APA-1

TRANSMITTAL SHEET FOR NOTICE OF INTENDED ACTION

Control: 335

Department or Agency: Alabama Department of Environmental Management Land Division - Solid Waste Program

Rule No.: 335-13-9-Appendix A

Rule Title: Solid Waste Management Plan

Intended Action: New

Would the absence of the proposed rule significantly harm or endanger the public health, welfare, or safety? Yes

Is there a reasonable relationship between the state's police power and the protection of the public health, safety, or welfare? Yes

Is there another, less restrictive method of regulation available that could adequately protect the public? No

Does the proposed rule have the effect of directly or indirectly increasing the costs of any goods or services involved? No

To what degree?: N/A

Is the increase in cost more harmful to the public than the harm that might result from the absence of the proposed rule? NA

Are all facets of the rule-making process designed solely for the purpose of, and so they have, as their primary effect, the protection of the public? Yes

Does the proposed action relate to or affect in any manner any litigation which the agency is a party to concerning the subject matter of the proposed rule? No

---

Does the proposed rule have an economic impact? No

If the proposed rule has an economic impact, the proposed rule is required to be accompanied by a fiscal note prepared in accordance with subsection (f) of Section 41-22-23, Code of Alabama 1975.

Certification of Authorized Official

I certify that the attached proposed rule has been proposed in full compliance with the requirements of Chapter 22, Title 41, Code of Alabama 1975, and that it conforms to all applicable filing requirements of the Administrative Procedure Division of the Legislative Services Agency.

Signature of certifying officer: Jeffery W. Kitchens

Jeffery W. Kitchens

Date: Wednesday, April 17, 2024

REC'D & FILED
APR 17, 2024
LEGISLATIVE SVC AGENCY

APA-2

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT LAND DIVISION - SOLID WASTE PROGRAM

NOTICE OF INTENDED ACTION

AGENCY NAME: Alabama Department of Environmental Management

RULE NO. & TITLE: 335-13-9-Appendix A Solid Waste Management Plan

INTENDED ACTION: New

SUBSTANCE OF PROPOSED ACTION:
335-13-9 Appendix A is being proposed to outline the State Solid Waste Management Plan.

TIME, PLACE AND MANNER OF PRESENTING VIEWS:
Comments may be submitted in writing or orally at a public hearing to be held at 1:30 p.m., June 20, 2024, in the ADEM Main Hearing Room, 1400 Coliseum Boulevard, Montgomery, Alabama 36110. Attendance at the hearing is not necessary to present such data, views, arguments, or comments. All comments should be received by 5:00 p.m., June 20, 2024.

FINAL DATE FOR COMMENT AND COMPLETION OF NOTICE:
Thursday, June 20, 2024

CONTACT PERSON AT AGENCY:
Lynn T. Roper, 334-271-7728

Jeffery W. Kitchens

Jeffery W. Kitchens

(Signature of officer authorized
to promulgate and adopt
rules or his or her deputy)

335-13-9-Appendix A **Solid Waste Management Plan.**

EXECUTIVE SUMMARY

In accordance with the requirements of the Solid Wastes Disposal Act, Alabama Code § 22-27-45, (2006 Rplc. Vol.), the State Solid Waste Management Plan (Plan) is intended to provide information on the quantities of solid waste generated, disposed and recycled in the State, as well as provide an update regarding activities being implemented to manage these programs. Additionally, the Plan outlines a mechanism to be used in evaluating local solid waste management and recycling programs. The most recent information has been collected for the 2023 fiscal year.

SECTION I
BACKGROUND

In 1989, the Alabama State Legislature enacted Alabama Law 89-824 to amend the Solid Wastes Disposal Act. This Act is codified at Code of Alabama 1975, §§22- 27-40 through 48.1 and required several actions to be completed to address solid waste management in the State. One of these actions required the Alabama Department of Environmental Management (ADEM) to prepare an Alabama Solid Waste Management Plan. The Law required that the Plan be initially prepared in two phases. Phase 1 was completed in November 1989, and served as a guide to local governments in the development of their local solid waste management plans. Phase II was completed in April 1991, and refined previously gathered solid waste management data, as well as identified a number of recommended statutory improvements to the State's management of solid waste. The law also established the criteria that should be included in any amendment or periodic revision to the Plan. In 2002, the Alabama Environmental Management Commission (EMC) adopted these original two phases of the Solid Waste Management Plan into the ADEM solid waste regulations.

