

ARKANSAS GEOLOGICAL SURVEY

Enabling Laws

Act 45 of 2016

A.C.A. §15-55-201, et seq.

Act 708 of 2013

A.C.A §17-32-201, et seq.

History and Organization

The first geologic surveys made from State-appropriated funds go back to 1857-60. A second survey was made from 1871-74. In 1881, the Geological Survey of Arkansas was established under the direction of Dr. John C. Branner and lasted until 1893. During this period, Herbert Clark Hoover, who later became President of the United States, assisted Dr. Branner. For the next 30 years, the Department of Geology conducted a few geologic surveys at the University of Arkansas. In 1923 the Geological Survey of Arkansas was once again established by Act 573 of 1923 under the direction of George C. Branner, the son of John Branner. In 1945, reorganization changed the agency name to the Arkansas Resources and Development Commission, Division of Geology, under the direction of Harold B. Foxhall.

From 1951 to 1995 Norman F. Williams was Director and State Geologist. Reorganization in 1955 established the agency as the Arkansas Geological and Conservation Commission. Act 16 of 1963 changed the name of the organization to the Arkansas Geological Commission. In 1995, William V. Bush became Director and State Geologist. In 2003, Mac B. Woodward was appointed Director and State Geologist. In January 2005 Bekki White was appointed Director and State Geologist. Act 129 of 2007 changed the agency name back to Arkansas Geological Survey.

The mission of the Arkansas Geological Survey is to increase the knowledge of the geology of the State, to stimulate the orderly development and utilization of the State's mineral, water, and fossil fuel resources, while protecting the environment.

The Arkansas Geological Survey (AGS) is organized into four sections: Administrative Services, Information Services, and Technical Services, and the Board of Registration for Professional Geologists, all of which are under the direct supervision of the State Geologist.

The Administrative Services Section consists of fiscal services, human resources and support personnel services. This section provides all

the administrative support for the agency.

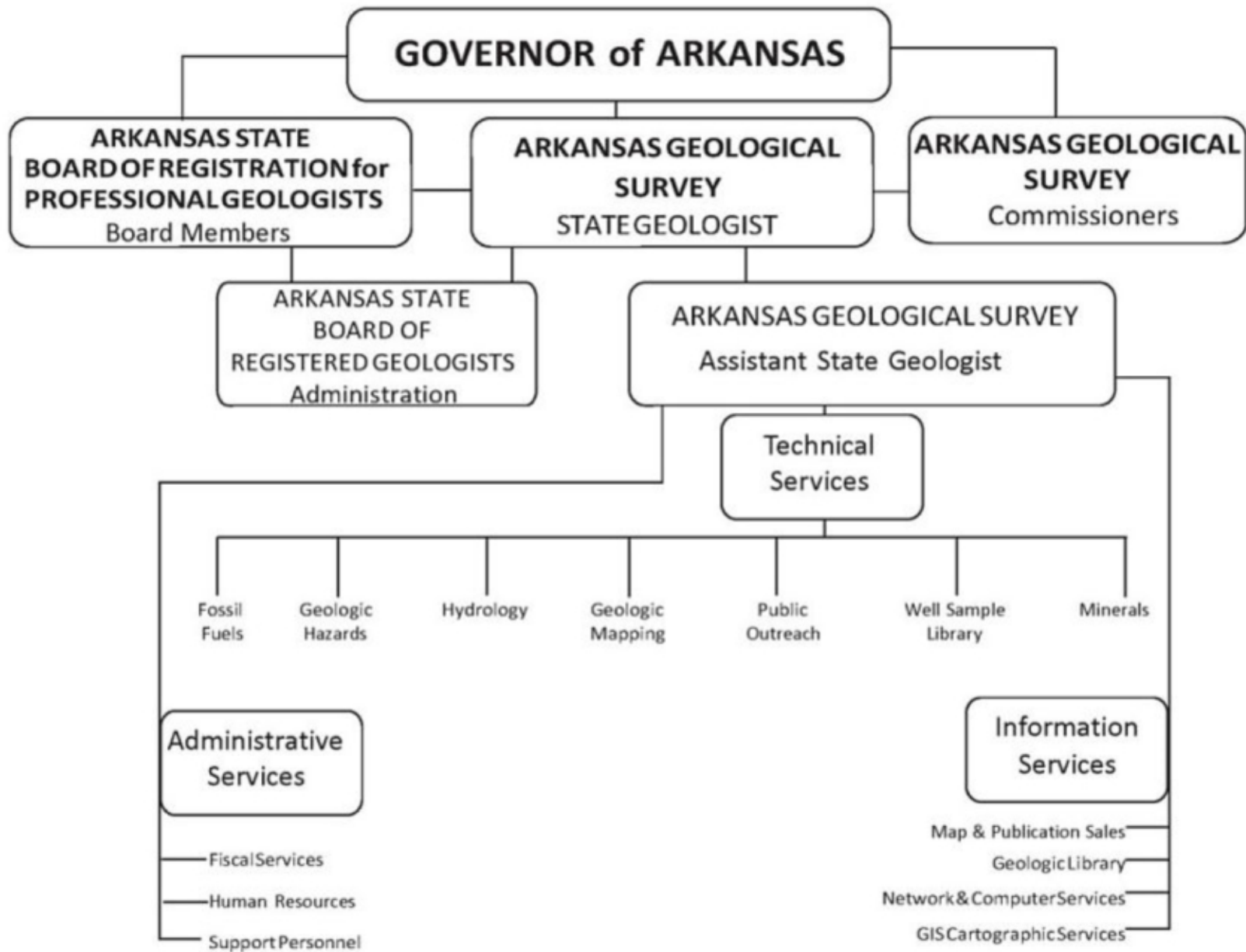
The Information Services Section's primary function is the distribution of information prepared and maintained by the Technical Services Section. This is accomplished through four offices: Map and Publication Sales, Geological Library, Network & Computer Services and GIS Cartographic Services.

