



SIP Revision: Forest and Range Management Burn Rules

Air Quality Division
October 11, 2023 Draft

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Table of Contents

Table of Contents	iii
List of Tables	iii
List of Appendices	iii
Completeness Criteria (40 C.F.R. Part 51, Appendix V, § 2.0)	v
Appendix V § 2.1 - Administrative Materials	v
Appendix V § 2.1 - Technical Support	vi
1 Introduction	1
1.1 Introduction and Statement of Purpose	1
1.2 Background of the Smoke Management Program and Rulemaking	1
2 Amended Smoke Management Rules (A.A.C. R18-2-1501– R18-2-1515)	3
2.1 SIP-Approved Rules Amended in This Revision	3
2.2 Summary of Rule Amendments	4
3 Demonstrating Noninterference with Other CAA Requirements	7
3.1 Rule Clarifications and Updated Terms	7
3.2 Removal of A.A.C. R18-2-1503 Annual Registration Program Requirements and Noninterference with Setting of Annual Emission Goals	7
4 Public Process	9
4.1 SIP Public Process	9

List of Tables

Table 1: Rules Amended in or Removed from the SIP	3
Table 2: Brief Description of Rules Amended in the SIP	4

List of Appendices

Exhibit I: Notice of Proposed Rulemaking	11
Exhibit II: Notice of Final Rulemaking	12
Exhibit III: Final Rules Published in A.A.C.	13
Exhibit IV: Delegation of Authority	15
Exhibit V: Authorizing Statutes	16

Exhibit VI: Public Notice and Affidavit of Publication 17
Exhibit VII: Public Hearing Agenda..... 18
Exhibit IX: Public Hearing Sign-in Sheet 19
Exhibit X: Public Hearing Officer Certification 20
Exhibit XI: Public Hearing Transcript..... 21
Exhibit XII: Compilation of Comments and State Responses..... 22

COMPLETENESS CRITERIA

(40 C.F.R. PART 51, APPENDIX V, § 2.0)

Appendix V § 2.1 - Administrative Materials

(a) A formal signed, stamped, and dated letter of submittal from the Governor or his designee, requesting EPA approval of the plan or revision thereof (hereafter “the plan”). If electing to submit a paper submission with a copy in electronic version, the submittal letter must verify that the electronic copy provided is an exact duplicate of the paper submission.

See the cover letter for this SIP submission and attached delegation of authority (Exhibit IV) from Karen Peters, Director of the Arizona Department of Environmental Quality (ADEQ), to Daniel Czecholinski, Director of the ADEQ Air Quality Division, authorizing Mr. Czecholinski to perform any act the ADEQ Director is authorized to perform under the state air quality statutes, including the submission of SIPs to EPA.

(b) Evidence that the State has adopted the plan in the State code or body of regulations; or issued the permit, order, consent agreement (hereafter “document”) in final form. That evidence shall include the date of adoption or final issuance as well as the effective date of the plan, if different from the adoption/issuance date.

As described in greater detail in Chapter 1, this SIP submission consists of a revision to ADEQ’s smoke management program for prescribed burns conducted by federal and state land managers in Arizona.

ADEQ completed a rulemaking to revise and update the Forest and Range Management rules contained in Arizona Administrative Code (A.A.C.), Title 18, Chapter 2, Article 15 (A.A.C. R18-2-1501 – R18-2-1515) in order to update outdated terminology and ensure the rule text accurately reflects the prescribed burn approval process as implemented. These rule changes will streamline ADEQ's prescribed burn approvals and reduce miscommunication and rework with land managers, while preserving the emission reductions gained from agency oversight and implementation of best practices to mitigate smoke impacts.

The Notice of Final Rulemaking (NFRM) for the smoke rule revisions is attached as Exhibit II and was published in the Arizona Administrative Register (A.A.R.) on June 30, 2023 with an effective date of August 7, 2023 (29 A.A.R. 1427).

The final rules, as currently published and effective in the Arizona Administrative Code, are also provided as Exhibit III.

(c) Evidence that the State has the necessary legal authority under State law to adopt and implement the plan.

ADEQ is authorized to adopt and administer smoke management rules and to submit the rules for approval in the SIP under Arizona Revised Statutes (A.R.S.) §§ 49-104, 49-106, 49-404, 49-406, 49-425, 49-426, 49-501, and 49-458.01, which are included in Exhibit V.

(d) A copy of the actual regulation, or document submitted for approval and incorporation by reference into the plan, including indication of the changes made (such as redline/strikethrough) to the existing approved plan, where applicable. The submission shall include a copy of the official State regulation/document, signed, stamped, and dated by the appropriate State official indicating that it is fully enforceable by the State. The effective date of any regulation/document contained in the submission shall, whenever possible, be indicated in the regulation/document itself; otherwise the State should include a letter signed, stamped, and dated by the appropriate State official indicating the effective date. If the regulation/document provided by the State for approval and incorporation by reference into the plan is a copy of an existing publication, the State submission should, whenever possible, include a copy of the publication cover page and table of contents.

The NFRM contains rule revisions to update the Article 15 smoke management rules. See Exhibit II. Table 1 below shows the rules that are modified in this SIP Revision. Table 2 briefly summarizes the changes to each rule.

(e) Evidence that the State followed all of the procedural requirements of the State's laws and constitution in conducting and completing the adoption/issuance of the plan.

Evidence that ADEQ complied with all state requirements for the adoption of the rule revisions included in this SIP revision and the SIP revision itself is described in sections 2.1(b), 2.1(f), and 2.1(g) of this completeness criteria checklist.

(f) Evidence that public notice was given of the proposed change consistent with procedures approved by EPA, including the date of publication of such notice.

Evidence that ADEQ gave notice of the SIP Revision in accordance with A.R.S. § 49-444 is attached as Appendix B, Exhibit VI through Exhibit XI.

(g) Certification that public hearing(s) were held in accordance with the information provided in the public notice and the State's laws and constitution, if applicable and consistent with the public hearing requirements in 40 CFR 51.102.

The certification of public comments and other documents related to the public hearing are included in Appendix B, Exhibit VI through Exhibit X.

(h) Compilation of public comments and the State's response thereto.

Contained in Exhibit XI: Compilation of Comments and State Responses.

Appendix V § 2.1 - Technical Support

(a) Identification of all regulated pollutants affected by the plan.

This SIP revision addresses smoke from prescribed burning, which contributes to emissions of PM_{2.5}, PM₁₀, and VOCs.

(b) Identification of the locations of affected sources including the EPA attainment/nonattainment designation of the locations and the status of the attainment plan for the affected areas(s).

There are no affected sources, because prescribed fire is not a significant contributor to emissions in Arizona's PM₁₀ or PM_{2.5} nonattainment or maintenance areas.

(c) Quantification of the changes in plan allowable emissions from the affected sources; estimates of changes in current actual emissions from affected sources or, where appropriate, quantification of changes in actual emissions from affected sources through calculations of the differences between certain baseline levels and allowable emissions anticipated as a result of the revision.

The revised smoke rules will not result in any change in actual or allowable emissions from prescribed burning, as the changes do not affect the stringency of review, the conditions under which ADEQ will approve a burn, or the criteria ADEQ uses to evaluate burn requests.

(d) The State's demonstration that the national ambient air quality standards, prevention of significant deterioration increments, reasonable further progress demonstration, and visibility, as applicable, are protected if the plan is approved and implemented. For all requests to redesignate an area to attainment for a national primary ambient air quality standard, under section 107 of the Act, a revision must be submitted to provide for the maintenance of the national primary ambient air quality standards for at least 10 years as required by section 175A of the Act.

Not applicable.

(e) Modeling information required to support the proposed revision, including input data, output data, models used, justification of model selections, ambient monitoring data used, meteorological data used, justification for use of offsite data (where used), modes of models used, assumptions, and other information relevant to the determination of adequacy of the modeling analysis.

Not applicable.

(f) Evidence, where necessary, that emission limitations are based on continuous emission reduction technology.

Not applicable.

(g) Evidence that the plan contains emission limitations, work practice standards and recordkeeping/reporting requirements, where necessary, to ensure emission levels.

Not applicable.

(h) Compliance/enforcement strategies, including how compliance will be determined in practice.

Not applicable.

(i) Special economic and technological justifications required by any applicable EPA policies, or an explanation of why such justifications are not necessary.

Not applicable.

1 INTRODUCTION

Chapter 1 provides an overview of Arizona’s prescribed fire smoke management program. Chapter 2 examines the final rule revisions that contain updated terms and procedural elements. Chapter 3 discusses the requirement for SIP revisions to demonstrate non-interference with other SIP provisions. Chapter 4 documents the public process conducted for this rulemaking and SIP revision.

1.1 Introduction and Statement of Purpose

The purpose of this rulemaking and SIP revision is to update the Arizona Department of Environmental Quality’s (ADEQ) forest and range management burn rules, which regulate prescribed burns by federal and state land managers and enable smoke management across the State. Prescribed fire or prescribed burning refers to the controlled application of fire to the landscape by experts under specific weather conditions in order to improve ecosystem health and to reduce excess fuel loads, which can reduce the severity of future natural fires.

Like many Western states, Arizona has experienced an increase in severe wildfires over the past several years. As a result, state leaders have prioritized legislative and administrative actions to prevent and mitigate the negative impacts of severe fire. One step toward this goal is to modernize and streamline these smoke management rules to support timely oversight of prescribed burns when conditions allow.

State and federal forest and range land covers roughly 27% of Arizona, occupying 19.4 million acres of the State. With close attention to potential air quality concerns, state and federal land managers apply fire on forest and range land as a tool for ecosystem health and fuel load management.

Arizona Administrative Code (A.A.C.) Title 18, Chapter 2, Article 15 ("Article 15") regulates the emissions from these fires and provides the procedure ADEQ uses to review prescribed burn requests from land managers. The rules address the two primary concerns for air quality from prescribed fire: violations of the National Ambient Air Quality Standards (NAAQS) for particulate matter (PM₁₀ or PM_{2.5}) and visibility impairment. The requirements under Article 15 address these air quality concerns, primarily through ensuring implementation of best practices to reduce the amount of smoke produced, which in turn reduces the impacts of the smoke to residents of Arizona and the environment.

EPA originally approved these rules into the Arizona SIP on May 16, 2006 (71 FR 28270). This revision submits the updated rules for EPA consideration and inclusion in the SIP.

1.2 Background of the Smoke Management Program and Rulemaking

In early 2002, ADEQ established a Fire Emissions Work Group (FEWG) to discuss visibility issues related to fire emissions and to make recommendations to ADEQ for the Regional Haze SIP. Fifteen stakeholders, representing public and private entities in geographically diverse areas of the State, agreed to participate in the work group. The FEWG helped ADEQ draft the current Article 15 rules and create the State’s enhanced smoke management program.

ADEQ, on average, approves 440 prescribed fire requests per year, with the majority of prescribed burns taking place in the cooler months. ADEQ staff meteorologists and air quality specialists review burn requests from land managers that contain information on the acreage and fuel type of the burn, the

time, date, and location of the burn, and key contacts for information requests and sharing. This review ensures that burns only occur when weather conditions allow for adequate dispersion of smoke and other pollutants from the fires, minimizing negative health and visibility impacts on people and ecosystems.

The current rules regulating prescribed fires contain outdated terms and provisions that do not completely align with the industry standards developed by the National Wildfire Coordination Group (NWCG), which provides national leadership to prescribed fire operations. This misalignment causes confusion for stakeholders. This rulemaking updates the terminology, realigns the program with NWCG standards, and streamlines the program for stakeholders.

2 AMENDED SMOKE MANAGEMENT RULES (A.A.C. R18-2-1501– R18-2-1515)

Chapter 2 discusses the proposed rule revisions to Arizona’s SIP. Section 2.1 examines the rules to be added to and removed from the SIP. Section 2.2 provides a brief summary of each rule amendment.

2.1 SIP-Approved Rules Amended in This Revision

As discussed above, through internal review and discussion with stakeholders, ADEQ determined the Article 15 smoke management rules required updates for clarity and ease of use for federal and state land managers conducting prescribed burns.

ADEQ found the rules contained several outdated terms and descriptions of procedures that no longer matched actual practice as closely as when the rules were drafted, causing confusion and delay during land manager submittal of burn requests and ADEQ review of those requests.

The June 30, 2023 Notice of Final Rulemaking (NFRM), attached as Exhibit II, contains these updates and revisions to the Article 15 smoke management rules. Table 1 below identifies the rules in Appendix A that ADEQ is requesting that EPA approve into the SIP and the existing SIP rules that they are replacing.