Another requirement of the amendments to the Act was that each of the State's regional planning and development commissions were to develop a regional solid waste management needs assessment to assist local governments in the development of their own solid waste management plans. These regional solid waste needs assessments are required to be annually evaluated and revised. The initial assessments were completed in 1989.

Another major requirement of the amendments was to require local governments to prepare and adopt local solid waste management plans. Criteria were established under which the local solid

waste management plans were to be developed. Each county was responsible for developing a solid waste management plan for its incorporated and unincorporated areas. However, municipalities were given the option to submit to the jurisdiction of the county plan, or to develop their own plan for solid waste management within their boundary. Similarly, counties were authorized to establish regional solid waste authorities through the development of joint solid waste management plans. A total of 80 plans (67 counties and 13 municipalities) were developed across the State and were initially submitted to ADEM in November 1990.

Coincidental with the adoption of the State plan into the regulations in 2002, the EMC required that revised regional solid waste needs assessments be prepared by the regional planning and development commissions and councils as required by the Act. The EMC established a regulatory deadline of November 2003 for submittal of these revised assessments. The regulations also required the development of revised local solid waste management plans by the governing body of each county or municipality with responsibility for overseeing solid waste management. The deadline to submit the revised plans to the Department was September 2004.

A key component of Phase II of the State Solid Waste Plan was the list of recommendations for improvements in the State's solid waste management system. Throughout the 1990's, the Department made repeated efforts to obtain legislative approval of a number of the recommendations included in Phase II of the Plan. Despite ADEM's efforts, only a portion of one of the recommendations listed in Phase II of the Plan was passed by the Alabama Legislature at that time (see Section VI. Scrap Tire Management Program).

However, in 2008, during the regular session, the Alabama Legislature passed the “Solid Wastes and Recyclable Materials Management Act”. This act provided a comprehensive, statewide program for the effective management of solid wastes and recyclable materials by implementing a number of recommendations of the previous version of the State Solid Waste Management Plan. Specifically, the act established the Solid Waste Fund which funds the costs associated with the remediation of unauthorized solid waste dumps; established the Alabama Recycling Fund which provides grants funds to local governments and non-profit organizations within Alabama to develop and enhance recycling and waste minimization programs; and has provided adequate funding resources to ADEM to carry out the duties related to the regulation of solid waste management and funds educational programs related to solid waste management and

recycling. These programs are funded by a $1.00 per ton and $0.25 per cubic yard statewide solid waste disposal fee.

With the 2008 passage of the Solid Wastes and Recoverable Materials Management Act (SWRMMA) and accompanying regulations, the Department was tasked with tracking, calculating and reporting progress towards a statewide 25% Solid Waste Reduction Goal. That goal was first exceeded in 2018 and again in 2022.

The data presented in this report represent the most current information on solid waste management that was made available to the State. The data and information presented in this report were obtained primarily from the approved local plans, which were the result of months of study by the counties and municipalities and their consultants. This report does not evaluate the accuracy and completeness of the local plans nor comment on the methods of future solid waste management selected by a county or municipality. The completeness of each plan is evaluated by ADEM as part of its review. During this most recent round of local plan development, additional municipalities made the decision to opt-in and opt-out of their respective county plans and to prepare their own solid waste management plans. As of March 2024, 68 local plans have been approved and several plans are expected to be received in the near future. To date, only nine counties and seven municipalities have not complied with the statutory and regulatory requirements to develop revised local solid waste plans. Further actions may be taken to bring these local governments into compliance.

The results of a statewide survey performed for the first phase of the Plan indicated Alabamians generated an average of 6.5 pounds of solid waste per person per day. The survey also indicated that approximately five percent of the State's waste stream was recycled. Later data supplied by local governments and compiled as part of the second phase of the Plan indicated that the average solid waste production per person per day is 6.3 pounds and that 2.6 percent of the waste stream was actually recycled. More recent data supplied to the Department during the period of 2022-2023 indicates the total average daily solid waste generation by Alabamians is 12.12 pounds per person per day combining municipal, construction/demolition and industrial waste streams, and that approximately 25 percent of the non-hazardous solid waste stream in the State is recycled or beneficially reused.

