Year Data

-- **Conservation and Competing Uses of Water**

Southwestern, along with other competing water users 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 dependant 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 COE, state game, fish and wildlife agencies, 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 resource requires understanding of each user's specific needs. In the years and generations to come, Southwestern desires not only to continue to serve our customers with America's cleanest source of renewable energy, but also to work cooperatively with the competing users to conserve the natural resources.

-- **Environmental Stewardship**

In CY2006, Southwestern's hydropower operations saved the nation an estimated 2.7 million barrels of oil, 0.7 tons of coal, or 15.6 billion cubic feet of gas through the generation of hydroelectric power, and prevented emission of greenhouse gases equivalent to 1.3 million tons of carbon dioxide, 3.8 thousand tons of sulfur dioxide, and 3.1 thousand tons of nitrogen oxide.

**SUMMARY OF ENVIRONMENTAL PERMITS**

Gore, Oklahoma Maintenance Facility

- RCRA Conditionally Exempt Small Quantity Generator
- EPA ID# OK2891632463
- PCB Activity Database ID# OK2891632463

Springfield, Missouri Maintenance Facility

- RCRA Conditionally Exempt Small Quantity Generator
- EPA ID# MO8891632467
- PCB Activity Database ID# MO8891632467
- Permit #MO-G140036, Missouri Dept. of Natural Resources  
NPDES Discharge Permit, Table Rock Substation Oil/Water Separator
- 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

Jonesboro, Arkansas Maintenance Facility

- RCRA Conditionally Exempt Small Quantity Generator
- EPA ID# AR0143120681
- PCB Activity Database ID# AR0143120681
- Permit #MO-G140037, Missouri Dept. of Natural Resources  
NPDES Discharge Permit, Nixa Substation Oil/Water Separator