Additional rule changes to improve clarity, consistency and update incorporations by reference are described in detail in the NFRM.¹

Table 1: Rules Amended in or Removed from the SIP

Rule added to the SIP (as amended by the NFRM)	Rule removed from the SIP	Title
A.A.C. R18-2-1501	A.A.C. R18-2-1501	Definitions
A.A.C. R18-2-1502	A.A.C. R18-2-1502	Applicability
A.A.C. R18-2-1503	A.A.C. R18-2-1503	Annual Registration
A.A.C. R18-2-1504	A.A.C. R18-2-1504	Prescribed Burn Plan
A.A.C. R18-2-1505	A.A.C. R18-2-1505	Prescribed Burn Requests and Authorization
A.A.C. R18-2-1506	A.A.C. R18-2-1506	Smoke Dispersion and Evaluation
A.A.C. R18-2-1507	A.A.C. R18-2-1507	Prescribed Burn Accomplishment; Wildlife Reporting
[repealed]	A.A.C. R18-2-1508	Wildland Fire Use: Plan, Authorization, Monitoring; Inter-Agency Consultation; Status Reporting
A.A.C. R18-2-1509	A.A.C. R18-2-1509	Emission Reduction Techniques
[repealed]	A.A.C. R18-2-1510	Smoke Management Techniques

¹Exhibit II.

A.A.C. R18-2-1511	A.A.C. R18-2-1511	Monitoring
A.A.C. R18-2-1512	A.A.C. R18-2-1512	Burner Qualifications
A.A.C. R18-2-1513	A.A.C. R18-2-1513	Public Notification Program; Regional Coordination

Rules R18-2-1514 (Surveillance and Enforcement) and R18-2-1515 (Forms; Electronic Copies; Information Transfers) were also amended in this rulemaking, but these rules are not part of the Arizona SIP. These rule amendments are not being submitted for SIP approval at this time.

Further discussion of why the removal of these two repealed rules from the SIP will not negatively impact air quality or attainment planning is available in Section 3.

2.2 Summary of Rule Amendments

Table 2 below provides a brief summary describing the changes contained in each rule amendment. Further details on the amendments, including the rule text with appropriate strikethroughs showing the old and new language, is available in the NFRM.²

Table 2: Brief Description of Rules Amended in the SIP

Rule Amended	Description of Amendments to SIP Rule
A.A.C. R18-2-1501	Added and amended definitions used in the smoke management program. Added definitions identifying industry terms and programs referenced in the rules.
A.A.C. R18-2-1502	Amended to update outdated terminology and to clarify applicability. Additional amendments to ensure conformity with A.R.S. § 49-501 and A.A.C. R18-2-602.

² *Id.*

<p>A.A.C. R18-2-1503</p>	<p>Amended to remove references to the “annual registration program” and the program’s components that required the collection of data pertaining to possible future projects. ADEQ does not use the data collected for the annual registration program because it is based on hypothetical prescribed fires (i.e. burns) that may or may not take place later in the year.</p> <p>ADEQ gathers the same information requested by the annual registration program as part of the submitted Burn Plan documents, usually within days before the actual burn taking place. The data gathered prior to each prescribed fire throughout the year is the most accurate for estimating emissions and reductions, as weather patterns and physical conditions change quickly.</p> <p>By waiting to collect the information closer to the burn date, ADEQ ensures that actual verifiable data is collected. ADEQ will still work with stakeholders to establish annual emission goals as required by 40 CFR § 51.309(d)(6). ADEQ removed unnecessary references to the “annual registration program” requirements to further streamline the smoke management program.</p>
<p>A.A.C. R18-2-1504</p>	<p>Amended to clarify the sequencing of the Daily Burn Application Process.</p> <p>Amended to update references to mapping and modeling technology to modern agency capabilities.</p> <p>Amended to prevent users from being locked out of the ADEQ online database for 14 days for minor revisions.</p>
<p>A.A.C. R18-2-1505</p>	<p>Amended to ensure the requested information is submitted for each day a burn is to take place.</p> <p>Amended to clarify what type of information may be requested, how Federal and State Land Managers may contact ADEQ, and that burn requests can only be reviewed the day before the burn. ADEQ cannot approve burn request forms prior to the day before the burn is to take place due to changing weather and other conditions that could impact the review of the request.</p> <p>Amended to clarify the standard industry safety requirements that apply when conducting ignitions to ensure the health and safety of the public in Arizona.</p>
<p>A.A.C. R18-2-1506</p>	<p>Amended to remove “wildland fire use” because the term and the associated processes are no longer used by industry.</p> <p>Amended to remove “100 acres prescription” because the numerical value is an arbitrary threshold that does not account for the changing nature of fires.</p> <p>Amended to provide further clarity and to reflect A.A.C. R18-2-1501(29).</p>

A.A.C. R18-2-1507	Amended to extend reporting deadlines for post-burn information collection. The extension does not affect emissions or the conditions under which the Federal and State Land Manager may burn. Amended to clarify procedure and update terminology. Amended to remove outdated procedures.
A.A.C. R18-2-1508	Repealed to reflect unenforceable “wildland fire use” requirements. The term “wildland fire use” is no longer used by industry or the U.S. Environmental Protection Agency (EPA). EPA's 2016 Final Rule for the Treatment of Data Influenced by Exceptional Events acknowledges that the term “wildland fire use” has fallen out of usage. ³
A.A.C. R18-2-1509	Amended to combine with A.A.C. R18-2-1510 due to the overlapping text and methodologies. Amended to reflect current industry practices.
A.A.C. R18-2-1510	Repealed to reflect the changes made to A.A.C. R15-2-1509.
A.A.C. R18-2-1511	Amended to clarify monitoring procedure. Amended to remove outdated monitoring technology requirements.
A.A.C. R18-2-1512	Amended to clarify existing requirements and to reflect the updated terminology used throughout the Article.
A.A.C. R18-2-1513	Amended to update and clarify the existing requirements. Amended to remove the outdated terminology.
A.A.C. R18-2-1514	Amended to conform with industry standards and to remove outdated terminology.
A.A.C. R18-2-1515	Amended to conform with current industry standards.

³ See 81 FR 68216, 68247, Oct. 03, 2016. In this document EPA stated “[w]hen the [smoke management program] SMP elements were developed for the 1998 Interim Air Quality Policy on Wildland and Prescribed Fires, the language reflected actions consistent with addressing three types of wildland fire (i.e., wildfire, prescribed fire and wildland fire use fire.) Fire terminology now recognizes two types of wildland fire: Wildfire and prescribed fire. We chose not to include provisions in regulatory text that do not reflect current terminology.”

3 DEMONSTRATING NONINTERFERENCE WITH OTHER CAA REQUIREMENTS

Section 110(l) of the CAA provides that EPA shall not approve a SIP revision if it interferes with attainment, reasonable further progress, or other CAA requirements:

Each revision to an implementation plan submitted by a State under this Act shall be adopted by such State after reasonable notice and public hearing. The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 171), or any other applicable requirement of this Act.

This SIP revision includes amended rules that regulate the smoke produced from prescribed burns and the burn approval process federal and state land managers (F/SLMs) comply with in order to ensure prescribed burns occur under optimal smoke dispersal conditions. The revision does not remove any substantive measures from the Arizona SIP, nor does it lessen the stringency of any SIP-approved measures or rules.

The two rules that were eliminated relate to an outdated term no longer applicable to smoke management practices (R18-2-1508 Wildland Fire Use), or were combined with a substantially similar rule to reduce redundancy (R18-2-1510 Smoke Management Techniques).

Accordingly, this SIP revision is not anticipated to interfere with reasonable further progress or attainment of the NAAQS or any other requirement of the CAA.

3.1 Rule Clarifications and Updated Terms

Certain rule amendments modify the time periods that F/SLMs have to report information after a burn takes place and otherwise clarify the procedure to ensure burn request reviews are completed as close to the actual burn day as is reasonable to ensure the most accurate forecasts and dispersion modeling.⁴ None of these changes reduce the amount of information or level of detail F/SLMs must provide for each burn request, nor do they lessen the stringency of ADEQ's review of each burn request or change the conditions under which F/SLMs may burn.

Throughout the rules, ADEQ removed reference to "wildland fire use," as EPA and the fire management industry standards no longer use this term or category of fire. These amendments will not affect practical administration of the program, as it will continue to regulate prescribed fires and wildfires separately.

3.2 Removal of A.A.C. R18-2-1503 Annual Registration Program Requirements and Noninterference with Setting of Annual Emission Goals

Amended to remove references to the "annual registration program" and the program's components that required the collection of data pertaining to possible future projects. ADEQ does not use the data

⁴ A.A.C. R18-2-1503, 1504, 1505, 1507.

collected for the annual registration program because it is based on hypothetical prescribed fires (i.e. burns) that may or may not take place later in the year.

ADEQ gathers the same information requested by the annual registration program as part of the submitted Burn Plan documents, usually within days before the actual burn taking place. The data gathered prior to each prescribed fire throughout the year is the most accurate for estimating emissions and reductions, as weather patterns and physical conditions change quickly.

By waiting to collect the information closer to the burn date, ADEQ ensures that actual verifiable data is collected. ADEQ will still work with stakeholders to establish annual emission goals as required by 40 CFR § 51.309(d)(6). ADEQ has removed unnecessary references to the “annual registration program” requirements to further streamline the smoke management program.

The amended rule continues to require a yearly meeting between ADEQ and F/SLMs to evaluate the smoke management program and set the annual emissions goal as required under the regional haze program.

4 PUBLIC PROCESS

ADEQ held an official comment period and public hearing for the Article 15 Smoke Management rulemaking to adopt the proposed rule amendments enclosed with this proposed SIP revision. ADEQ held the public hearing for this rulemaking on December 1, 2022.

The comment period for the rulemaking began on October 28, 2022 with the publication of the Notice of Proposed Rulemaking (NPRM) in the Arizona Administrative Register, attached as Exhibit I.

Documentation of the public process for this rulemaking is included in Appendix A of this proposed SIP.

In addition to fulfilling these state requirements for public notice under A.R.S. Title 41, Chapter 6, ADEQ conducted extensive stakeholder outreach throughout the rulemaking process.

When this rulemaking began, ADEQ provided notice via an internal mailing list to three hundred and twenty-four members of the smoke management community across various state and federal land management agencies in Arizona and invited them to engage in and provide feedback for this rulemaking at stakeholder review meetings.

In addition to the individual invitations, ADEQ sent out GovDelivery emails to the individuals and groups subscribed to the agency's email updates. Stakeholders received invitations for meetings held on Oct. 25, 2021, Nov. 4, 2021, Nov. 18, 2021, March 29, 2022, July 28, 2022, and Dec. 1, 2022. Each of these meetings involved in-depth discussion of user needs for the rules, identification of terms that became outdated, and detailed line-by-line revisions

4.1 SIP Public Process

Documentation of the public process for this SIP revision will be included in Appendix B of the final SIP after completion of the SIP comment period.

ADEQ will hold the comment period for this SIP revision after providing notice via newspaper publication and on ADEQ's website. The public notice process will fulfill notice requirements for SIP revisions under 40 CFR § 51.102 (Public hearings), including public notice and hearing materials, as well as records of and responses to public comments.

Appendix A: Rules for Approval

Exhibit I: Notice of Proposed Rulemaking

Exhibit II: Notice of Final Rulemaking

Exhibit III: Final Rules Published in A.A.C.

Exhibit I: Notice of Proposed Rulemaking

NOTICE OF PROPOSED RULEMAKING
TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL

PREAMBLE

<u>1. Article, Part, or Section Affected</u>	<u>Rulemaking Action</u>
R18-2-1501	Amend
R18-2-1502	Amend
R18-2-1503	Amend
R18-2-1504	Amend
R18-2-1505	Amend
R18-2-1506	Amend
R18-2-1507	Amend
R18-2-1508	Repeal
R18-2-1509	Amend
R18-2-1510	Repeal
R18-2-1511	Amend
R18-2-1512	Amend
R18-2-1513	Amend
R18-2-1514	Amend
R18-2-1515	Amend

2. Citations to the agency’s statutory rulemaking authority to include the authorizing statute (general) and the implementing statute (specific):

Authorizing statute: A.R.S. §§ 49-104(A)(1), (10), 49-404(A), 49-425(A), 49-458, 49-501(B)(2), (4)-(5) and (C).

Implementing statute: A.R.S. § 49-458.01 (A)(7) and (C).