The Technical Services Section is composed of the geologic staff and technical support personnel. Its primary responsibilities are: 1) to search for and provide information on the State's mineral, fossil-fuel (coal, oil and gas), and water resources; 2) to encourage the orderly development of these resources; 3) to maintain current geologic map coverage of the State; and 4) to study and report on the geologic factors affecting the State's environment.

Technical Services is divided into six major activities: Fossil Fuels (oil & gas, lignites & coals); Geohazards (earthquakes, landslides, karst); Hydrology; Geologic Mapping (surface, subsurface); and Public Outreach Minerals (Industrial, metallic, non-metallic). Also under this section is the Well Sample Library.

In 2013, the Arkansas Board of Registration for Professional Geologists was transferred to the Arkansas Geological Survey through A.C.A. § 25-2-104. The primary mission of the Board is to regulate the public practice of geology in Arkansas by registration and certification of qualified geologists and promulgate and enforce the regulations that provide the standards for practicing geology in Arkansas.

In addition to the major activities in the Geological Services Section, the Agency has several cooperative projects with the US Geological Survey (USGS). The AGS has three cooperative programs with the Water Resources Division of the USGS: Groundwater Survey Program, Stream Gauging Program (surface water), and Water Quality Program. Each of these is a 50-50 cooperative program in which the costs are split, but with the majority of the work being done by USGS personnel using their equipment and facilities. These programs provide base-line water data to the public and other users of water data needed in management and protection activities. The selection of sample sites is coordinated with other government agencies that collect water data, in order to eliminate duplication and establish site selection priorities in strategic areas for the public welfare.



Agency Commentary

The Arkansas Geological Survey (AGS) was created by Act 16 of 1963. Agency activities are divided into three major sections: 1) Administrative Services, 2) Technical Services, and 3) Information Services. Activities are primarily supported by General Revenue Funds, except Map and Publication Sales which operates on a revolving cash fund, and the Geology Learning Center which is funded by donations. The AGS receives federally funded grants which operate under a miscellaneous federal grant program. The Earthquake Education and Outreach Program is funded through a grant from State Farm Insurance Group. The AGS also participates in cooperative (50/50 matching) water programs with the U.S. Geological Survey.

The Survey's mission is to serve the people of Arkansas by providing geological information in order to develop and enable effective management of the State's mineral, fossil fuel and water resources while protecting the environment.

The **Administrative Services** section supports the AGS with fiscal services, human resources, and personnel services. This section provides all the administrative support for the agency as well as physical plant and vehicle maintenance.

The **Technical Services** section is composed of the geologic staff and support personnel. Its primary responsibilities are: 1) to search for and provide information on the State's mineral, fossil-fuel, and water resources; 2) to encourage the orderly development of these resources; 3) to maintain current geologic map coverage of the State; and 4) to study and report on the geologic factors affecting the State's environment.

Technical Services is divided into six major activities: **Fossil Fuels** (oil & gas, lignite & coal); **Geohazards** (earthquakes, landslides, karst); **Minerals** (Industrial, metallic, non-metallic); **Hydrology** (water); **Geologic Mapping** (surface, subsurface); and **Educational Outreach** (Outreach efforts such as the Geology Learning Center fall under this Section but is not an official program). A support group within the Information Services consisting of Information Technology (IT) and Geographic Information Systems (GIS) assists the geologic staff in collecting and preparing geologic data.

Current geologic map coverage of the State is maintained and other geologic studies are conducted as needed. The current Geologic Map of Arkansas was produced at a 1:500,000 scale. Current **geologic mapping** focuses on smaller areas so that investigations based on the geology are more precise. The geologic information compiled and maintained is necessary for exploration, planning and protection of the mineral resources, and as the framework for numerous environmental studies. The AGS has several ongoing and future mapping projects throughout the State in which part of the work has mineral resource evaluation (identification and location) as a component to the project.

The **Fossil Fuels Section** is responsible for the identification and geologic assessment of the state's fossil fuel resources including oil,

condensates, natural gas, coal and lignite. The totality of these resources directly impacts the existing and future economies of the State of Arkansas. For example, the AGS took a leading role in supplying geologic information and research pertaining to the recent development of the Fayetteville Shale natural gas resource. The Fayetteville Shale is responsible for infusing over \$22 billion and 9,500 direct and indirect jobs into the state's economy according to Kathy Deck, Director of the Walton's Center for Business and Economic Research, University of Arkansas, Fayetteville. The AGS also routinely assesses undeveloped areas within the state for the undiscovered potential of oil and natural gas resources and encourages industry to explore these areas by providing new geologic research. The state's coal and lignite resources are routinely assessed and information has been provided to the state's legislature regarding coal-to-liquids potential and newly emerged clean coal technologies.