SECTION II
STATUTORY AND REGULATORY UPDATE

Since the 2008 plan update, the Department and Legislature have implemented several revisions to the Solid Waste Program regulations (Division 13 of the ADEM Administrative Code) to reflect changes in the law. These revisions were made to incorporate new statutory requirements into the existing program regulations and redefine existing definitions.

In 2011, the Alabama Legislature directed the Department to work with the Alabama Department of Public Health to evaluate and make recommendations regarding solid waste management in the State of Alabama. As a result of this directive, the Department partnered with Auburn University to conduct an independent assessment of Alabama's solid waste permitting process. In addition, the Department also tasked Auburn University to evaluate Alabama's overall solid waste management practices. Auburn University completed the Alabama Solid Waste Study in November of 2013. The Alabama Solid Waste Study was a two phased project: Phase 1 examined the solid waste landfill permitting process currently in place in Alabama, and Phase 2 studied strategies for future solid waste management in Alabama. Reports for Phase 1 and 2 were submitted to the Department on May 30, 2013, and November 3, 2013, respectively. The reports of the complete study can be found on the ADEM website at http://www.adem.alabama.gov/programs/land/SolidWasteReport.cnt.

In 2016, new regulations [335-13-4-.26(6) Disposal requirements for wood ash waste.] were written to allow for the alternative management for wood ash wastes which exhibit less than 50 percent of each of the toxicity characteristic (TC) levels for metals.

In 2018 and 2021, new regulations [335-13-15 Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments.] were written that applies to owners and operators of new and existing landfills and surface impoundments that dispose or otherwise engage in solid waste management of coal combustion residuals (CCR) generated from the combustion of coal at electric utilities and independent power producers and established a permitting program for these CCR units.

The Department also amended the solid waste permitting application regulations [335-13-5-.02 Permit Application] to reflect a modification in the local host government approval process due to a statutory change (2017 Regular Session-House Bill 328) to the Code of Alabama. This modification inevitably removed the Regional Planning Committee's review and approval from the process. Furthermore, new landfill applicants are required to petition the circuit court to review whether the local governing body complied with the public comment

requirements, their approval of the application was consistent with the local solid waste management plan, and whether consideration of the criteria for siting a landfill, provided in the application, was considered.

In 2019, the Department revised existing regulations concerning permit duration. Permits obtained in compliance with Division 13 shall be valid for the design life of the facility or as otherwise determined by the Department, but no longer than a period of ten years.

In 2020, an effort to significantly reduce a contributor of solid waste to Alabama's landfills, and to provide oversight to a previously unregulated agricultural practice, ADEM established regulations to require management practices for utilization of using municipal and industrial by-product materials as substitutes for commercial fertilizers and soil amendments: 335-13-16 Requirements for the Beneficial Use of By-Product Materials for the Purpose of Land Application, or the Beneficial Use Program.

In 2020, the Alabama Legislature revised the statute to clarify the meaning and intent of alternative cover materials for landfills. In 2021, the Department adopted new regulations that give the Department the discretion to evaluate and approve alternative cover material in compliance with federal law and the USEPA rules for guidance to achieve a level of performance equal to or greater than earthen cover material.

The future success of solid waste management in Alabama rests with the implementation of programs designed to minimize the State's dependence on disposal and to increase efforts to re-use and recycle. Current programs implemented by ADEM with the purpose of achieving these goals include the School Recycling Challenge, the Alabama Recycling Fund Grants Program, the Scrap Tire Marketing Grants Program, and statewide Education & Outreach regarding these programs. Other efforts include communicating with stakeholders and coordinating with communities and municipal governments to achieve reduction goals. To continue the long-term viability of this path, significant increase in resources must be devoted to the regulatory oversight of both permitted landfills and to the closure of illegal solid waste dumps. Public education and political support either for a fundamental paradigm shift to waste minimization and recycling, or of increased resources and significant revisions to the State's existing solid waste management system must be achieved if Alabama is to fully embrace the statutory purpose of the orderly management of solid

wastes resulting from decisions based on comprehensive planning at the local, regional and state level.