3. Citations to all related notices published in the *Register* as specified in R1-1-409(A) that pertain to the record of the proposed rule:

Notice of Rulemaking Docket Opening: 27 A.A.R. 2702

4. The agency’s contact person who can answer questions about the rulemaking:

Name: Samantha Schaffer
Address: 1110 W. Washington St.
Phoenix, AZ 85007
Telephone: (602)771-2351

E-mail: Schaffer.samantha@azdeq.gov

5. An agency's justification and reason why a rule should be made, amended, repealed or renumbered, to include an explanation about the rulemaking:

Summary

The purpose of this rulemaking is to update the Arizona Department of Environmental Quality's (ADEQ) forest and range management burn rules that regulate prescribed burns and allow for smoke management across the state. Prescribed fires or burns, refer to the controlled application of fire by experts under specific weather conditions. The practice is used to restore health to the ecosystem and to prevent forest under-growth from fueling wildfires. Due to global warming and climate change creating warmer and drier than average conditions, Arizona has experienced an increase in severe wildfires. As a result, the Governor's Office has made it a priority to reduce the threat of wildfires by supporting and signing wildfire support legislation that focuses on preventing and fighting fires. Improving and modernizing these rules to streamline and meet current industry standards- without creating additional regulatory burden- will be another step towards reducing the major threat of wildfires in Arizona. The changes made to each rule within the article are discussed later in this section.

Legal Background

State and federal forest and range land cover roughly 27% of the state and occupy 19.4 million acres. Despite potential air quality concerns, state and federal land managers use fire as a resource management tool on this land for a variety of purposes. A.A.C. Title 18, Chapter 2, Article 15 governs the fires that are set or allowed to burn on forest and range lands in Arizona. The rules address the two primary concerns for air quality which are violations of national ambient air quality standards (NAAQS) for particulate matter (PM₁₀ or PM_{2.5}), and visibility impairment. Research indicates that, on average, 90 percent of smoke particles from wild and prescribed fires are PM₁₀, and 10 percent are PM_{2.5}. Arizona's Prescribed Burning requirements address these air quality concerns, primarily through efforts to ensure best practices are being used to reduce the amount of smoke produced and as a result the impacts of the smoke to the citizens of Arizona and the environment.

A.R.S. § 49-458.01 specifically requires the Director to submit a plan to EPA, and allows ADEQ to promulgate rules addressing programs related to emissions from wildland fire, including prescribed fires and wildfires (*See* A.R.S. § 49-458.01(A)(7)). The proposed revisions to Article 15 of the Code, which houses the procedures relating to prescribed fires, will better conform to EPA's regional haze requirements, be more understandable, and facilitate enhanced compliance. Most of the proposed changes to Article 15 improve the existing requirements that reflect the mandates of the regional haze state implementation plan (SIP) requirements promulgated at 40 CFR §§ 51.308 and 51.309. Under 40 CFR § 51.309(d)(6), regional haze plans relating to fire must provide for:

- “(i) Documentation that all federal, state, and private prescribed fire programs within the state evaluate and address the degree visibility impairment from smoke in their planning and application. In addition, *the plan must include smoke management programs that include all necessary components including, but not limited*

to, actions to minimize emissions, evaluation of smoke dispersion, alternatives to fire, public notification, air quality monitoring, surveillance and enforcement, and program evaluation.

- (ii) *A statewide inventory and emissions tracking system (spatial and temporal) of VOC, NOX, elemental and organic carbon, and fine particle emissions from fire. In reporting and tracking emissions from fire from within the state, states may use information from regional data gathering and tracking initiatives.*
- (iii) *Identification and removal wherever feasible of any administrative barriers to the use of alternatives to burning in federal, state, and private prescribed fire programs within the state.*
- (iv) *Enhanced smoke management programs for fire that consider visibility effects, not only health and nuisance objectives, and that are based on the criteria of efficiency, economics, law, emission reduction opportunities, land management objectives, and reduction of visibility impact.*
- (v) Establishment of annual emission goals for fire, excluding wildfire, that will minimize emission increases from fire to the maximum extent feasible and that are established in cooperation with states, tribes, federal land management agencies, and private entities” (emphasis added).

Since the amendments proposed streamline Article 15 for stakeholders and meet the federal regional haze requirements the proposed changes do not create additional burden on stakeholders.

Factual Background

In early 2002, ADEQ's Regional Haze stakeholders established a Fire Emissions Work Group (FEWG) to discuss visibility issues related to fire emissions and make recommendations to ADEQ for the Regional Haze SIP. Fifteen stakeholders, representing public and private entities in geographically diverse areas of the state, agreed to participate in the work group. The FEWG helped ADEQ draft the current rules and create the state’s enhanced smoke management program. The program while nationally recognized at the time of its inception as one of the best in the country, over the last 20 years has become outdated and requires updating to ensure it continues to be one of the country’s leading enhanced smoke management programs. The current proposed rulemaking is a joint effort between ADEQ and stakeholders, including many of the original FEWG participants, to further improve the state’s existing program.

Section by Section Explanation of Proposed Rules:

- R18-2-1501 Add and amend definitions used in the smoke management program. Add definitions identifying industry terms and programs referenced in the rules.
- R18-2-1502 Amend to update outdated terminology and to clarify applicability. Additional amendments were made to ensure conformity with Arizona Revised Statutes (A.R.S.) § 49-501 and Arizona Administrative Code (A.A.C.) R18-2-602.
- R18-2-1503 Amend to remove references to the “annual registration program” and the program’s components which required the collection of data pertaining to possible future projects.

The data collected for the annual registration program is not used by ADEQ because it is based on hypothetical prescribed fires (i.e. burns) that may or may not take place later in the year. ADEQ gathers the same information requested by the annual registration program albeit at a later date; usually within days of the actual burn taking place as part of the submitted Burn Plan documents submitted. The data gathered prior to the prescribed fire taking place throughout the year is the most accurate, as weather patterns and physical conditions change quickly. By waiting to collect the information closer to the burn date ADEQ with the help of federal and state land managers ensure that actual verifiable data is collected. However, ADEQ will still be working with stakeholders to establish annual emission goals as required by 40 CFR 51.309(d)(6). By removing the “annual registration program” requirements and references ADEQ will be freeing stakeholders from unnecessary burden and further streamlining the program.

- R18-2-1504 Amend to clarify the sequencing of the Daily Burn Application Process. Amend to update the mapping and modeling technology to modern agency capabilities. Amend to prevent users from being locked out of the ADEQ online database for 14 days for minor revisions.
- R18-2-1505 Amend to ensure information is submitted for each day a burn is to take place. Amend to clarify what type of information may be requested, how stakeholders may contact ADEQ, and that burn requests can only be reviewed the day before the burn. ADEQ cannot approve burn request forms prior to the day before the burn is to take place due to changing weather and other conditions that could impact the review of the request. Amend to clarify the standard industry safety requirements that apply when conducting ignitions to ensure the health and safety of Arizona residents and out of state visitors.
- R18-2-1506 Amend to remove “wildland fire use” because the term and the associated processes are no longer used by industry. Amend to remove “100 acres prescription” because the numerical value is an arbitrary threshold that does not account for the changing nature of fires. Amend to provide further clarity and to reflect A.A.C. R18-2-1501(29).
- R18-2-1507 Amend to extend deadlines. The extension does not affect emissions or the conditions under which the federal and state land manager may burn. Amend to clarify procedure and update terminology. Amend to remove outdated procedures.
- R18-2-1508 Repeal to reflect unenforceable “wildland fire use” requirements. The term “wildland fire use” is no longer used by industry or the U.S. Environmental Protection Agency (EPA). In the Agency’s 2016 Final Rule for the Treatment of Data Influenced by Exceptional Events “wildland fire use” was not codified (See 81 FR 68216, 68247 (10/03/2016)). In the document EPA stated “[w]hen the [smoke management program] SMP elements were developed for the 1998 Interim Air Quality Policy on Wildland and Prescribed Fires, the language reflected actions consistent with addressing three types of wildland fire (i.e., wildfire, prescribed fire and wildland fire use fire.) Fire terminology now recognizes two

types of wildland fire: Wildfire and prescribed fire. We chose not to include provisions in regulatory text that do not reflect current terminology.” Id.

- R18-2-1509 Amend to combine with A.A.C. R18-2-1510 due to the overlapping text and methodologies used. Amend to reflect current industry practices.
- R18-2-1510 Repeal to reflect the changes made to A.A.C. R15-2-1509.
- R18-2-1511 Amend to clarify monitoring procedure. Amend to remove outdated monitoring technology requirements.
- R18-2-1512 Amend to clarify existing requirements and to reflect the updated terminology used throughout the Article.
- R18-2-1513 Amend to update and clarify the existing requirements. Amend to remove the outdated terminology.
- R18-2-1514 Amend to conform with industry standards and to remove outdated terminology.
- R18-2-1515 Amend to conform with current industry standards.

6. A reference to any study relevant to the rule that the agency reviewed and proposes either to rely on or not to rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

A study was not referenced or relied upon when revising the regulations.

7. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:

Not applicable.

8. The preliminary summary of the economic, small business, and consumer impact:

The following discussion addresses each of the elements required for an Economic, Small Business, and Consumer Impact statement (EIS) under A.R.S. § 41-1055.

An identification of the rulemaking

Conduct addressed in this rulemaking: ADEQ, on average, approves 440 prescribed fire requests per year, with the majority of prescribed burns taking place in the cooler months. The rules regulating prescribed fires contain outdated terms and provisions that do not completely align with the industry standards developed by the National Wildfire Coordination Group, which provides national leadership to prescribed fire operations.

Resulting harm: The disconnect between industry standards and the state’s regulatory rules causes confusion among stakeholders and requires them to adhere to practices that are no longer relevant nationally. Burn requests occasionally require revision or clarification during review by ADEQ in collaboration with the land manager requesting burn authorization. This rework incurs a time cost for both parties’ staff resources and negatively

impacts the land managers' ability to plan and adapt to changing fire conditions.

Change in targeted conduct:

This rulemaking will update and clarify terminology to conform to current industry practice without additional regulatory burden, while also complying with the enhanced smoke management program requirements under the federal regional haze program. These updates will clarify the rules and improve the experience of the regulated community by reducing the amount of rework or additional information required to receive burn authorization. The changes will ensure federal and state land managers conducting prescribed burns understand the smoke program's approval and reporting requirements while facilitating open communication and cooperation between the federal and state land managers and ADEQ. This cooperative effort will allow the state to achieve its goals of prescribed fire (reduced wildfire risk, improved watershed and ecosystem health) while protecting air quality.

Improving and modernizing these rules to streamline and meet current industry standards - without creating additional regulatory burden - will be another step towards reducing the major threat of wildfires in Arizona. The details of specific changes made to each rule within the article are discussed in section 5 of the Notice of Proposed Rulemaking.

An identification of the persons who will be directly affected by, bear the cost of or directly benefit from the rulemaking.

Since ADEQ has jurisdiction, other than in Tribal Nations and Communities, over air pollution resulting from prescribed burning, this rule will impact the following federal and state agencies that conduct prescribed burns: (1) Federal Land Managers (FLMs) involved in burning activities, such as U.S. Forest Service, U.S. Fish and Wildlife Service, National Parks Service, Bureau of Land Management, Bureau of Reclamation, Department of Defense; (2) State Land Managers (SLMs), such as Arizona State Land Department, Arizona Department of Transportation, Arizona Department of Game and Fish, and Parks Department. Additionally, there are entities not legally subject to this rule who may voluntarily comply with some or all of the rule provisions, such as the Bureau of Indian Affairs, one of the largest burners in Arizona. Note that as political subdivisions of the state of Arizona, local and municipal agencies and fire districts are considered SLMs for purposes of this analysis.

Occasionally, there are also private individuals or land managers who wish to conduct large-scale prescribed burning. These parties must receive assistance and oversight from a F/SLM in order to ensure compliance. The private burner and the F/SLM then jointly follow smoke management procedures and rule requirements while sharing costs. As private burners, such as the Nature Conservancy, must coordinate with F/SLMs to use the Article 15 rules, there are no additional costs or benefits to private parties beyond the minimal impact on F/SLMs discussed in this impact statement.

ADEQ administers the smoke management program, reviews prescribed burn plans and individual burn requests,

and is responsible for collecting and reporting data on the smoke impacts of prescribed fire. ADEQ’s administration of the rules is positively impacted by the rule improvements in this rulemaking, as less staff time will be required to address questions arising from outdated or conflicting provisions of the current rules.

A cost benefit analysis of the following:

(a) The probable costs and benefits to the implementing agency or other agencies directly affected by the implementation and enforcement of the rulemaking.