The **Geohazards Section** is responsible for the study of geologic hazards or geohazards in the State of Arkansas. A geohazard is a geologic condition, either natural or manmade, that poses a potential danger to life and property. Arkansas has its share of geohazards, including earthquakes, landslides, karst (sinkholes), man-induced subsidence (mine collapses and yard-holes), floods and radon. Occurrences of geohazards are investigated (delineated and documented) by the AGS Geohazards Section. This ongoing research leads to a better understanding of geologic hazards for mitigation and educational outreach activities in Arkansas. The AGS owns and operates the Arkansas Seismic Network (ASN). The ASN consists of six state-of-the-art permanent broadband seismic stations strategically placed within selected state parks across Arkansas. The goal of the ASN is to establish better and more uniform earthquake detection outside of the New Madrid Seismic Zone (NMSZ). The ASN is operated and maintained in cooperation with the Arkansas Geological Survey (AGS), Center for Earthquake Research and Information (CERI) at the University of Memphis, and Arkansas State Parks (ASP). Information on geohazards is provided to the public through the AGS website via a series of publications and maps.

The **Minerals** section provides information on the State's minerals and encourages their orderly development. The agency serves as a point of contact for industry personnel gathering information on the mineral resources we have available in the state. Continuing the American standard of living requires the mining of 7.1 billion tons of rocks and minerals annually to make the things we use and depend on every day (Mineral Information Institute data). That's 3.7 million pounds for every person in the USA and with 300 million people in the USA who expect to live comfortably and affordably, mining has to occur somewhere. Although accurate production data are not readily available, bromine brine, crushed stone (sandstone, limestone, dolostone, and syenite), sand, and gravel have been the most valuable industrial materials mined in recent years. The agency website has a searchable database on the mine locations, commodities and status, and the agencies core and well cutting repository. Descriptions of the industrial minerals and metallic mineral and USGS annual reports on the non-fuel resources can also be located on our website.

The **Hydrology or water** section continues to provide information to the public regarding depth to water producing formations and amounts of water available. The AGS has created a web accessible file of over 150,000 water well completion reports that have been scanned. This

agency is working with the USGS to get water well information into a common data system.

Educational outreach is particularly important for the public. General interest projects that lead to publications pertaining to minerals, rocks, and fossils are especially popular with the public. The AGS has recently begun a State Park Series and a Roadside Geology Guide Series. These publications along with geology trail guides are frequently requested by the public. The AGS maintains a good working relationship with the public by answering questions daily regarding: 1) mineral, rock, and fossil identification, 2) the geology of their property, 3) water availability, 4) oil and gas, and 5) questions pertaining to earthquakes. The AGS visits classrooms in Arkansas and provides presentations to an average of 42 schools per year. We continue to produce posters, pocket guides, and other resources for the teachers and the general public. We also work with Educational Cooperatives and Stem Centers in the state to lead three teacher workshops in the summer pertaining to geology, and following the Arkansas Science Curriculum, so that teachers can meet their earth science goals in the classroom.

The **Information Services** section's primary functions are preparation, storage, and distribution of data, reports, and maps prepared and maintained by the Technical Services section. This is accomplished through the Map and Publication Sales Office, Geological Library, and Network and Computer Services. With the increasing demand for maps in digital format, we are, in an orderly fashion, digitizing the geology of Arkansas.

The **Map Re-Sale** appropriation provides for the authorization to operate from a revolving cash fund, using a portion of the money collected from the sale of maps, publications, and reproduction charges.

The **Geological Library** is the repository of geologic and mineral information collected for more than 150 years. Most of this information is in a paper format. A data archival system is being established to provide for the storage, preservation, and archival of subsurface and surface geological data, samples, and publications. This information provides a "catalogue" of AGS information that is easily accessible. The purpose of this program is to insure that this data is preserved for future generations of Arkansas citizens.

The **Network and Computer Services** allows the Survey to function more efficiently in-house as well as to provide information to the public via our website. The AGS is in the process of developing databases and geodatabases. We have developed a geodatabase of all field points and geological data pertaining to geologic mapping. Databases of geophysical well logs, cores, cuttings, and water well logs have been developed and are available to the public.

The AGS has three **Cooperative Programs with the U.S. Geological Survey (USGS) Water Resources Division**. These cooperative programs with the Water Resources Division include 1) Stream Gauging Program (surface water), 2) Water Quality Program, and 3) Ground Water Survey. These programs provide for collection, evaluation, and development of data relating to the State's surface and ground water

agencies that regulate and manage the State's water resources. Specifically, these funds are used to collect and analyze surface and ground water samples (Water Quality Program); installation and monitoring of continuous-record stream gauging stations (Stream Gauging Program); and research in subsurface geology relating to ground water (Ground Water Survey). The Ground Water Survey includes regular water-level measurements of wells in the critical Sparta Aquifer in south Arkansas and the Quaternary Aquifer in east Arkansas.

The **State Geologic Mapping Program** receives federal funds from the Department of the Interior for geologic mapping, research and data collection, and data preservation. Within this program are three grants awarded to the AGS: 1) STATEMAP, 2) National Geological and Geophysical Data Preservation Program, 3) Brown Dense Research.

STATEMAP is a cooperative (50/50 matching) grant with the USGS National Cooperative Geologic Mapping Program that pays the salary of one field geologist to conduct geologic field studies and mapping with an AGS staff geologist in north-central Arkansas. The program involves the geologic mapping of three quadrangles selected by the State Mapping Advisory Committee. This cooperative project is part of the National Geologic Mapping Act mandated by Congress in 1992. The AGS has participated in this grant program since 1996. This on-going project will aid in the development and management of the mineral resources of the area and greatly expand the knowledge of the geology of the state.