SECTION III
WASTE GENERATION AND DISPOSAL VOLUME NEEDS

An accurate accounting of the quantity of waste in Alabama's solid waste stream is a key element of producing a solid waste management plan that reflects the present and future needs of the State. The Act stipulates that each revision of the State Solid Waste Management Plan may include:

1. a revised estimate of the solid waste generation and disposal in the State for a 10-year period;
2. the total amounts of solid waste generated, recycled, and disposed of during the calendar year prior to the Plan's revision; and
3. the methods of solid waste disposal and recycling used during the prior calendar year.

In past waste accountings there were two basic methods utilized by counties and municipalities in quantifying their waste streams:

Method I: Evaluation of historical waste stream quantities landfilled, incinerated, and recycled. Projection of waste quantities by determining overall trends in the historical waste quantities; or

Method II: Evaluation of historical waste stream quantities landfilled, incinerated, and recycled. Projection of waste quantities by applying unit waste generation factors derived from historical waste stream quantities and population estimates.

Projections utilizing Method I were made through the assumption that future waste stream quantities will follow historical trends. This method did not acknowledge individual factors affecting waste quantities but considers the trend in overall changes in waste stream quantities over a period of time.

In Method II, total waste stream quantities were projected by modifying historical waste quantities through expected changes in population. A unit waste generation factor (i.e.,

pounds per capita per day) was calculated from historical data and was applied to the projected annual population. Pounds per capita per day rates varied greatly across the State, and the variations can be attributed to commercial activity, industrial activity, individual waste disposal practices, and the various data collection techniques utilized by local governments. Many local solid waste management plans utilized the national average of 5.3 pounds per capita per day. Appendices A-1 and A-2 contain the total annual solid waste generation and recycling projections for the State for a period of ten years, as well as actual information on waste disposal for 2022.

SECTION IV
DEVELOPMENT AND IMPLEMENTATION OF LOCAL SOLID WASTE MANAGEMENT PLANS

Both the Act and the ADEM Solid Waste regulations require periodic updating of local solid waste management plans. Rulemaking undertaken in 2002 required submittal of the local plans to ADEM by September 2004. As of March 2024, 68 local plans have been approved and several plans are expected to be received in the near future. To date, only nine counties and seven municipalities have not complied with the statutory and regulatory requirements to develop revised local solid waste plans. A complete listing of the local solid waste management plans and their approval status as of March 2024 is included in Appendix A-3.

Despite continued efforts to encourage recycling and waste minimization, a number of local jurisdictions have not fully developed and implemented recycling programs as part of their local solid waste management strategy. In an effort to help assist those jurisdictions, revisions and amendments to solid waste management plans are eligible for funding through the Alabama Recycling Fund Grants Program.

SECTION V
SOLID WASTE REDUCTION AND RECYCLING EFFORTS

The Solid Waste Disposal Act, SWRMMA and ADEM regulations provide for programs that emphasize waste minimization and recycling as key components of the State's overall solid waste management program. Pursuant to Code of Alabama §22-27-45, (2006 Rplc. Vol.), the State Solid Waste Management Plan developed in 1991 and adopted into the regulations in 2002 recommended a statewide municipal solid waste recycling goal of 25%. In 2020, the Environmental Protection Agency announced a National Recycling Goal to reach a recycling

rate of 50% by 2030. On a state level, Alabama met its Solid Waste Reduction Goal of 25% in 2018, 2019, 2020, 2021 and in 2022.

To further state government's commitment to recycling and waste reduction, under Alabama Law 90-564 §3(b), and subsequently Code of Alabama §22-22B-3(b), (2006 Rplc. Vol.), state agencies and public school systems are required to report recycling activities annually to ADEM. In 2008, the Materials Management Section of the Solid Waste Branch assumed the responsibility for tracking and reporting on this requirement. From 2019 to 2022 state agencies and school systems recycled 34,043.61 tons of material.