Description of Affected Groups	Description of Effect	Increased Cost/Decreased Revenue or Benefit	Decreased Cost/Increased Revenue or Benefit
A. Government Agencies			
Federal and State Public Land Managers	Further clarifies the Article for users.	None	Marginal decreased time cost of compliance
Arizona Department of Environmental Quality	Further clarifies the Article for users.	Moderate initial cost to update online smoke portal/database	Marginal decreased time cost of addressing stakeholder questions

Minimal	Moderate	Substantial	Significant	Marginal
\$5,000 or less	\$5,001 up to \$25,000	\$25,000 or more	Cost or benefit cannot be easily quantified, but ADEQ expects it to be significant.	Cost or benefit cannot be easily quantified, but ADEQ expects it to be marginal.

(b) The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking

Federal and State Land Managers

The current implementation of Article 15 already requires close coordination between ADEQ and federal or state land managers seeking to conduct a prescribed burn in order to minimize smoke impacts on surrounding communities and sensitive areas. The updated rules will benefit land managers by reducing discrepancies between the state rules and federal programs/rules, which should clarify the administration of the rules.

Certain rule changes allow more time to report information to ADEQ, in order to provide flexibility to federal and state land managers in varying field conditions, while still complying with federal requirements for an enhanced smoke management program. This additional flexibility, on top of the clarifications to the rules to provide federal and state land managers with a streamlined experience that is anticipated to save time and effort. The substantive requirements of the rules remain the same, so ADEQ anticipates no additional costs to federal and state land managers, including local and municipal agencies or fire districts.

ADEQ

The clarification of the Article 15 will ease administration and reduce the inconsistency between the current rules and nationwide industry standards. ADEQ expects the rulemaking to decrease staffing costs related to providing technical assistance to land managers. ADEQ will not require new staff or any substantial contractor expenditures to implement these updated rules. ADEQ will benefit from the revision as the changes align with recognized industry standards which simplifies compliance and enforcement. The revisions will have a moderate, one-time cost to ADEQ. The department will be updating the prescribed fire online database to streamline access to users and to accommodate the changes to the rules.

(c) The probable costs and benefits to businesses directly affected by the rulemaking, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.

As the rules apply only to federal and state land managers and do not directly apply to private businesses unless assisted by a federal or state land manager, ADEQ anticipates no impact on private employment from this rulemaking.

A general description of the probable impact on private and public employment in business, agencies, and political subdivisions of this state directly affected by the rulemaking.

Since the updates proposed are updating, clarifying, and streamlining the rule for users, no substantial changes were made to the operation of ADEQ's prescribed burn process. As such, there is no expected impact on public employment. ADEQ does not anticipate any impact to private employment due to the provisions under A.R.S. § 49-501 which prohibits private businesses and residents from conducting prescribed burns unless they are assisted by a qualified federal or state land manager that will apply the rules under Article 15.

There may be some impact to state political subdivisions, such as fire departments, who meet the federal and state land manager requirements who wish to conduct prescribed fires. However, the impact should only be procedural paperwork and not increase payroll or other costs.

A statement of the probable impact of the rulemaking on small businesses:

These rules apply only to federal and state land managers. Private entities, including any business, are prohibited from conducting prescribed burns under Article 15 unless assisted by an F/SLM. Therefore, this rulemaking will have no impact on small businesses.

(a) An identification of the small business subject to the rulemaking

Not applicable.

(b) The administrative and other costs required for compliance with the rulemaking

Not applicable.

(c) A description of the methods that the agency may use to reduce the impact on small businesses.

Not applicable.

(d) The probable costs and benefit to private persons and consumers who are directly affected by the rulemaking.

Not applicable.

A statement of the probable effect on state revenues.

Since the proposed rule updates do not substantially change the operations of the ADEQ prescribed burn authorization process or affect commercial activity from which the state of Arizona would receive tax revenue, ADEQ projects no effect on state revenues resulting from the rulemaking.

A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

Since this rulemaking aligns with federal and state best management practices for wildfire and prescribed fire, there is not a less intrusive or less costly alternative available at this time. In fact, because the amendments streamline the rules ADEQ is reducing stakeholder burden with this rulemaking.

ADEQ reviewed and discussed the prescribed burn authorization process with federal and state land manager stakeholders who use the Article 15 rules, as well as internal subject matter experts, and determined that the current burn permit structure achieves the enhanced smoke management program outcomes required under the federal Regional Haze rule in the least intrusive and costly way that is feasible.

A description of any data on which a rule is based with a detailed explanation of how the data was obtained and why the data is acceptable data. An agency advocating that any data is acceptable data has the burden of proving that the data is acceptable. For the purposes of this paragraph, “acceptable data” means empirical, replicable, and testable data as evidenced in supporting documentation, statistics, reports, studies, or research.

Not applicable.

9. The agency’s contact person who can answer questions about the economic, small business and consumer impact statement:

Name: Samantha Schaffer
Address: 1110 W. Washington St.
Phoenix, AZ 85001
Telephone: (602) 771-2351
E-mail: Schaffer.samantha@azdeq.gov

10. The time, place, and nature of the proceedings to make, amend, repeal, or renumber the rule, or if no proceeding is scheduled, where, when, and how persons may request an oral proceeding on the proposed rule:

ADEQ will conduct a public hearing to receive feedback, comments, questions, and concerns on the proposed rulemaking. All interested parties may attend. The public comment period for this rulemaking will take place between September XX, 2022 and October XX, 2022. The public comment period will close October XX, 2022. The public hearing for the rules will be conducted virtually on: October XX, 2022

11. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

A previously mentioned in question #5, A.R.S. § 49-458.01(A) (7) requires that the ADEQ director to submit to U.S. Environmental Protection Agency (EPA) SIP revisions to address regional haze visibility impairment in mandatory federal class I areas. The SIP revisions submitted to EPA must address programs related to emissions from fire sources including those emissions from prescribed fires conducted and occurring on federal, state and private lands.

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

The rules provide the F/SLM with an agency authorization which under Article 15 is referred to as the Daily Burn Authorization Process. This rulemaking is exempt from the use of a general permit under A.R.S. § 41-1037 because a general permit is not technically feasible and would not meet the applicable statutory requirements under A.R.S. § 49-501(B)(2), (4)-(5) and (C). Furthermore, any efforts to incorporate a general permit into this rulemaking would result in additional regulatory requirements and costs being placed on the permit applicant.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

As previously mentioned, in question # 5, Article 15 reflects the mandates of the federal regional haze SIP requirements under 40 CFR 51.308 and 51.309. However, the rules under Article 15 are not more stringent than federal law.

c. Whether a person submitted an analysis to the agency that compares the rule's impact of the competitiveness of business in this state to the impact on business in other states:

Not applicable.

12. A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rules:

Not applicable.

13. The full text of the rules follows:

**TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 2. AIR POLLUTION CONTROL**

ARTICLE 15. FOREST AND RANGE MANAGEMENT BURNS

R18-2-1501	Definitions
R18-2-1502	Applicability
R18-2-1503	Annual Registration, Program Evaluation and Planning
R18-2-1504	Prescribed Burn Plan
R18-2-1505	Prescribed Burn Requests and Authorization
R18-2-1506	Smoke Dispersion Evaluation
R18-2-1507	Prescribed Burn Accomplishment; Wildfire Reporting
R18-2-1508	Wildland Fire Use: Plan, Authorization, Monitoring; Inter-agency Consultation; Status Reporting
R18-2-1509	Emission Reduction <u>and Smoke Management</u> Techniques
R18-2-1510	Smoke Management Techniques
R18-2-1511	Monitoring
R18-2-1512	Burner Qualifications
R18-2-1513	Public Notification and Awareness Program; Regional Coordination
R18-2-1514	Surveillance and Enforcement
R18-2-1515	Forms; Electronic Copies ; and Information Transfers

ARTICLE 15. FOREST RANGE AND MANAGEMENT BURNS

R18-2-1501. Definitions

In addition to the definitions contained in A.R.S. § 49-501 and R182-101, in this Article:

1. "Activity fuels" means those fuels created by human activities such as thinning or logging.
2. "ADEQ" means the Arizona Department of Environmental Quality.
3. "Annual emissions goal" means the annual establishment in cooperation with the F/SLMs, under R18-2-1503(G), of a planned quantifiable value of emissions reduction from prescribed fires and fuels management activities.
4. "Assisting" means an agency or organization providing personnel, services, or other resources to the agency with direct responsibility for prescribed fire management.
5. "Burn Accomplishment Form" means the online database form as provided by the director to be completed for each approved or approved with conditions Daily Burn Request, with details of the conducted prescribed burn.

- ~~4-6.~~ “Burn plan” for the purposes of this article means the ADEQ the ADEQ online database form as provided by the director that includes information on the conditions under which a burn will occur with details of the burn and smoke management prescriptions.
- ~~5-7.~~ “Burn prescription” means, with regard to a burn project, the pre-determined area, fuel, and weather conditions required to attain planned resource management objectives.
- ~~6-8.~~ “Burn project” means an active or planned prescribed burn, including a wildland fire use incident.
9. “Daily Burn Request” means the online database form as provided by the director that allows burners to request for permission to ignite on a single specific day, submitted under an acknowledged Burn Plan.
10. “Daily Burn Authorization Process” means daily review by ADEQ of burn requests for the following day.
11. “Director” means the Director of ADEQ.
12. “Duff” means forest floor material consisting of decomposing needles and other natural materials.
- ~~8-13.~~ “Emission reduction techniques (ERT)” means methods for controlling emissions from prescribed fires to minimize the amount of emission output per unit of area burned.
- ~~9-14.~~ “Federal land manager (FLM)” means any department, agency, delegee, or agent of the federal government, including the following:
- a. United States Forest Service,
 - b. United States Fish and Wildlife Service,
 - c. National Park Service,
 - d. Bureau of Land Management,
 - e. Bureau of Reclamation,
 - f. Department of Defense,
 - g. Bureau of Indian Affairs, and
 - h. ~~and~~ Natural Resources Conservation Service.
- ~~10-15.~~ “F/SLM” means a federal land manager or a state land manager.
- ~~11-16.~~ “Local fire management officer” means a person designated by a F/SLM as responsible for fire management in a local district or area.
- ~~12.~~ “Mop up” means the act of extinguishing or removing burning material from a prescribed fire to reduce smoke impacts.
- ~~13-17.~~ “National Wildfire Coordinating Group” means the national inter-agency group of federal and state land managers that shares similar ~~wildfire suppression programs~~ wildfire management programs and has established standardized inter-agency training courses and qualifications for fire management positions.
18. “New Burn Plan” means a Burn Plan that has never been submitted to ADEQ.

- ~~14.~~ 19. “Non-burning alternatives to fire” means techniques that replace fire for at least five years as a means to treat activity fuels created to achieve a particular land management objective (e.g., reduction of fuel-loading, manipulation of fuels, enhancement of wildlife habitat, and ecosystem restoration). These alternatives are not used in conjunction with fire. Techniques used in conjunction with fire are referred to as emission reduction techniques (ERTs).
- ~~15.~~ 20. “Planned resource management objectives” means public interest goals in support of land management agency objectives including silviculture, wildlife habitat management, grazing enhancement, fire hazard reduction, wilderness management, cultural scene maintenance, weed abatement, watershed rehabilitation, vegetative manipulation, and disease and pest prevention.
- ~~16.~~ 21. “Prescribed burning” means the controlled application of fire to wildland fuels that are in either a natural or modified state, under certain burn and smoke management prescription conditions that have been specified by the ~~land manager~~ F/SLM in charge of or assisting the burn, to attain planned resource management objectives. Prescribed burning does not include a fire set or permitted by a public officer to provide instruction in ~~fire-fighting~~ fire-fighting methods, or construction or residential burning under R18-2-602.
- ~~17.~~ 22. “~~Prescribed fire manager~~” means a person designated by a F/SLM as responsible for ~~prescribed burning for that land manager.~~ “Prescribed Fire Burn Boss” means a person designated by their respective F/SLM with the requisite training and certification to ensure that all ADEQ prescribed fire burn plan specifications and requirements are met before, during, and after a prescribed fire. This includes the following NWCG positions: Prescribed Fire Burn Boss Type 1, Prescribed Fire Burn Boss Type 2, and Prescribed Fire Burn Boss Type 3. A private burner does not qualify as a Burn Boss under this article.
23. “Private Burner” means a private person or company assisted by a F/SLM in conducting a prescribed burn under this article. A person not covered under this definition shall be regulated under A.R.S. § and A.A.C. R18-2-602.
24. “Revised Burn Plan” means any Burn Plan that has been submitted to ADEQ by way of the online database which has remaining un-accomplished acres available and has been revised.
- ~~18.~~ 25. “Smoke management prescription” means the predetermined meteorological conditions that affect smoke transport and dispersion under which a burn could occur without adversely affecting public health and welfare, including transportation networks, considering such factors as National Ambient Air Quality Standard and Class I Visibility Areas.
- ~~19.~~ 26. “Smoke management techniques (SMT)” means management and dispersion practices used during a prescribed burn ~~or wildland fire use incident~~ which affect the direction, duration, height, or density of smoke.