The National Geological and Geophysical Data Preservation Program (NGGDPP) is a cooperative (50/50 matching) grant with the USGS. It allows the AGS to hire an extra help person to digitize and preserve reports in the library. This program was authorized by Section 351 of the Energy Policy Act of 2005 (Public Law 109-58, Sec. 351). Objectives of the Program as outlined in the Act are to: 1) Archive geologic, geophysical, and engineering data, maps, well logs, and samples; 2) provide a national catalog of such archival material; and 3) provide technical and financial assistance related to the archival material. This project will aid the Survey in preserving and digitizing data in the library and provide an accessible database for the public.

The **National Coal Resources Data System (NCRDS)** began as a cooperative venture between the USGS and State geological agencies in 1975 and focused on the stratigraphy and chemistry of coal. The NCRDS is now a database in the USGS Energy Resources Program to provide information of rock formations from U.S. coal fields. This program now provides a grant to collect, interpret, correlate, and encode other energy related stratigraphic (rock formation) data. The AGS received a grant to characterize the Brown Dense, a subsurface producing zone, within the Smackover Formation.

The **Geology Learning Center (Museum Expenses)** is an appropriation that provides for the authorization to spend money donated to the AGS Geology Learning Center (GLC). The GLC is part of the educational arm of the agency with the purpose of giving student and citizens of all ages' exposure to rocks, minerals, fossils, and fossil fuels. The GLC has five display areas and receives funding and exhibit material from donations.

Audit Findings

DIVISION OF LEGISLATIVE AUDIT
AUDIT OF :
ARKANSAS GEOLOGICAL SURVEY
FOR THE YEAR ENDED JUNE 30, 2014

Findings

Recommendations

None

None

Performance Audit Findings

ARKANSAS GEOLOGICAL SURVEY

Findings and Conclusions:

U.S. Geological Survey_Research and Data Collection (CFDA 15.808)

National Cooperative Geologic Mapping Program (CFDA15.810)

Activities Allowed or Unallowed and Allowable Costs/Cost Principles

ALA staff reviewed control procedures, in accordance with OMB Circular A-133 § 300(b), to determine if they were designed, implemented, and operating effectively and if the Agency approves all purchases and documents the process with an approval date and the signature of its Executive Administrator or his/her designee.

Regarding the grant associated with the U.S. Geological Survey_Research and Data Collection Program, ALA staff review of a sample of 11 invoices revealed that 7 invoices lacked an approval date and signature. Additionally, documentation for one invoice revealed the purchase had been requested and authorized by the same individual. ALA staff review of the sample associated with the National Cooperative Geologic Mapping Program revealed 1 of the 15 invoices lacked an approval date and signature.

In September 2014, the Agency hired an accountant to assist with establishing and implementing the necessary control policies and procedures. As a result of the hire, ALA staff elected to expand the sample for the U.S. Geological Survey_Research and Data Collection Program and selected items from fiscal year 2015 to determine if the approval process was being documented. Review of an additional eight invoices revealed two invoices lacked an approval date and signature; however, these invoices were processed prior to the hiring of the accountant. The remaining six invoices that were processed subsequent to the hiring of the accountant contained an approval date and signature as required.

Although there was a lack of documented review and approval of purchases during fiscal year 2014, it appears that the Agency has taken steps to strengthen and improve internal control policies and procedures for this process.

Recommendations:

ALA staff recommend the Agency continue to maintain internal control processes for documenting review and approval of all purchases.

Management Response: Policies and procedures have been established to ensure that internal controls are followed. The new policy requires all purchase requests to go through the Authorized Purchasing Official (APO). The APO will manage federal awards purchases in compliance with laws, regulations, and provisions of contracts or grant agreements as well as DFA-OSP guidelines.

State Contracts Over \$50,000 Awarded To Minority Owned Businesses Fiscal Year 2016

None

Employment Summary

	Male	Female	Total	%
White Employees	16	10	26	93 %
Black Employees	0	1	1	4 %
Other Racial Minorities	1	0	1	3 %
Total Minorities			2	7 %
Total Employees			28	100 %

Publications

A.C.A. 25-1-201 et seq.

Name	Statutory Authorization	Required for		# of Copies	Reason(s) for Continued Publication and Distribution	Unbound Black & White Copies Produced During the Last Two Years	Cost of Unbound Copies Produced During the Last Two Years
		Governor	General Assembly				
None	N/A	N	N	0	N/A	0	0.00

Department Appropriation Summary

Historical Data

Agency Request and Executive Recommendation

Appropriation	2015-2016		2016-2017		2016-2017		2017-2018					2018-2019						
	Actual	Pos	Budget	Pos	Authorized	Pos	Base Level	Pos	Agency	Pos	Executive	Pos	Base Level	Pos	Agency	Pos	Executive	Pos
166 State Operations	1,919,518	27	1,998,524	27	2,078,098	27	2,006,245	27	2,006,245	27	2,006,245	27	2,007,348	27	2,007,348	27	2,007,348	27
169 Map Resale	2,442	0	35,000	0	100,000	0	35,000	0	35,000	0	35,000	0	35,000	0	35,000	0	35,000	0
210 State Geologic Mapping Program	88,636	1	135,000	1	219,406	1	135,115	1	135,115	1	135,115	1	135,115	1	135,115	1	135,115	1
54U State Farm Grant	1,953	0	6,505	0	36,000	0	6,505	0	6,505	0	6,505	0	6,505	0	6,505	0	6,505	0
873 Geology Museum	0	0	1,125	0	9,025	0	1,125	0	1,125	0	1,125	0	1,125	0	1,125	0	1,125	0
F44 Reg for Prof Geo	43,016	1	62,560	1	63,149	1	62,734	1	62,734	1	62,734	1	62,734	1	62,734	1	62,734	1
N32 Geological Research - Landslide/Sinkhole	36,523	1	111,105	1	110,000	1	111,331	1	111,331	1	111,331	1	112,067	1	112,067	1	112,067	1
Total	2,092,088	30	2,349,819	30	2,615,678	30	2,358,055	30	2,358,055	30	2,358,055	30	2,359,894	30	2,359,894	30	2,359,894	30