An additional component of the SWRMMA was the establishment of an Alabama Recycling Fund (ARF) and directive that ADEM develop a grants program which would assist local governments in the establishment or expansion of local recycling and waste minimization programs. Each year grant applications submitted by the March 1 deadline are reviewed and ranked for funding. Communities are designated as Category 1 (greater than 40,000 households), which must receive at least 60% of funds, or Category 2 (less than 40,000 households), which must receive at least 20% of grant funds. The remaining 20% can be awarded to either category, with no single award being for more than 20% of funds available. To date, approximately $30,000,000 has been awarded to local governments in Alabama. The recycling grants assist Alabama communities in realizing increases in diversion from the disposal of recyclable commodities. As a requirement for funding, local governments may only request funding for items that are consistent with the stated goals and objectives of their local Solid Waste Management Plan. If not consistent however, the ARF funds and associated grants program may provide resources to update local plans for consistency. Once the updated plan has been approved, funding for other items requested may be obtained.

To foster a better understanding by the Department as to the waste reduction and recycling efforts of local solid waste management programs, the Plan established an annual reporting requirement for local solid waste management authorities. The reporting would simplify the recommendation for a comprehensive annual solid waste report that was made as part of Phase II of the State Solid Waste Management Plan. Tables for this streamlined reporting are included in Appendix A-4.

Furthermore, solid waste reduction efforts are realized through the implementation of new programs, such as the Beneficial Use program (335-13-16). The program instituted

the requirement for all Generators and Distributors of by-product materials destined for land application in the State to register in the program and abide by specific operational standards for storage and land application activities. This structure provided the Department with the ability to monitor and inspect by-product application sites to ensure compliance and the use of best management practices to protect human health and the environment. These inspections combined with annual reporting of by-product material use broadened the Departments' understanding of the Beneficial Use universe and has provided data-driven framework by which further regulatory needs could be known and incorporated in future rulemaking efforts.

Since 2020, approximately 1.1 million dry tons of by-product materials have been diverted from landfills for agricultural use and the universe of registered applicants has grown from 96 in 2020 to nearly 150 in 2022.

SECTION VI
SCRAP TIRE MANAGEMENT PROGRAM

In the 2003 session, the Alabama Legislature passed the Alabama Scrap Tire Environmental Quality Act. This legislation was developed as a result of a recommendation made in Phase II of the State Solid Waste Management Plan. This statute established the Scrap Tire Fund and required ADEM to develop and implement a statewide scrap tire management program by October 1, 2004. ADEM Administrative Code, Division 4, which contains the scrap tire regulations and requirements, became effective August 4, 2004.

With input from the Scrap Tire Commission, ADEM began the process of staffing the program, and developing information systems and supporting documents as well as standard operating procedures. In conjunction with trade and industry associations and the media, the Department initiated strategies to notify those subject to regulation. The regulatory program instituted the registration of Scrap Tire Receivers, which included separate classes for tire retailers and salvage and fleet operations. The permitting program initiated provided for permitting of scrap tire transporters, processors and end-users, and included provisions for the storage and transportation of scrap tires as well as other requirements. Manifesting shipments utilizing an approved form was a requirement to provide ADEM with information useable in determining proper reuse or disposal of scrap tires within the state. Procedures were also established by

regulation for the use of the Scrap Tire Fund for remediation of scrap tire sites in Alabama. Included were those for an approved contractor and site ranking systems.

Since initiated, the ADEM Scrap Tire Program has issued over 5,000 receiver registrations, 800 transporter and processor permits, and performed over 13,600 inspections of scrap tire facilities and scrap tire sites. In the area of site cleanup, cooperative efforts by property owners and ADEM enforcement actions have resulted in the removal of over 12.5 million scrap tires from illegal disposal sites, without expending Scrap Tire Fund resources. In 2019, the site ranking process identified the State's fourth largest illegal scrap tire site in Camp Hill, Tallapoosa County, Alabama. After completing the initial contractor approval, competitive bidding and contract award processes, scrap tire removal from the site began and within three months of the project’s start date the remediation was completed, removing approximately 4,000 tons of scrap tire material. Of this amount, roughly 10% of the material was been beneficially reused.