~~20.~~27. “Smoke management unit” means any of the geographic areas defined by ADEQ whose area is based on primary watershed boundaries and whose outline is determined by diurnal windflow patterns that allow smoke to follow predictable drainage patterns. A map of the state divided into the smoke management units is on file with ADEQ.

~~21.~~28 “State land manager (SLM)” means any department, agency, or political subdivision of the state government including the following:

- a. State Land Department,
- b. Department of Transportation,
- c. Department of Game and Fish,
- d. ~~and~~ Parks Department,
- e. Local and Municipal Governments and Agencies.
- f. Arizona Department of Forestry and Fire Management, and
- g. Fire Districts.

~~22.~~29. “Smoke Sensitive Area” means areas where the Air Pollution Control Officer determines that smoke and air pollutants can adversely affect public health or welfare. Such areas may include, but are not limited to cities, towns, villages, campgrounds, trails, populated recreational areas, hospitals, nursing homes, schools, roads, airports, public events, shopping centers, and mandatory Class I areas.

~~22.~~30. “Wildfire” means an unplanned ~~wildland fire subject to appropriate control measures.~~ignition, such as lightning, unauthorized and accidental human fires. Wildfires include those incidents where suppression may be limited for safety, economic, or resource concerns.

~~23.~~ “Wildland fire use” means a ~~wildland fire that is ignited by natural causes, such as lightning, and is managed using the same controls and for the same planned resource management objectives as prescribed burning.~~

R18-2-1502. Applicability

- A. A F/SLM that is conducting or assisting a prescribed burn shall follow the requirements of this Article.
- B. A private burner may conduct burns under this article if assisted by an F/SLM or municipal burner with whom ADEQ has entered into a memorandum of agreement shall follow the requirements of this Article.
- C. The provisions of this Article apply to all areas of the state except ~~Indian Trust lands.~~ Tribal Nations and Communities land which has the same meaning as the term defined in 18 U.S.C. § 1151. All federally managed lands and all state lands, parks, and forests are under the jurisdiction of ADEQ in matters relating to air pollution from prescribed burning.

- ~~D. Notwithstanding subsection (C), ADEQ and any Indian tribe may enter into a memorandum of agreement to implement this Article. Notwithstanding subsection (C), any Tribal Nations and Communities may enter into a memorandum of agreement with ADEQ to implement this article.~~
- ~~E. ADEQ and any private or municipal prescribed burner may enter into a memorandum of agreement to implement this Article.~~

R18-2-1503. Annual Registration, Program Evaluation and Planning

- A. ~~Each F/SLM shall register annually with ADEQ on a form prescribed by ADEQ, all planned burn projects, including areas planned for wildland fire use. ADEQ shall hold a meeting after January 31 and before April 1 of each year between ADEQ and F/SLM to evaluate the program and set the annual emissions goals to minimize prescribed fire emissions to the maximum extent feasible using emission reduction techniques and non-burning alternatives to fire subject to economic, technical, and safety feasibility criteria, and consistent with land management objectives.~~
- B. ~~Each planned year extends from January 1 of the registration year to December 31 of the same year. Each F/SLM shall use best efforts to register before December 31 and no later than January 31 of each year. Outside of the annual meeting, ADEQ may request additional information about future prescribed burns to support regional coordination of smoke management, annual emission goal setting using ERTs, and non-burning alternatives to fire.~~
- C. ~~A F/SLM shall include the following information on the registration form:~~
- ~~1. The F/SLM's name, address, and business telephone number;~~
 - ~~2. The name, address, and business telephone number of an air quality representative who will provide technical support to ADEQ for decisions regarding prescribed burning. The same air quality representative may be selected by more than one F/SLM;~~
 - ~~3. All prescribed burn projects and potential wildland fire use areas planned for the next year;~~
 - ~~4. Maximum project and annual acres to be burned, maximum daily acres to be burned, fuel types within project area, and planned use of emission reduction techniques to support the annual emissions goal for each prescribed burn project;~~
 - ~~5. Planned use of any smoke management techniques for each prescribed burn project;~~
 - ~~6. Maximum project and annual acres projected to be burned, maximum daily acres projected to be burned, and a map of the anticipated project area, fuel types and loading within the planned area for an area the F/SLM anticipates for wildland fire use;~~
 - ~~7. A list of all burn projects that were completed during the previous year;~~
 - ~~8. Project area for treatment, treatment type, fuel types to be treated, and activity fuel loading to support the annual emissions goal for areas to be treated using non-burning alternatives to fire; and~~

- ~~9. The area treated using non-burning alternatives to fire during the previous year including the number of acres, the specific types of alternatives utilized, and the location of these areas. At least once every five years, ADEQ shall request long-term projections of future prescribed fire activity from the F/SLM to support planning for visibility impairment and assessment of air quality concerns by ADEQ.~~
- ~~D. After consultation with the F/SLM, ADEQ may request additional information for registration of prescribed burns and wildland fire use to support regional coordination of smoke management, annual emission goal setting using ERTs, and non-burning alternatives to fire. F/SLM may submit topics to discuss at the yearly meeting by contacting ADEQ.~~
- ~~E. A F/SLM may amend a registration at any time with a written submission to ADEQ.~~
- ~~F. ADEQ accepts a facsimile or other electronic method as a means of complying with the deadline for registration. If an electronic means is used, the F/SLM shall deliver the original paper registration form to ADEQ for its records. ADEQ shall acknowledge in writing the receipt of each registration.~~
- ~~G. ADEQ shall hold a meeting after January 31 and before April 1 of each year between ADEQ and F/SLMs to evaluate the program and cooperatively establish the annual emission goal. The annual emission goal shall be developed to minimize prescribed fire emissions to the maximum extent feasible using emission reduction techniques and alternatives to burning subject to economic, technical, and safety feasibility criteria, and consistent with land management objectives.~~
- ~~H. At least once every five years, ADEQ shall request long-term projections of future prescribed fire and wildland fire use activity from the F/SLMs to support planning for visibility impairment and assessment of other air quality concerns by ADEQ.~~

R18-2-1504. Prescribed Burn Plan

Each F/SLM planning a prescribed burn shall complete and submit to ADEQ the "Burn Plan" form supplied by ADEQ no later than 14 days before the date on which the F/SLM requests permission to burn. ADEQ shall consider the information supplied on the Burn Plan Form as binding conditions under which the burn shall be conducted. A Burn Plan shall be maintained by ADEQ until notification from the F/SLM of the completion of the burn project. ~~Revisions~~ The Burn Plan provisions listed in A.A.C. R18-2-1504(1)-(5), may be revised no later than 2p.m. the business day before the burn. Any other revision to the Burn Plan for a burn project shall be submitted in writing no later than 14 days before the date on which the F/SLM requests permission to burn. ADEQ shall not act on the Daily Burn Request until the Burn Plan is submitted by the F/SLM and acknowledged as complete by ADEQ. To facilitate the Daily Burn Authorization Process ~~authorization process~~ under R18-2-1505, the Burn Plan Form ~~the F/SLM~~ shall include ~~on the Burn Plan form~~:

1. An emergency telephone number that is answered 24 hours a day, seven days a week;

2. Burn prescription;
3. Smoke management prescription;
4. The name of the person submitting the Burn Plan on behalf of the F/SLM;
5. Any other information to support the Burn Plan needed by ADEQ to assist in the Daily Burn Authorization Process for smoke management purposes, prevention of negative impacts on smoke sensitive areas, or assessment of contribution to visibility impairment of Class I areas.
- ~~4.6.~~ The total number of acres in the project to be burned, the quantity and type of fuel, type of burn, and the ignition technique to be used;
- ~~5.7.~~ The land management objective or purpose for the burn such as restoration or maintenance of ecological function and indicators of fire resiliency;
- ~~6.8.~~ A map depicting the potential impact of the smoke unless waived either orally or in writing by ADEQ. The potential impact shall be determined by mapping both the daytime and nighttime smoke path and down-drainage flow for 15 miles from the burn site, with smoke-sensitive areas delineated. The map shall use the appropriate scale to show the impacts of the smoke adequately;
- ~~7.9.~~ Modeling of smoke impacts unless waived either orally or in writing by ADEQ, for burns greater than 250 acres per day, or greater than 50 acres per day if the burn is within 15 miles of a Class I Area, an area that is nonattainment for particulates, a carbon monoxide nonattainment area, or other smoke-sensitive area. In consultation with the F/SLM, ADEQ shall provide guidelines on modeling;
- ~~8.~~ The name of the official submitting the Burn Plan on behalf of the F/SLM; and
- ~~9.~~ After consultation with the F/SLM, any other information to support the Burn Plan needed by ADEQ to assist in the Daily Burn authorization process for smoke management purposes or assessment of contribution to visibility impairment of Class I areas.

R18-2-1505. Prescribed Burn Requests and Authorization

- A. Each F/SLM planning a prescribed burn, shall complete and submit to ADEQ the “Daily Burn Request” form supplied by ADEQ for each day the F/SLM will complete ignitions. The Daily Burn Request form shall include:
1. The contact information of the F/SLM conducting the burn;
 2. Acknowledgement that a qualified Prescribed Fire Burn Boss is conducting the burn;
 - ~~2.3.~~ Each day of the burn; Date of the ignition;
 - ~~3.4.~~ The area to be burned on the day for which the Burn Request is submitted, with reference to the Burn Plan, including size, legal location to the section, and latitude and longitude to the minute;
 - ~~4.5.~~ Projected smoke impacts; and

- ~~5.6.~~ Any local conditions or circumstances known to the F/ SLM that, ~~if conveyed to ADEQ,~~ could impact the Daily Burn Authorization Process ~~authorization process~~ or the burn.
- B. After consultation ~~with the F/SLM,~~ ADEQ may request and upon request to ADEQ, the F/SLM shall provide additional information related to the burn or any ongoing prescribed fires or wildfires such as: reports, digital photographs, meteorological, smoke dispersion, or air quality conditions to supplement the Daily Burn Request form and to aid in the Daily Burn Authorization Process ~~authorization process~~. F/SLM may coordinate with ADEQ prior to submitting a Daily Burn Request to discuss potential air quality impacts or other concerns.
- C. The F/SLM shall submit the Daily Burn Request form to ADEQ as expeditiously as practicable, but no later than 2:00 p.m. of the business day preceding the burn. ~~An original form, a facsimile, or an electronic information transfer are acceptable submittals.~~
- D. An F/SLM shall not ignite a prescribed burn without receiving the approval of ADEQ, as follows:
1. ADEQ shall only approve, approve with conditions, or disapprove a burn on ~~the same business day as the Burn Request submittal.~~ the business day before the burn is to take place.
 2. If ADEQ fails to address a Burn Request by ~~10:00 p.m. of the business day on which the request is submitted,~~ 10 p.m. the business day before the burn is to take place the Burn Request is approved by default after the burner makes a good faith effort to contact ADEQ to confirm that the Burn Request was received; by exhausting available methods of communication, which may include contracting the ADEQ smoke management team directly, as well as the main number for the ADEQ air quality division, and leaving voicemails if there is no response.
 3. ADEQ may communicate its decision by verbal, written, or electronic means. ADEQ shall provide a written or electronic reply if requested by the F/SLM.
- E. If weather conditions cease to conform to those in the smoke management prescription of either the Burn Plan or ~~an Approval with Conditions,~~ any conditions on the approval of the applicable Burn Request, the F/SLM shall take appropriate action to reduce further smoke impacts, ensure safe and appropriate fire control, and notify the public ~~when necessary.~~ as per the requirements established by the National Wildfire Coordinating Group or F/SLM equivalent. ~~After consultation with ADEQ, the smoke management prescription or burn plan may be modified.~~ The F/SLM may modify the smoke management prescription in the Burn Plan after consultation with ADEQ. A F/SLM conducting a burn shall contact ADEQ if there is any change in the burn conditions that ceases to conform with the Burn Plan and could cause negative impacts to smoke sensitive areas and communicate what areas of the submitted smoke management prescription in the Burn Plan need to be modified.
- F. The F/SLM shall ensure that there is appropriate industry- standard signage and notification to protect public safety on transportation corridors including roadways and airports during a prescribed fire.