Funding Sources		%		%		%		%		%		%		%		%
Fund Balance	4000005	183,388	7.9	224,930	8.7		223,397	8.7	223,397	8.7	223,397	8.7	228,776	8.8	228,776	8.8
General Revenue	4000010	1,919,518	82.8	1,998,524	77.7		2,006,245	77.8	2,006,245	77.8	2,006,245	77.8	2,007,348	77.6	2,007,348	77.6
Federal Revenue	4000020	88,636	3.8	135,000	5.2		135,115	5.2	135,115	5.2	135,115	5.2	135,115	5.2	135,115	5.2
Non-Revenue Receipts	4000040	10,368	0.4	58,644	2.3		58,644	2.3	58,644	2.3	58,644	2.3	58,644	2.3	58,644	2.3
Cash Fund	4000045	45,814	2.0	45,800	1.8		45,800	1.8	45,800	1.8	45,800	1.8	45,800	1.8	45,800	1.8
Interest	4000300	128	0.0	318	0.0		0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Inter-agency Fund Transfer	4000316	69,166	3.0	110,000	4.3		110,000	4.3	110,000	4.3	110,000	4.3	110,000	4.3	110,000	4.3
Total Funds		2,317,018	100.0	2,573,216	100.0		2,579,201	100.0	2,579,201	100.0	2,579,201	100.0	2,585,683	100.0	2,585,683	100.0
Excess Appropriation/(Funding)		(224,930)		(223,397)			(221,146)		(221,146)		(221,146)		(225,789)		(225,789)	
Grand Total		2,092,088		2,349,819			2,358,055		2,358,055		2,358,055		2,359,894		2,359,894	

Variance in fund balance is due to unfunded appropriation in (54U) State Farm Grant and (873) Geology Museum.
Budget exceeds Authorized Appropriation due to salary adjustments in (N32) Geological Research.

Agency Position Usage Report

FY2014 - 2015						FY2015 - 2016						FY2016 - 2017					
Authorized in Act	Budgeted			Unbudgeted	% of Authorized Unused	Authorized in Act	Budgeted			Unbudgeted	% of Authorized Unused	Authorized in Act	Budgeted			Unbudgeted	% of Authorized Unused
	Filled	Unfilled	Total	Total			Filled	Unfilled	Total	Total			Filled	Unfilled	Total	Total	
29	27	2	29	0	6.90 %	30	28	2	30	0	6.67 %	30	28	1	29	1	6.67 %

Analysis of Budget Request

Appropriation: 166 - State Operations

Funding Sources: HUA - Miscellaneous Agencies Fund

The Arkansas Geological Survey's (AGS) appropriation for State Operations is funded entirely by general revenue. In this program, data is accumulated, analyzed, and disseminated to provide knowledge of the geology and hydrogeology of the State to stimulate orderly development and encourage effective management and utilization of the State's minerals, fossil fuels, and water resources in an environmentally responsible manner.

Base Level Regular Salaries and Personal Services Matching include the continuation of the previously authorized 2017 Salaries and Career Service Payments for eligible employees. Personal Services Matching includes the monthly contribution for State employee's health insurance for a total State match per budgeted employee of \$420 per month. Base Level salaries and matching do not include appropriation for a Cost of Living Adjustment or Merit Pay Increases. The Base Level request for Regular Salaries includes board member stipend payments.

Base Level is \$2,006,245 in FY2018 and \$2,007,348 in FY2019.

The Agency's Change Level request includes a reallocation of \$1,854 each year from Operating Expenses to Water Quality Program and Ground Water Survey to better align with agency needs.

The Executive Recommendation provides for the Agency Request.

Appropriation Summary

Appropriation: 166 - State Operations
Funding Sources: HUA - Miscellaneous Agencies Fund