Originally tasked to the Alabama Department of Economic and Community Affairs (ADECA), but transferred to ADEM in 2009, the ADEM Scrap Tire Marketing Program was established to demonstrate potential beneficial end uses of scrap tires. Included in the potential uses are scrap tire derived products and applications, and their suitability for substitution of new raw materials. Widespread use of scrap tire derived products has been limited by factors including developers, consumers, construction firms and others being unaware of the myriad of applications available. The program aims to bring awareness of the many uses of scrap tire derived products to these groups and others. The utilization of scrap tires in beneficial reuse applications continues to be demonstrated successfully in Alabama. The availability and durability of the material lends itself to a wide range of uses which, in many cases, also yields economic benefits. The program aims to support research and demonstration of end uses, which may overcome current misconceptions, and technical barriers, which will lead to more widespread implementation.

The Department utilizes an open grant process to select demonstration projects for reimbursement. Such projects are meant to encourage the use of tire derived products and applications. These projects have not only provided environmental and economic benefits in their application but have improved communities and public facilities across Alabama. To date, the program has provided over $12.3 million

for the implementation of Scrap Tire Marketing projects in the State. Please see the list below of several major scrap tire marketing projects funded by ADEM:

* Lake Guntersville & Desoto State Parks - Recycled Tire Rubber Modified Asphalt Project (~5 miles)
* Tuscaloosa County Park & Recreation Authority – Muny Sokol Park - Recycled tire surfacing for an All-Inclusive Playground Project
* Coffee County Rubber Modified Asphalt Project (~1.85 miles)
* SSAB Alabama, Inc. – Injection Carbon Optimization Project
* Numerous recycled tire material mulch projects primarily for playgrounds and septic drainage fields
* Numerous recycled tire material bonded mulch projects primarily for walking trails
* McClellan Development Authority – Lake Yahou - Recycled Tire Rubber Modified Asphalt Project (~1.25 mile)
* Joe Wheeler State Park - Recycled Tire Rubber Modified Asphalt Project (~6.75 mile)
* St. Clair County - Recycled Tire Rubber Modified Asphalt Project (~2.91 mile)

SECTION VII
CONCLUSIONS

In summary, the Department continues to make a concerted effort towards continually exceeding the Solid Waste Reduction Goal. The Department recognizes that increasing reduction and recycling in Alabama requires a multi-faceted approach. Informing local governments and municipalities of their eligibility for Alabama Recycling Fund Grants has led to an increase in grant applications. The Department's implementation of an annual Grant Workshop has improved the quality of these applications. Continued involvement in education and outreach opportunities helps communicate the importance of recycling through personal contact with locals and the public. The School Recycling Challenge has expanded by targeting more schools and including a more in-depth educational component. The Department continues to maintain a positive relationship with stakeholders and communities by keeping them informed and involved in waste reduction and recycling efforts.

The Scrap Tire Marketing Program continues to grow. In line with the multi-faceted approach, the Scrap Tire Marketing component was added to the Alabama Recycling Fund Grant’s Scope of Services. By offering additional funding to address scrap tire’s, it is the Department's intent to help communities boost their reduction efforts and bring awareness to the Scrap Tire Marketing Fund.

The implementation of the Department's new permitting system, AEPACS (Alabama Environmental Permitting and Compliance System), has made permitting and compliance more streamlined. The increased efficiency benefits the Department and the external users. It allows both users to easily navigate facility information and monitor schedules for permits, payments and applications. As the benefits of the system continue to be realized, the expectation is to see an increase in data collection. Efficient and increased data collection is an integral piece of increasing reduction and recycling in Alabama.