R18-2-1506. Smoke Dispersion Evaluation

ADEQ shall approve, approve with conditions, or disapprove a Daily Burn Request submitted under R18-2 1505, by using the following factors for each smoke management unit:

1. Analysis of the emissions from burns in progress and residual emissions from previous burns on a day-to-day basis;
- ~~2. Analysis of emissions from active wildland fire use incidents, and active multiple day burns, and consideration of potential long term emissions estimates;~~
- ~~3.2.~~ Analysis of the emissions from wildfires ~~greater than 100 acres~~ and consideration of their potential long-term growth;
- ~~4.3.~~ Local burn conditions;
- ~~5.4.~~ Burn prescription and smoke management prescription from the applicable Burn Plan;
- ~~6.5.~~ Existing and predicted local air quality; i.e. meteorological or smoke modeling;
- ~~7.6.~~ Local and synoptic meteorological conditions;
- ~~8.7.~~ Type and location of areas to be burned;
- ~~9.8.~~ Protection of the national visibility goal for Class I Areas under § 169A(a)(1) of the Clean Air Act and 40 CFR 51.309;
- ~~10.9.~~ Assessment of duration and intensity of smoke emissions to minimize cumulative impacts;
- ~~11.10.~~ Minimization of smoke impacts in Class I Areas, areas that are non-attainment for particulate matter, carbon monoxide, and ozone non-attainment areas, or other ~~smoke sensitive~~ smoke sensitive areas including transportation corridors; ~~and~~
- ~~12.11.~~ Protection of the National Ambient Air Quality Standards.

R18-2-1507. Prescribed Burn Accomplishment; Wildfire Reporting

- A. Each F/SLM conducting a prescribed burn shall complete and submit to ADEQ the “Burn Accomplishment” form supplied by ADEQ. For each burn approval, the F/SLM shall submit a Burn Accomplishment form to ADEQ ~~by 2:00 p.m. of the business day~~ within seven calendar days following the approved burn. The F/SLM shall include the following information on the Burn Accomplishment form:
1. Any known conditions or circumstances that could impact ~~the subsequent~~ Daily Burn approval~~decision~~ ~~process;~~
 2. The date, location, fuel type, fuel loading, and acreage accomplishments;

3. The ERTs and SMTs described in R18-2-1509 ~~and R182-1510, respectively~~, and may include any further ERTs and SMTs that become available, that the F/SLM used to reduce emissions or manage the smoke from the burn.
- B. The F/SLM shall submit the Burn Accomplishment form as an ~~original form, a facsimile, or an electronic information transfer~~; electronic submittal.
- C. ADEQ shall maintain a record of Daily Burn Requests, Burn Plan Form Burn Approvals/Conditional Approvals/Denials and Burn Accomplishments for five years. Burn Approvals with Conditions, Denials, and Burn Accomplishments data for five years.
- D. ~~The F/SLM in whose jurisdiction a wildfire occurs shall make available to ADEQ no later than the day after the activity all required information for wildfire incidents that burned more than 100 acres per day in timber or slash fuels or 300 acres per day in brush or grass fuels. For each day of a wildfire incident that exceeds the daily activity threshold, the F/SLM shall provide the location, an estimate of predominant fuel type and quantity consumed, and an estimate of the area blackened that day. ADEQ may request information about a burn prior to the submission of the Burn Accomplishment Form.~~
- E. The F/SLM in whose jurisdiction a wildfire occurs shall, upon request, make available to ADEQ no later than the day after the request is made and may include any necessary information for wildfire incidents, including the location, and estimate of predominant fuel type and quantity consumed, and an estimate of the area blackened that day. The F/SLM shall participate in air quality coordination calls upon request by ADEQ.

~~R18-2-1508. Wildland Fire Use: Plan, Authorization, Monitoring; Inter-agency Consultation; Status Reporting~~

- A. ~~In order for ADEQ to participate in the wildland fire use decision-making process, the F/SLM shall notify ADEQ as soon as practicable of any wildland fire use incident projected to attain or attaining a size of 50 acres of timber fuel or 250 acres of brush or grass fuel.~~
- B. ~~For each wildland fire use incident that has been declared as such by the F/SLM, the F/SLM shall complete and submit to ADEQ a Wildland Fire Use Burn Plan in a format approved by ADEQ in cooperation with the F/SLM. The F/SLM shall submit the Wildland Fire Use Burn Plan to ADEQ as soon as practicable but no later than 72 hours after the wildland fire use incident is declared or under consideration for such designation. The F/SLM shall include the following information in the Wildland Fire Use Burn Plan:-~~
- ~~1. An emergency telephone number that is answered 24 hours a day, seven days a week;~~
 - ~~2. Anticipated burn prescription;~~
 - ~~3. Anticipated smoke management prescription;~~

4. ~~The estimated daily number of acres, quantity, and type of fuel to be burned;~~
 5. ~~The anticipated maximum allowable perimeter or size with map;~~
 6. ~~Information on the condition of the area to be burned, such as whether it is in maintenance or restoration, its ecological function, and other indicators of fire resiliency;~~
 7. ~~The anticipated duration of the wildland fire use incident;~~
 8. ~~The anticipated long range weather trends for the site;~~
 9. ~~A map depicting the potential impact of the smoke. The potential impact shall be determined by mapping both the daytime and nighttime smoke path and down drainage flow for 15 miles from the wildland fire use incident, with smoke sensitive areas delineated. Mapping is mandatory unless waived either orally or in writing by ADEQ. The map shall use the appropriate scale to show the impacts of the smoke adequately; and~~
 10. ~~Modeling or monitoring of smoke impacts, if requested by ADEQ after consultation with the F/SLM.~~
- C. ~~ADEQ shall approve or disapprove a Wildland Fire Use Burn Plan within three hours of receipt. ADEQ shall consult directly with the requesting F/SLM before disapproving a Wildland Fire Use Burn Plan. If ADEQ fails to address the Wildland Fire Use Burn Plan within the time allotted, the Plan is approved by default under the condition that the F/SLM makes a good faith effort to contact ADEQ to confirm that the Plan was received. Approval by ADEQ of a Wildland Fire Use Burn Plan is binding upon ADEQ for the duration of the wildland fire use incident, unless smoke from the incident creates a threat to public health or welfare. If a threat to public health or welfare is created, ADEQ shall consult with the F/SLM regarding the situation and develop a joint action plan for reducing further smoke impacts.~~
- D. ~~The F/SLM shall submit a Daily Status Report for each wildland fire use incident to ADEQ for each day of the burn that the fire burns more than 100 acres in timber or slash fuels or 300 acres in brush or grass fuels. The F/SLM shall include a synopsis of smoke behavior, future daily anticipated growth, and location of the activity of the wildland fire use incident in the Daily Status Report.~~
- E. ~~The F/SLM shall consult with ADEQ prior to initiating human made ignition on the wildland fire use incident when greater than 250 acres is anticipated to be burned by the ignition. Emergency human made ignition on the incident for protection of public or fire fighter safety does not require consultation with ADEQ regardless of the size of the area to be burned.~~
- F. ~~The F/SLM shall ensure that there is appropriate signage and notification to protect public safety on transportation corridors including roadways and airports during a wildland fire use incident.~~

R18-2-1509. Emission Reduction and Smoke Management Techniques

- A. Each F/SLM conducting a prescribed burn shall implement as many Emission Reduction Techniques and Smoke Management Techniques as are feasible subject to economic, technical, and safety feasibility criteria, and land management objectives.
- B. Emission Reduction Techniques include:
1. Reducing biomass to be burned by use of techniques such as yarding or consolidation of unmerchandiseable material, multi-product timber sales, or public firewood access, when economically feasible;
 2. Reducing biomass to be burned by fuel exclusion practices such as preventing the fire from consuming dead snags or dead and downed woody material through lining, application of fire-retardant foam, or water;
 3. Using mass ignition techniques such as aerial ignition by helicopter to produce high intensity fires of high fuel density areas such as logging slash decks;
 4. Burning only fuels essential to meet resource management objectives;
 5. Minimizing consumption and smoldering by burning under conditions of high fuel moisture of duff and litter;
 6. Minimizing fuel consumption and smoldering by burning under conditions of high fuel moisture of large woody fuels;
 7. Minimizing soil content when slash piles are constructed by using brush blades on material-moving equipment and by constructing piles under dry soil conditions or by using hand piling methods;
 8. Burning fuels in piles or windrows;
 9. Using a backing fire in grass fuels;
 10. Burning fuels with an air curtain destructor, as defined in R18-2-101, operated according to manufacturer specifications and meeting applicable state or local opacity requirements;
 11. Extinguishing or mopping-up of smoldering fuels;
 12. Chunking of piles and other consolidations of burning material to enhance flaming and fuel consumption, and to minimize smoke production;
 13. Burning before litter fall; green-up of fuels, recently cut large fuels cure in areas with fuels reduction activity, and just before precipitation to reduce fuel smoldering and consumption;
 14. ~~Burning before green-up of fuels;~~ Reduce the area burned, by only burning a portion of the area within a designated perimeter or through mosaic burning.
 15. ~~Burning before recently cut large fuels cure in areas with activity; and~~
 16. ~~Burning just before precipitation to reduce fuel smoldering and consumption.~~
- C. Smoke management techniques include:

1. Burning from March 15 through September 15, when meteorological conditions allow for good smoke dispersion;
2. Igniting burns under good-to-excellent ventilation conditions;
3. Suspending operations under poor smoke dispersion conditions;
4. Considering smoke impacts on local community activities and land users;
5. Burning piles when other burns are not feasible, such as when snow or rain is present;
6. Using mass ignition techniques such as aerial ignition by helicopter to produce high combustion efficiency with short duration impacts;
7. Using all opportunities that meet the burn prescription and all burn locations to spread smoke impacts over a broader time period and geographic area;
8. Burning during optimum mid-day dispersion hours, with all ignitions in a burn unit completed by 3:00 p.m. to prevent trapping smoke in inversion or diurnal windflow patterns;
9. Providing information on the adverse impacts of using green or wet wood as fuel when public firewood access is allowed;
10. Implementing maintenance burning in a periodic rotation to shorten prescribed fire duration and reduce excessive fuel accumulations that could result in excessive smoke production in a wildfire; and
11. Using fire-management strategies to shift smoke into more favorable smoke dispersion seasons.

~~R18-2-1510. Smoke Management Techniques~~

- ~~A. Each F/SLM conducting a prescribed burn shall implement as many Smoke Management Techniques as are feasible subject to economic, technical, and safety feasibility criteria, and land management objectives.~~
- ~~B. Smoke management techniques include:~~
- ~~1. Burning from March 15 through September 15, when meteorological conditions allow for good smoke dispersion;~~
 - ~~2. Igniting burns under good to excellent ventilation conditions;~~
 - ~~3. Suspending operations under poor smoke dispersion conditions;~~
 - ~~4. Considering smoke impacts on local community activities and land users;~~
 - ~~5. Burning piles when other burns are not feasible, such as when snow or rain is present;~~
 - ~~6. Using mass ignition techniques such as aerial ignition by helicopter to produce high intensity fires with short duration impacts;~~
 - ~~7. Using all opportunities that meet the burn prescription and all burn locations to spread smoke impacts over a broader time period and geographic area;~~
 - ~~8. Burning during optimum mid-day dispersion hours, with all ignitions in a burn unit completed by 3:00 p.m. to prevent trapping smoke in inversions or diurnal windflow patterns;~~

- ~~9. Providing information on the adverse impacts of using green or wet wood as fuel when public firewood access is allowed;~~
- ~~10. Implementing maintenance burning in a periodic rotation to shorten prescribed fire duration and to reduce excessive fuel accumulations that could result in excessive smoke production in a wildfire; and~~
- ~~11. Using wildland fire use strategies to shift smoke into more favorable smoke dispersion seasons.~~

R18-2-1511. Monitoring

- A. ADEQ may require a F/SLM to monitor air quality before ~~or~~, during, or after a prescribed burn ~~or a wildland fire use incident~~ if as reasonably necessary to assess smoke impacts. Air quality monitoring may be conducted using both federal and non-federal reference ~~method~~ methods, as well as other techniques including but not limited to digital photographs, video calling, webcams, visibility monitors, and air quality sensors.
- ~~B. ADEQ may require a F/SLM to monitor weather before or during a prescribed burn or a wildland fire use incident, if necessary to predict or assess smoke impacts. After consultation with the F/SLM, ADEQ may also require the F/SLM to establish burn site or area representative remote automated weather stations or their equivalent, having telemetry that allows retrieval on a real time basis by ADEQ. An F/SLM shall give ADEQ notice and an opportunity to comment before making any change to a long term established remote automated weather station.~~
- ~~C. B.~~ A F/SLM shall employ the following types of monitoring, unless ~~Unless~~ waived by ADEQ, a F/SLM shall conduct a test burn at the burn site to verify the needed wind speed, direction, and stability, for burns greater than 250 acres per day, or greater than 50 acres per day if the burn is within 15 miles of a Class I Area, an area that is non-attainment for particulate matter, carbon monoxide, or ozone, or other ~~smokesensitive~~ smoke sensitive area:
 - ~~1. Smoke plume measurements, using a format supplied by ADEQ; and~~
 - ~~2. The release of pilot balloons (PIBALs) at the burn site to verify needed wind speed, direction, and stability. Instead of pilot balloons, a test burn at the burn site may be used for specific prescribed burns on a case by case basis as approved by ADEQ, to verify needed wind speed, direction, and stability.~~
- ~~D. C.~~ An F/SLM shall make monitoring information required under subsection ~~(C)~~ (B) available to ADEQ on the business day following the burn ignition, if an instantaneous method was not used to convey the information.
- ~~E. D.~~ The F/SLM shall keep on file for one year following the burn date any monitoring information required under this Section.