Historical Data

Agency Request and Executive Recommendation

Commitment Item	Historical Data			2017-2018			2018-2019		
	2015-2016 Actual	2016-2017 Budget	2016-2017 Authorized	Base Level	Agency	Executive	Base Level	Agency	Executive
Regular Salaries 5010000	1,185,208	1,250,223	1,308,038	1,250,823	1,250,823	1,250,823	1,251,723	1,251,723	1,251,723
#Positions	27	27	27	27	27	27	27	27	27
Extra Help 5010001	11,701	11,600	12,000	11,600	11,600	11,600	11,600	11,600	11,600
#Extra Help	7	18	18	18	18	18	18	18	18
Personal Services Matching 5010003	402,441	413,699	435,058	420,820	420,820	420,820	421,023	421,023	421,023
Operating Expenses 5020002	289,799	212,791	212,791	212,791	210,937	210,937	212,791	210,937	210,937
Conference & Travel Expenses 5050009	6,579	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Professional Fees 5060010	0	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Data Processing 5090012	0	0	0	0	0	0	0	0	0
Capital Outlay 5120011	0	0	0	0	0	0	0	0	0
Water Quality Program 5900046	0	19,500	19,500	19,500	20,085	20,085	19,500	20,085	20,085
Stream Gauging 5900047	0	23,000	23,000	23,000	23,000	23,000	23,000	23,000	23,000
Ground Water Survey 5900048	0	31,711	31,711	31,711	32,980	32,980	31,711	32,980	32,980
Mineral Exploration 5900050	23,790	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000
Total	1,919,518	1,998,524	2,078,098	2,006,245	2,006,245	2,006,245	2,007,348	2,007,348	2,007,348
Funding Sources									
General Revenue 4000010	1,919,518	1,998,524		2,006,245	2,006,245	2,006,245	2,007,348	2,007,348	2,007,348
Total Funding	1,919,518	1,998,524		2,006,245	2,006,245	2,006,245	2,007,348	2,007,348	2,007,348
Excess Appropriation/(Funding)	0	0		0	0	0	0	0	0
Grand Total	1,919,518	1,998,524		2,006,245	2,006,245	2,006,245	2,007,348	2,007,348	2,007,348

Change Level by Appropriation

Appropriation: 166 - State Operations
Funding Sources: HUA - Miscellaneous Agencies Fund

Agency Request

Change Level		2017-2018	Pos	Cumulative	% of BL	2018-2019	Pos	Cumulative	% of BL
BL	Base Level	2,006,245	27	2,006,245	100.0	2,007,348	27	2,007,348	100.0
C04	Reallocation	0	0	2,006,245	100.0	0	0	2,007,348	100.0

Executive Recommendation

Change Level		2017-2018	Pos	Cumulative	% of BL	2018-2019	Pos	Cumulative	% of BL
BL	Base Level	2,006,245	27	2,006,245	100.0	2,007,348	27	2,007,348	100.0
C04	Reallocation	0	0	2,006,245	100.0	0	0	2,007,348	100.0

Justification

C04	Reallocation of \$1,854 from Operating Expenses to Water Quality Program and Ground Water Survey.
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Analysis of Budget Request

Appropriation: 169 - Map Resale

Funding Sources: MWA - Geology Map Resale Revolving Fund

The Arkansas Geological Survey utilizes this appropriation to operate a Map Resale Program. Funding for the Arkansas Geological Survey's Map Resale appropriation is obtained from the sale of geological and topographical maps to the general public. These proceeds are deposited into the Agency's revolving fund, as authorized in A.C.A. §19-4-1804.

The Agency Request is for Base Level of \$35,000 each year of the 2017-2019 Biennium.

The Executive Recommendation provides for the Agency Request. Expenditure of appropriation is contingent upon available funding.

Appropriation Summary

Appropriation: 169 - Map Resale

Funding Sources: MWA - Geology Map Resale Revolving Fund

Historical Data

Agency Request and Executive Recommendation

Commitment Item	2015-2016 Actual	2016-2017 Budget	2016-2017 Authorized	2017-2018			2018-2019		
				Base Level	Agency	Executive	Base Level	Agency	Executive
Resale Revolving Fund 5900046	2,442	35,000	100,000	35,000	35,000	35,000	35,000	35,000	35,000
Total	2,442	35,000	100,000	35,000	35,000	35,000	35,000	35,000	35,000
Funding Sources									
Fund Balance 4000005	33,430	41,356		65,000	65,000	65,000	88,644	88,644	88,644
Non-Revenue Receipts 4000040	10,368	58,644		58,644	58,644	58,644	58,644	58,644	58,644
Total Funding	43,798	100,000		123,644	123,644	123,644	147,288	147,288	147,288
Excess Appropriation/(Funding)	(41,356)	(65,000)		(88,644)	(88,644)	(88,644)	(112,288)	(112,288)	(112,288)
Grand Total	2,442	35,000		35,000	35,000	35,000	35,000	35,000	35,000

Expenditure of appropriation is contingent upon available funding.

Analysis of Budget Request

Appropriation: 210 - State Geologic Mapping Program

Funding Sources: FAL - Geology Federal

The Arkansas Geological Survey (AGS) utilizes this appropriation for the federal portion of the following program activities: National Coal Resources Data System (NCRDS) project to collect, interpret, correlate and encode point-source coal and other energy-related stratigraphic data; the State Geologic Mapping Program to coordinate collection of data and formulation of maps displaying the location and quantity of minerals in specific areas of the State; and the Geothermal ARRA grant awarded to allow the Geological Survey to populate the National Geothermal Data System. Federal funding is received from the US Department of Energy and the US Department of Interior.

Base Level Regular Salaries and Personal Services Matching include the continuation of the previously authorized 2017 Salaries and Career Service Payments for eligible employees. Personal Services Matching includes the monthly contribution for State employee's health insurance for a total State match per budgeted employee of \$420 per month. Base Level salaries and matching do not include appropriation for a Cost of Living Adjustment or Merit Pay Increases.

The Agency Request is for Base Level of \$135,115 each year of the 2017-2019 Biennium.

The Executive Recommendation provides for the Agency Request.