APPENDIX A-1
10-YEAR SOLID WASTE GENERATION AND RECYCLING PROJECTIONS

Year[a]	Population[b] (persons)	Diverted Wastes[c] (tons)	Landfilled Wastes[d] (tons)	Total Waste Generation[e] (tons)	Total Waste Generation[e] (lbs/person/day)	Solid Waste Diversion Rate[g]
2022	*5,096,708*	2,884,967	8,391,829	11,276,796	12.12	25.58%
2023[h]	*5,125,547*	(2,409,721)	(8,499,435)	(10,909,156)	(11.65)	(22.09%)
2023[i]	*(same)*	*(3,134,006)*	*(8,206,599)*	*(11,340,605)*	12.12	*(27.64%)*
2024	*5,154,387*	*3,385,663*	*8,018,751*	*11,404,414*	12.12	*29.69%*
2025	*5,183,305*	*3,639,995*	*7,828,403*	*11,468,398*	12.12	*31.74%*
2026	*5,212,144*	*3,896,894*	*7,635,313*	*11,532,207*	12.12	*33.79%*
2027	*5,240,984*	*4,156,412*	*7,439,605*	*11,596,016*	12.12	*35.84%*
2028	*5,269,823*	*4,418,548*	*7,241,277*	*11,659,825*	12.12	*37.90%*
2029	*5,298,742*	*4,683,373*	*7,040,436*	*11,723,809*	12.12	*39.95%*
2030	*5,327,581*	*4,950,750*	*6,836,868*	*11,787,618*	12.12	*42.00%*
2031	*5,356,420*	*5,220,746*	*6,630,681*	*11,851,427*	12.12	*44.05%*
2032	*5,385,260*	*5,493,361*	*6,421,875*	*11,915,236*	12.12	*46.10%*

[a]2022 data (except population) are reported numbers; 2023 data are incomplete as of Monday, March 11, 2024, therefore 2023 projections are provided in addition to those reported, with Statewide Solid Waste Reduction Goal set at 25% (see 335-13-13-.02 prior to expected regulatory changes); 2024-2032 data are *projected* as described below.

[b]Population projected via linear regression on US Census data for Alabama (2000, 2010, 2020; $R^2 = 0.9841$; $\mu = 4.75 \times 10^6$ persons; $\sigma = 2.90 \times 10^5$ persons)

[c]Diverted wastes = summation of volumes reported across recycling, scrap tire, and beneficial-use programs; Note: Diversion prior to 2023 was calculated by reported materials received at recycling facilities. Updated reporting in 2023 and after allows the calculation to use reported materials that are sent to end-use manufacturers (i.e., truly diverted); Diverted wastes are projected at a set rate[a,g]

[d]2022, 2023 landfilled wastes are in-state volumes reported (MSW, C&D, & ILF); 2023(projected)-2032 landfilled wastes projection assumes static annual diversion rate[g]

[e]2022, 2023$_{(incomplete)}$ Total waste generation = summation of reported landfilled and diverted wastes; 2023$_{(projected)}$-2032 total waste generation projected by applying 2022 per capita waste generation rate to population projections over the same time period.

[f]Per capita waste generation rate = (([Projected Waste Generation]x2000lbs)/[Projected Population])/365.25days

[g]2022, 2023 Solid Waste Diversion Rate = (Projected Diverted Wastes)/(Projected Total Waste Generation)x100%; Annual increase in diversion rate for 2023$_{(projected)}$-2031 projections is based on an average percentage increase from 2012-2022 of 2.05%.

[h]incomplete

[i]projected

APPENDIX A-2

SOLID WASTE DISPOSAL IN ALABAMA[1]

Source	2020 (tons)	2021 (tons)	2022 (tons)	2023 (tons)[2]
Municipal Solid Waste Disposal	6,159,254	6,071,849	6,430,234	6,726,817
Industrial Solid Waste	1,526,132	1,633,253	1,397,715	1,304,631
Construction and Demolition Waste	1,706,283	1,769,871	1,907,073	1,793,455
Total Waste Disposal	9,391,669	9,474,973	9,735,022	9,824,903

[1]Based on in-state and out-of-state quantities reported to the Alabama Department of Environmental Management

[2]2023 reports as of Friday, March 1, 2024

APPENDIX A-3
APPROVED LOCAL SOLID WASTE MANAGEMENT PLANS*

Autauga County	Jackson County
Baldwin County	Jefferson County
Barbour County	Lamar County
Bibb County	Lauderdale County
City of Birmingham	Lawrence County
Blount County	Lee/East Alabama Regional SWDA
Bullock County	Limestone County
Butler County	Macon County
Calhoun County	Madison County
Chambers County	Marengo County
Cherokee County	Marion County
Chilton County	Marshall County
Choctaw County	City of Mobile
Clay County	Mobile County
Coffee County	Monroe County
Colbert County	Montgomery County
Conecuh County	Perry
Covington County	Pickens
Crenshaw County	Pike
Cullman County	Randolph
Dale County	City of Red Bay
Dallas County	Russell/East Alabama Regional SWDA
DeKalb County	Phenix City
City of Dothan	City of Selma
Escambia County	Shelby County
Fayette County	St. Clair County
City of Florence	Sumter County
Franklin County	Town of Sylvan Springs
City of Ft. Payne	Tallapoosa County
Geneva County	Tuscaloosa County
Green County	City of Valley
Hale County	Washington County
Henry County	Wilcox County
Houston County	Winston County