R18-2-1512. Burner Qualifications

- A. ~~All burn projects shall be conducted by personnel trained in prescribed fire and smoke management techniques as required by the F/SLM in charge of the burn and established by National Wildfire Coordinating Group training qualifications.~~ All burn projects shall be conducted by personnel trained and certified in prescribed fire and smoke management techniques. Burn project personnel shall be trained in the fire and smoke management techniques required by the F/SLM in charge of the burn or the training requirements established by the National Wildfire Coordinating Group.
- B. ~~A Prescribed Fire Boss or other local Fire Management Officer of the F/SLM having jurisdiction over prescribed burns shall have smoke management training obtained through one of the following:~~ A Prescribed Fire Burn Boss of the F/SLM with jurisdiction over the prescribed burn shall have smoke management training obtained through one of the following:
 - 1. Successful completion of a National Wildfire Coordinating Group or F/SLM-equivalent course addressing smoke management; or
 - 2. Attendance at an ADEQ-approved smoke management workshop.

R18-2-1513. Public Notification and Awareness Program; Regional Coordination

- A. The Director shall ~~maintain a public education and awareness program webpage, in cooperation with the F/SLM and other interested parties, to inform the general public of the smoke management program~~ conduct a public education and awareness program in cooperation with F/SLMs and other interested parties to inform the general public of the smoke management program described by this Article. The ~~webpage shall inform the public about the health risks and impacts from smoke and prescribed fires; how smoke management techniques can protect air quality; program shall include smoke impacts from prescribed fires and the role of prescribed fire in natural ecosystems.~~ webpage shall inform the public about the health risks and impacts from smoke and prescribed fires; how smoke management techniques can protect air quality; program shall include smoke impacts from prescribed fires and the role of prescribed fire in natural ecosystems.
- B. ADEQ shall make ~~annual registration,~~ prescribed burn approval, and wildfire ~~and wildland fire use~~ activity information readily available to the public and to facilitate regional coordination efforts and public notification.
- C. ADEQ shall ensure all publicly available information concerning smoke management, including electronic material, is updated annually, or as new information is published.

R18-2-1514. Surveillance and Enforcement

- A. An F/SLM conducting a prescribed burn shall permit and provide safe escort to ADEQ ~~to~~ for the purpose of entering and inspecting ~~enter and inspect~~ burn sites ~~unannounced~~ to verify the accuracy of the Daily Burn Request, Burn Plan, or Accomplishment data as well as matching burn approval with actual

conditions, smoke dispersion, and air quality impacts. Onground site inspection procedures and aerial surveillance shall be coordinated by ADEQ and the F/SLM for safety purposes.

- B. ADEQ may use remote automated weather station data if necessary to verify current and previous meteorological conditions at or near the burn site.
- C. ADEQ may audit burn accomplishment data, smoke dispersion measurements, or weather measurements from previously conducted burns, if necessary to verify conformity with, or deviation from, procedures and authorizations approved by ADEQ.
- D. Deviation from procedures and authorizations approved by ADEQ constitute a violation of this Article. Violations may require containment or ~~mop-up~~ appropriate smoke mitigation action of any active burns and may also require, in the Director's discretion, a five-day moratorium on ignitions by the responsible F/SLM. Violations of this Article are also subject to a civil penalty of not more than \$10,000 per day per violation under A.R.S. § 49-463.

R18-2-1515. Forms; ~~Electronic Copies;~~ and Information Transfers

- A. ~~ADEQ shall make available on paper and in electronically readable format any form required to be developed by ADEQ and completed by a F/SLM.~~ ADEQ shall make all forms for completion by a F/SLM available in electronic format as provided by the director.
- B. After consultation with an F/SLM, ADEQ may require the F/ SLM to provide data ~~in a manner that facilitates electronic transfers of information.~~ Or completed forms in an electronic format as provided by the director.

Exhibit II: Notice of Final Rulemaking

NOTICES OF FINAL RULEMAKING

This section of the *Arizona Administrative Register* contains Notices of Final Rulemaking. Final rules have been through the regular rulemaking process as defined in the Administrative Procedures Act. These rules were either approved by the Governor’s Regulatory Review Council or the Attorney General’s Office. Certificates of Approval are on file with the Office.

The final published notice includes a preamble and text of the rules as filed by the agency.

Economic Impact Statements are not published but are filed by the agency with their final notice.

The Office of the Secretary of State is the filing office and publisher of these rules. Questions about the interpretation of the final rules should be addressed to the agency that promulgated them. Refer to item #5 to contact the person charged with the rulemaking.

The codified version of these rules will be published in the *Arizona Administrative Code*.

NOTICE OF FINAL RULEMAKING

TITLE 18. ENVIRONMENTAL QUALITY

**CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL**

[R23-94]

PREAMBLE

- | <u>1. Article, Part, or Section Affected (as applicable)</u> | <u>Rulemaking Action</u> |
|---|---------------------------------|
| R18-2-1501 | Amend |
| R18-2-1502 | Amend |
| R18-2-1503 | Amend |
| R18-2-1504 | Amend |
| R18-2-1505 | Amend |
| R18-2-1506 | Amend |
| R18-2-1507 | Amend |
| R18-2-1508 | Repeal |
| R18-2-1509 | Amend |
| R18-2-1510 | Repeal |
| R18-2-1511 | Amend |
| R18-2-1512 | Amend |
| R18-2-1513 | Amend |
| R18-2-1514 | Amend |
| R18-2-1515 | Amend |
- 2. Citations to the agency’s statutory rulemaking authority to include both the authorizing statute (general) and the implementing statute (specific):**
 Authorizing statute: A.R.S. §§ 49-104(A)(1), (10), 49-404(A), 49-425(A), 49-458, 49-501(B)(2), (4)-(5) and (C).
 Implementing statute: A.R.S. § 49-458.01 (A)(7) and (C).
 - 3. The effective date of the rule:**
 August 7, 2023
 - 4. Citations to all related notices published in the Register as specified in R1-1-409(A) that pertain to the record of the final rulemaking package:**
 Notice of Rulemaking Docket Opening: 27 A.A.R. 2702, November 19, 2021
 Notice of Proposed Rulemaking: 28 A.A.R. 3413, October 28, 2022
 - 5. The agency’s contact person who can answer questions about the rulemaking:**
 Name: Samantha Schaffer
 Address: Department of Environmental Quality
 1110 W. Washington St.
 Phoenix, AZ 85007
 Telephone: (602) 771-2351
 Email: Schaffer.samantha@azdeq.gov
 - 6. An agency’s justification and reason why a rule should be made, amended, repealed or renumbered, to include an explanation about the rulemaking:**

Summary

The purpose of this rulemaking is to update the Arizona Department of Environmental Quality’s (ADEQ) forest and range management burn rules which regulate prescribed burns and allow for smoke management across the State. Prescribed fires or burns, refer to the controlled application of fire by experts under specific weather conditions to the landscape in order to restore health to

the ecosystem and to prevent forest under-growth from fueling wildfires.

Arizona has experienced an increase in severe wildfires. As a result, the Ducey Administration made it a priority to reduce the threat of wildfires by supporting and signing wildfire legislation that focuses on preventing and fighting fires. Improving and modernizing these rules to streamline and meet current industry standards - without creating additional regulatory burden - will be another step towards reducing the major threat of wildfires in Arizona. The changes made to each rule within the article are discussed later in this section.

Legal Background

State and federal forest and range land covers roughly 27% of the State and occupies 19.4 million acres. Despite potential air quality concerns, State and Federal Land Managers use the application of fire as a resource management tool on forest and range land for a variety of purposes. Arizona Administrative Code (A.A.C.) Title 18, Chapter 2, Article 15 governs the emissions from these fires and the rules address the two primary concerns for air quality which are violations of national ambient air quality standards (NAAQS) for particulate matter (PM₁₀ or PM_{2.5}) and visibility impairment. Research indicates that on average most of the smoke particles from wild and prescribed fires are from PM₁₀ and PM_{2.5}. The requirements under Article 15 address these air quality concerns, primarily through efforts to ensure best practices are being used to reduce the amount of smoke produced and as a result the impacts of the smoke to the citizens of Arizona and the environment.

A.R.S. § 49-458.01 specifically requires the Director to submit a plan to EPA, and allows ADEQ to promulgate rules to address programs related to emissions from fires, including prescribed and wildfires as necessary. (See A.R.S. § 49-458.01(A)(7)). The revisions to Article 15 will improve clarity and facilitate enhanced compliance. In addition, the changes to Article 15 clarify the existing requirements that reflect the mandates of the regional haze State Implementation Plan (SIP) requirements promulgated at 40 Code of Federal Regulations (CFR) §§ 51.308 and 51.309. At the time of the program's inception, under 40 CFR § 51.309(d)(6), regional haze plans relating to fire had to provide for:

- “(i) Documentation that all federal, state, and private prescribed fire programs within the state evaluate and address the degree visibility impairment from smoke in their planning and application. In addition, *the plan must include smoke management programs that include all necessary components including, but not limited to, actions to minimize emissions, evaluation of smoke dispersion, alternatives to fire, public notification, air quality monitoring, surveillance and enforcement, and program evaluation.*
- (ii) *A statewide inventory and emissions tracking system (spatial and temporal) of VOC, NOX, elemental and organic carbon, and fine particle emissions from fire. In reporting and tracking emissions from fire from within the state, states may use information from regional data gathering and tracking initiatives.*
- (iii) *Identification and removal wherever feasible of any administrative barriers to the use of alternatives to burning in federal, state, and private prescribed fire programs within the state.*
- (iv) *Enhanced smoke management programs for fire that consider visibility effects, not only health and nuisance objectives, and that are based on the criteria of efficiency, economics, law, emission reduction opportunities, land management objectives, and reduction of visibility impact.*
- (v) Establishment of annual emission goals for fire, excluding wildfire, that will minimize emission increases from fire to the maximum extent feasible and that are established in cooperation with states, tribes, federal land management agencies, and private entities” (emphasis added).

Since the amendments streamline Article 15 for stakeholders and meet the current federal regional haze requirements under 40 CFR §§ 51.308 and 51.309 the changes do not create additional burden on stakeholders.

Factual Background

In early 2002, ADEQ established a Fire Emissions Work Group (FEWG) to discuss visibility issues related to fire emissions and to make recommendations to ADEQ for the Regional Haze SIP. Fifteen stakeholders, representing public and private entities in geographically diverse areas of the State, agreed to participate in the work group. The FEWG helped ADEQ draft the current rules and create the State’s enhanced smoke management program. The program, while nationally recognized at the time of its inception as one of the best in the country, has become outdated over the last 20 years and requires updating to ensure it continues to be one of the country’s leading enhanced smoke management programs. The current rulemaking was the result of a joint effort between ADEQ and stakeholders, including many of the original FEWG participants, to further improve the state’s existing program.