Appropriation Summary

Appropriation: 210 - State Geologic Mapping Program

Funding Sources: FAL - Geology Federal

Historical Data

Agency Request and Executive Recommendation

Commitment Item		Historical Data			Agency Request and Executive Recommendation			Agency Request and Executive Recommendation		
		2015-2016 Actual	2016-2017 Budget	2016-2017 Authorized	2017-2018			2018-2019		
					Base Level	Agency	Executive	Base Level	Agency	Executive
Regular Salaries	5010000	33,510	37,332	37,332	37,332	37,332	37,332	37,332	37,332	37,332
#Positions		1	1	1	1	1	1	1	1	1
Extra Help	5010001	13,055	22,000	11,591	22,000	22,000	22,000	22,000	22,000	22,000
#Extra Help		1	4	4	4	4	4	4	4	4
Personal Services Matching	5010003	15,390	15,098	14,483	15,213	15,213	15,213	15,213	15,213	15,213
Operating Expenses	5020002	26,681	60,570	156,000	60,570	60,570	60,570	60,570	60,570	60,570
Conference & Travel Expenses	5050009	0	0	0	0	0	0	0	0	0
Professional Fees	5060010	0	0	0	0	0	0	0	0	0
Data Processing	5090012	0	0	0	0	0	0	0	0	0
Capital Outlay	5120011	0	0	0	0	0	0	0	0	0
Total		88,636	135,000	219,406	135,115	135,115	135,115	135,115	135,115	135,115
Funding Sources										
Federal Revenue	4000020	88,636	135,000		135,115	135,115	135,115	135,115	135,115	135,115
Total Funding		88,636	135,000		135,115	135,115	135,115	135,115	135,115	135,115
Excess Appropriation/(Funding)		0	0		0	0	0	0	0	0
Grand Total		88,636	135,000		135,115	135,115	135,115	135,115	135,115	135,115

FY17 Budget amount in Extra Help and Personal Services Matching exceeds the authorized amount due to salary and matching rate adjustments during the 2015-2017 Biennium.

Analysis of Budget Request

Appropriation: 54U - State Farm Grant

Funding Sources: NGC - Geology Private Grants

The State Farm Grant is a privately funded grant donated by State Farm in order to increase earthquake awareness throughout the State. The appropriation provides outreach to the citizens of the State in the form of town hall meetings. In these meetings a geologist will give a presentation on earthquake basics and preparedness techniques.

The Agency Request is for Base Level of \$6,505 each year of the 2017-2019 Biennium.

The Executive Recommendation provides for the Agency Request. Expenditure of appropriation is contingent upon available funding.

Appropriation Summary

Appropriation: 54U - State Farm Grant

Funding Sources: NGC - Geology Private Grants

Historical Data

Agency Request and Executive Recommendation

Commitment Item		Historical Data			2017-2018			2018-2019		
		2015-2016 Actual	2016-2017 Budget	2016-2017 Authorized	Base Level	Agency	Executive	Base Level	Agency	Executive
Operating Expenses	5020002	1,953	6,505	36,000	6,505	6,505	6,505	6,505	6,505	6,505
Conference & Travel Expenses	5050009	0	0	0	0	0	0	0	0	0
Professional Fees	5060010	0	0	0	0	0	0	0	0	0
Data Processing	5090012	0	0	0	0	0	0	0	0	0
Capital Outlay	5120011	0	0	0	0	0	0	0	0	0
Total		1,953	6,505	36,000	6,505	6,505	6,505	6,505	6,505	6,505
Funding Sources										
Fund Balance	4000005	8,057	6,215		0	0	0	0	0	0
Interest	4000300	111	290		0	0	0	0	0	0
Total Funding		8,168	6,505		0	0	0	0	0	0
Excess Appropriation/(Funding)		(6,215)	0		6,505	6,505	6,505	6,505	6,505	6,505
Grand Total		1,953	6,505		6,505	6,505	6,505	6,505	6,505	6,505

Expenditure of appropriation is contingent upon available funding.

Analysis of Budget Request

Appropriation: 873 - Geology Museum

Funding Sources: NGC - Geology Cash

The Geology Museum and Learning Center (GLC) is funded by donations collected by the Agency. The GLC is part of the educational arm of the Agency with the purpose of giving students and citizens exposure to rocks, minerals, fossils, and fossil fuels through its five (5) display areas.

The Agency Request is for Base Level of \$1,125 each year of the 2017-2019 Biennium.

The Executive Recommendation provides for the Agency Request. Expenditure of appropriation is contingent upon available funding.

Appropriation Summary

Appropriation: 873 - Geology Museum

Funding Sources: NGC - Geology Cash

Historical Data

Agency Request and Executive Recommendation

Commitment Item	Historical Data			2017-2018			2018-2019		
	2015-2016 Actual	2016-2017 Budget	2016-2017 Authorized	Base Level	Agency	Executive	Base Level	Agency	Executive
Museum Expenses 5900046	0	1,125	9,025	1,125	1,125	1,125	1,125	1,125	1,125
Total	0	1,125	9,025	1,125	1,125	1,125	1,125	1,125	1,125
Funding Sources									
Fund Balance 4000005	1,080	1,097		0	0	0	0	0	0
Interest 4000300	17	28		0	0	0	0	0	0
Total Funding	1,097	1,125		0	0	0	0	0	0
Excess Appropriation/(Funding)	(1,097)	0		1,125	1,125	1,125	1,125	1,125	1,125
Grand Total	0	1,125		1,125	1,125	1,125	1,125	1,125	1,125

Expenditure of appropriation is contingent upon available funding.