LOCAL PLANS NOT SUBMITTED FOR ADEM REVIEW (expired)*

City of Alex City	City of Huntsville
City of Brundidge	Lowndes County
Clarke County	City of Montgomery
Cleburne County	Morgan County
Coosa County	City of Scottsboro
Elmore County	Talladega County
Etowah County	City of Troy
City of Heflin	Walker County

*Status as of March 2024

APPENDIX A-4
RECYCLING REPORTING FOR STATE GOVERNMENT AND EDUCATION DEPARTMENTS

Year	Total Reports	Total Volume (tons)	Tons per Report
2016	59	7,009.03	118.80
2017	40	17,614.15	440.35
2018	56	8,195.37	146.35
2019	38	5,602.98	147.45
2020	45	8,154.66	181.21
2021	54	11,518.39	213.30
2022	26	8,767.58	337.21

RECYCLING PROJECTION RANGES FOR STATE GOVERNMENT AND EDUCATIONAL DEPARTMENTS

Year	Reports Projected Range[1]	Volume Projected Range[2]	Avg. Tons per Report Projected[3]
2023[4]	22 - 45	4,572 - 12,544	253.84
2024	19 - 43	4,323 - 12,296	269.91
2025	16 - 40	4,075 - 12,047	289.37
2026	13 - 37	3,826 - 11,799	313.40
2027	10 - 34	3,578 - 11,550	343.82
2028	7 - 31	3,330 - 11,302	383.59
2029	4 - 28	3,081 - 11,053	437.79
2030	1 - 25	2,833 - 10,805	516.02

[1]Reports projected range = (Average of Total Reports 2016-2022) ± (Standard deviation of Total Reports 2016-2022)

[2]Volume Projected Range = (Average of Total Volume 2016-2022) ± (Standard deviation of Total Volume 2016-2022)

[3]Avg. Tons per Report Projected = (Average of Total Reports 2016-2022)/(Average of Total Volume 2016-2022)

[4]2023 reports are still coming in at the time of these calculations. As of Monday, March 11, 2024: No. of Reports = 40; Total Volume Reported (tons) = 10,184; Tons per Report = 254.59

APPENDIX A-5
ALABAMA RECYCLING FUND GRANTS PROGRAM

Fiscal Year	No. of Grants	Total Amount Awarded
2010	8	$1,162,052.62
2011	13	$1,654,106.12
2012	20	$2,000,000.51
2013	15	$2,009,006.36
2014	18	$2,363,640.18
2015	16	$1,899,997.31
2016	22	$1,829,372.46
2017	19	$1,252,968.35
2018	13	$1,600,000.67
2019	13	$1,756,592.35
2020	19	$1,623,556.32
2021	16	$1,478,324.22
2022	16	$1,700,000.00
2023	43	$3,766,907.87
Total	**251**	**$26,096,525.33**

APPENDIX A-6
SCRAP TIRE MARKETING FUND GRANTS PROGRAM

Fiscal Year	No. of Grants	Total Amount Awarded
2010	1	$62,013.00
2011	42	$359,936.00
2012	18	$6,158,797.00
2013	5	$71,428.00
2014	4	$420,069.00
2015	4	$290,597.00
2016	2	$31,818.00
2017	2	$461,853.00
2018	4	$237,565.00
2019	9	$242,768.00
2020	2	$301,541.00
2021	5	$896,370.00
2022	10	$634,595.00
2023	13	$2,090,266.10
Total	**121**	**$12,259,616.10**

Author: Jason Wilson, Blake B. Pruitt.
Statutory Authority: Code of Alabama 1975 §§22-22A-8(d); 227-27-40 et seq.
History: **New Rule:** Published _____; effective _____.