Analysis of Budget Request

Appropriation: F44 - Reg for Prof Geo

Funding Sources: NGC - Prof Geo Board

The Board of Registration for Professional Geologists was created by Act 701 of 1987. The primary duty of the Board is to regulate the public practice of geology in the State of Arkansas by registration and certification of qualified geologists. The Board is cash funded from application, registration, and renewal fees charged pursuant to Arkansas Code Annotated §17-32-307.

Base Level Regular Salaries and Personal Services Matching include the continuation of the previously authorized 2017 Salaries and Career Service Payments for eligible employees. Personal Services Matching includes the monthly contribution for State employee's health insurance for a total State match per budgeted employee of \$420 per month. Base Level salaries and matching do not include appropriation for a Cost of Living Adjustment or Merit Pay Increases.

The Agency Request is for Base Level of \$62,734 each year of the 2017-2019 Biennium.

The Executive Recommendation provides for the Agency Request. Expenditure of appropriation is contingent upon available funding.

Appropriation Summary

Appropriation: F44 - Reg for Prof Geo

Funding Sources: NGC - Prof Geo Board

Historical Data

Agency Request and Executive Recommendation

Commitment Item		Historical Data			2017-2018			2018-2019		
		2015-2016 Actual	2016-2017 Budget	2016-2017 Authorized	Base Level	Agency	Executive	Base Level	Agency	Executive
Regular Salaries	5010000	21,097	30,713	31,020	30,713	30,713	30,713	30,713	30,713	30,713
#Positions		1	1	1	1	1	1	1	1	1
Extra Help	5010001	0	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
#Extra Help		0	1	1	1	1	1	1	1	1
Personal Services Matching	5010003	9,741	12,072	12,354	12,246	12,246	12,246	12,246	12,246	12,246
Operating Expenses	5020002	12,128	14,775	14,775	14,775	14,775	14,775	14,775	14,775	14,775
Conference & Travel Expenses	5050009	50	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Professional Fees	5060010	0	0	0	0	0	0	0	0	0
Data Processing	5090012	0	0	0	0	0	0	0	0	0
Capital Outlay	5120011	0	0	0	0	0	0	0	0	0
Total		43,016	62,560	63,149	62,734	62,734	62,734	62,734	62,734	62,734
Funding Sources										
Fund Balance	4000005	140,821	143,619		126,859	126,859	126,859	109,925	109,925	109,925
Cash Fund	4000045	45,814	45,800		45,800	45,800	45,800	45,800	45,800	45,800
Total Funding		186,635	189,419		172,659	172,659	172,659	155,725	155,725	155,725
Excess Appropriation/(Funding)		(143,619)	(126,859)		(109,925)	(109,925)	(109,925)	(92,991)	(92,991)	(92,991)
Grand Total		43,016	62,560		62,734	62,734	62,734	62,734	62,734	62,734

Expenditure of appropriation is contingent upon available funding.

Analysis of Budget Request

Appropriation: N32 - Geological Research - Landslide/Sinkhole

Funding Sources: NCG - Landslides/Sinkholes Research

The Arkansas Geological Survey has received an increase in reports of mudslides and sinkholes in various areas of the State. The Agency's goal is to provide knowledge of these geohazards to the State of Arkansas, various stakeholders, and the general public in order to further its mission of environmentally responsible management of the State's geological resources.

Base Level Regular Salaries and Personal Services Matching include the continuation of the previously authorized 2017 Salaries and Career Service Payments for eligible employees. Personal Services Matching includes the monthly contribution for State employee's health insurance for a total State match per budgeted employee of \$420 per month. Base Level salaries and matching do not include appropriation for a Cost of Living Adjustment or Merit Pay Increases.

The Agency provides for Base Level of \$111,331 in FY2018 and \$112,067 in FY2019.

The Executive Recommendation provides for the Agency Request. Expenditure of Appropriation is contingent upon available funding.

Appropriation Summary

Appropriation: N32 - Geological Research - Landslide/Sinkhole

Funding Sources: NCG - Landslides/Sinkholes Research

Historical Data

Agency Request and Executive Recommendation

Commitment Item		Historical Data			2017-2018			2018-2019		
		2015-2016 Actual	2016-2017 Budget	2016-2017 Authorized	Base Level	Agency	Executive	Base Level	Agency	Executive
Regular Salaries	5010000	25,770	40,313	39,199	40,313	40,313	40,313	40,913	40,913	40,913
#Positions		1	1	1	1	1	1	1	1	1
Personal Services Matching	5010003	10,753	13,969	13,978	14,195	14,195	14,195	14,331	14,331	14,331
Geological Research	5900046	0	56,823	56,823	56,823	56,823	56,823	56,823	56,823	56,823
Total		36,523	111,105	110,000	111,331	111,331	111,331	112,067	112,067	112,067
Funding Sources										
Fund Balance	4000005	0	32,643		31,538	31,538	31,538	30,207	30,207	30,207
Inter-agency Fund Transfer	4000316	69,166	110,000		110,000	110,000	110,000	110,000	110,000	110,000
Total Funding		69,166	142,643		141,538	141,538	141,538	140,207	140,207	140,207
Excess Appropriation/(Funding)		(32,643)	(31,538)		(30,207)	(30,207)	(30,207)	(28,140)	(28,140)	(28,140)
Grand Total		36,523	111,105		111,331	111,331	111,331	112,067	112,067	112,067

FY17 Budget amount in Regular Salaries exceeds the authorized amount due to salary adjustments during the 2015-2017 Biennium.
Expenditure of appropriation is contingent upon available funding.