Section by Section Explanation of Proposed Rules:

R18-2-1501	Added and amended definitions used in the smoke management program. Added definitions identifying industry terms and programs referenced in the rules.
R18-2-1502	Amended to update outdated terminology and to clarify applicability. Additional amendments were made to ensure conformity with A.R.S. § 49-501 and A.A.C. R18-2-602.
R18-2-1503	Amended to remove references to the “annual registration program” and the program’s components which required the collection of data pertaining to possible future projects. The data collected for the annual registration program is not used by ADEQ because it is based on hypothetical prescribed fires (i.e. burns) that may or may not take place later in the year. ADEQ gathers the same information requested by the annual registration program albeit at a later date; usually within days of the actual burn taking place as part of the submitted Burn Plan documents. The data gathered prior to the prescribed fire taking place throughout the year is the most accurate, as weather patterns and physical conditions

	change quickly. By waiting to collect the information closer to the burn date ADEQ with the help of Federal and State Land Managers ensure that actual verifiable data is collected. However, ADEQ will still be working with stakeholders to establish annual emission goals as required by 40 CFR 51.309(d)(6). By removing the “annual registration program” requirements and references ADEQ will be freeing stakeholders from unnecessary burden and further streamline the program.
R18-2-1504	Amended to clarify the sequencing of the Daily Burn Application Process. Amended to update the mapping and modeling technology to modern agency capabilities. Amended to prevent users from being locked out of the ADEQ online database for 14 days for minor revisions.
R18-2-1505	Amended to ensure information is submitted for each day a burn is to take place. Amended to clarify what type of information may be requested, how Federal and State Land Managers may contact ADEQ, and that burn requests can only be reviewed the day before the burn. ADEQ cannot approve burn request forms prior to the day before the burn is to take place due to changing weather and other conditions that could impact the review of the request. Amended to clarify the standard industry safety requirements that apply when conducting ignitions to ensure the health and safety of Arizona residents and out of state visitors.
R18-2-1506	Amended to remove “wildland fire use” because the term and the associated processes are no longer used by industry. Amended to remove “100 acres prescription” because the numerical value is an arbitrary threshold that does not account for the changing nature of fires. Amended to provide further clarity and to reflect A.A.C. R18-2-1501(29).
R18-2-1507	Amended to extend reporting deadlines for post-burn information collection. The extension does not affect emissions or the conditions under which the Federal and State Land Manager may burn.
R18-2-1508	Amended to clarify procedure and update terminology. Amended to remove outdated procedures. Repealed to reflect unenforceable “wildland fire use” requirements. The term “wildland fire use” is no longer used by industry or the U.S. Environmental Protection Agency (EPA). In the Agency’s 2016 Final Rule for the Treatment of Data Influenced by Exceptional Events “wildland fire use” was not codified (<i>See</i> 81 FR 68216, 68247, Oct. 03, 2016). In this document EPA stated “[w]hen the [smoke management program] SMP elements were developed for the 1998 Interim Air Quality Policy on Wildland and Prescribed Fires, the language reflected actions consistent with addressing three types of wildland fire (i.e., wildfire, prescribed fire and wildland fire use fire.) Fire terminology now recognizes two types of wildland fire: Wildfire and prescribed fire. We chose not to include provisions in regulatory text that do not reflect current terminology.” <i>Id.</i>
R18-2-1509	Amended to combine with A.A.C. R18-2-1510 due to the overlapping text and methodologies used.
R18-2-1510	Amended to reflect current industry practices.
R18-2-1511	Repealed to reflect the changes made to A.A.C. R15-2-1509.
R18-2-1512	Amended to clarify monitoring procedure. Amended to remove outdated monitoring technology requirements.
R18-2-1513	Amended to clarify existing requirements and to reflect the updated terminology used throughout the Article.
R18-2-1514	Amended to update and clarify the existing requirements. Amended to remove the outdated terminology.
R18-2-1515	Amended to conform with industry standards and to remove outdated terminology.
R18-2-1515	Amended to conform with current industry standards.

7. A reference to any study relevant to the rule that the agency reviewed and either relied on or did not rely on in its evaluation of or justification for the rule, where the public may obtain or review each study, all data underlying each study, and any analysis of each study and other supporting material:

Not applicable

8. A showing of good cause why the rulemaking is necessary to promote a statewide interest if the rulemaking will diminish a previous grant of authority of a political subdivision of this state:

Not applicable

9. A summary of the economic, small business, and consumer impact:

The following discussion addresses each of the elements required for an Economic, Small Business, and Consumer Impact statement (EIS) under A.R.S. § 41-1055.

An identification of the rulemaking

Conduct addressed in this rulemaking: ADEQ, on average, approves 440 prescribed fire requests per year, with the majority of prescribed burns taking place in the cooler months. The current rules regulating prescribed fires contain outdated terms and provisions that do not completely align with the industry standards developed by the National Wildfire Coordination Group (NWCG), which provides national leadership to prescribed fire operations. This misalignment causes confusion for stakeholders. This

rulemaking will update the terminology, realign the program with NWCG standards, and streamline the program for stakeholders.

Resulting harm: The disconnect between industry standards and the State’s regulatory rules causes confusion among stakeholders and requires them to adhere to practices that are no longer relevant nationally. Burn requests occasionally require revision or clarification during review by ADEQ in collaboration with the land manager requesting burn authorization. This rework causes delays for both parties and negatively impacts the ability of land managers to plan and adapt to changing fire conditions.

Change in targeted conduct:

This rulemaking will update and clarify terminology to conform to current industry practice without additional regulatory burden, while also ensuring compliance with the enhanced smoke management program requirements under the federal regional haze program. These updates will clarify the rules and improve the experience of the regulated community by reducing the amount of rework or additional information required to receive burn authorization. The changes will ensure Federal and State Land Managers conducting prescribed burns understand the smoke program’s approval and reporting requirements while facilitating open communication and cooperation between them and ADEQ. This cooperative effort will allow the State to achieve its goals for prescribed fire (reduced wildfire risk, improved watershed and ecosystem health) while protecting air quality.

Improving and modernizing these rules to streamline and meet current industry standards - without creating additional regulatory burden - will be another step towards reducing the major threat of wildfires in Arizona. The details regarding the specific changes made to each rule within the article are discussed in section 6 of the Notice of Final Rulemaking.

An identification of the persons who will be directly affected by, bear the cost of or directly benefit from the rulemaking.

ADEQ has jurisdiction over air pollution resulting from prescribed burning other than in Tribal Nations and Communities. This rule will impact the following federal and state agencies that conduct prescribed burns: (1) Federal Land Managers (FLMs) involved in burning activities, such as U.S. Forest Service, U.S. Fish and Wildlife Service, National Parks Service, Bureau of Land Management, Bureau of Reclamation, Department of Defense; (2) State Land Managers (SLMs), such as Arizona Department of Forest and Fire Management, Arizona Department of Transportation, Arizona Department of Game and Fish, and Parks Department. Additionally, there are entities not legally subject to this rule who may voluntarily comply with some or all of the rule provisions, such as the Bureau of Indian Affairs, one of the largest burners in Arizona. Note that as political subdivisions of the State of Arizona, local and municipal agencies and fire districts are considered SLMs for purposes of this analysis.

Occasionally, there are also private individuals or land managers who wish to conduct large-scale prescribed burning. These parties must receive assistance and oversight from a F/SLM in order to ensure compliance. The private burner and the F/SLM then jointly follow smoke management procedures and rule requirements while sharing costs. Certain private burners, such as land conservation organizations, must coordinate with F/SLMs to use the Article 15 rules, there are no additional costs or benefits to private parties beyond the minimal impact on F/SLMs discussed in this impact statement.

ADEQ administers the smoke management program, reviews prescribed burn plans and individual burn requests, and is responsible for collecting and reporting data on the smoke impacts of prescribed fire. ADEQ’s administration of the rules is positively impacted by the rule improvements in this rulemaking, as less staff time will be required to address questions arising from outdated or conflicting provisions of the current rules.

A cost benefit analysis of the following:

(a) The probable costs and benefits to the implementing agency or other agencies directly affected by the implementation and enforcement of the rulemaking.

Description of Affected Groups	Description of Effect	Increased Cost/Decreased Revenue or Benefit	Decreased Cost/Increased Revenue or Benefit
A. Government Agencies			
Federal and State Public Land Managers	Further clarifies the Article for users.	None	Marginal decreased time cost of compliance
Arizona Department of Environmental Quality	Further clarifies the Article for users.	Moderate initial cost to update online smoke portal/database	Marginal decreased time cost of addressing stakeholder questions

Minimal	Moderate	Substantial	Significant	Marginal
\$5,000 or less	\$5,001 up to \$25,000	\$25,000 or more	Cost or benefit cannot be easily quantified, but ADEQ expects it to be significant.	Cost or benefit cannot be easily quantified, but ADEQ expects it to be marginal.

(b) The probable costs and benefits to a political subdivision of this state directly affected by the implementation and enforcement of the rulemaking**Federal and State Land Managers**

The current implementation of Article 15 already requires close coordination between ADEQ and Federal or State Land Managers seeking to conduct a prescribed burn in order to minimize smoke impacts on surrounding communities and sensitive areas. The updated rules will benefit Land Managers by reducing discrepancies between the state rules and federal programs/rules, which should clarify the administration of the rules.

Certain rule changes allow more time to report information to ADEQ, in order to provide flexibility to federal and state land managers in varying field conditions, while still complying with federal requirements for an enhanced smoke management program. This additional flexibility, on top of the clarifications to the rules to provide federal and state land managers with a streamlined experience, is anticipated to save time and effort. The substantive requirements of the rules remain the same, so ADEQ anticipates no additional costs to federal and state land managers, including local and municipal agencies or fire districts.

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The clarification of the Article 15 will ease administration and reduce the inconsistency between the current rules and nationwide industry standards. ADEQ expects the rulemaking to decrease staffing costs related to providing technical assistance to land managers. ADEQ will not require new staff or any substantial contractor expenditures to implement these updated rules. ADEQ will benefit from the revision as the changes align with recognized industry standards which simplifies compliance and enforcement. The revisions will have a moderate, one-time cost to ADEQ. The department will be updating the prescribed fire online database to streamline access to users and to accommodate the changes to the rules.

(c) The probable costs and benefits to businesses directly affected by the rulemaking, including any anticipated effect on the revenues or payroll expenditures of employers who are subject to the rulemaking.

As the rules apply only to federal and state land managers and do not directly apply to private businesses unless assisted by a federal or state land manager, ADEQ anticipates no impact on private employment from this rulemaking.

A general description of the probable impact on private and public employment in business, agencies, and political subdivisions of this state directly affected by the rulemaking.

Since the updates proposed are updating, clarifying, and streamlining the rule for users, no substantial changes were made to the operation of ADEQ's prescribed burn process. As such, there is no expected impact on public employment. ADEQ does not anticipate any impact to private employment due to the provisions under A.R.S. § 49-501 which prohibits private businesses and residents from conducting prescribed burns unless they are assisted by a qualified federal or state land manager that will apply the rules under Article 15.

There may be some impact to state political subdivisions, such as fire departments, who meet the federal and state land manager requirements who wish to conduct prescribed fires. However, the impact should only be procedural paperwork and not increase payroll or other costs.

A statement of the probable impact of the rulemaking on small businesses:

These rules apply only to federal and state land managers. Private entities, including any business, are prohibited from conducting prescribed burns under Article 15 unless assisted by an F/SLM. Therefore, this rulemaking will have no impact on small businesses.

(a) An identification of the small business subject to the rulemaking

Not applicable.

(b) The administrative and other costs required for compliance with the rulemaking

Not applicable.

(c) A description of the methods that the agency may use to reduce the impact on small businesses.

Not applicable.

(d) The probable costs and benefit to private persons and consumers who are directly affected by the rulemaking.

Not applicable.

A statement of the probable effect on state revenues.

Since the proposed rule updates do not substantially change the operations of the ADEQ prescribed burn authorization process or affect commercial activity from which the state of Arizona would receive tax revenue, ADEQ projects no effect on state revenues resulting from the rulemaking.

A description of any less intrusive or less costly alternative methods of achieving the purpose of the rulemaking.

Since this rulemaking aligns with federal and state best management practices for wildfire and prescribed fire, there is not a less intrusive or less costly alternative available at this time. In fact, because the amendments streamline the rules ADEQ is reducing stakeholder burden with this rulemaking.

ADEQ reviewed and discussed the prescribed burn authorization process with federal and state land manager stakeholders who use the Article 15 rules, as well as internal subject matter experts, and determined that the current burn permit structure achieves the enhanced smoke management program outcomes required under the federal Regional Haze rule in the least intrusive and costly way that is feasible.

A description of any data on which a rule is based with a detailed explanation of how the data was obtained and why the data is acceptable data. An agency advocating that any data is acceptable data has the burden of proving that the data is acceptable. For the purposes of this paragraph, “acceptable data” means empirical, replicable, and testable data as evidenced in supporting documentation, statistics, reports, studies, or research.

Not applicable.

10. A description of any changes between the proposed rulemaking, to include supplemental notices, and the final rulemaking:

A.A.C. R18-2-1505(E) was amended to change the word “control” to “management” per stakeholder suggestion. In addition, A.A.C. R18-2-1501(10) was amended from the ““Daily Burn Authorization Process” means daily review by ADEQ of burn requests for the following day” to state the “Daily Burn Authorization Process” means the daily process by which ADEQ reviews and approves, approves with conditions, or disapproves “Daily Burn Requests” for the following day” per stakeholder suggestion. In addition, minor typographical corrections were made throughout the document. These amendments further streamline and clarify the rules which furthers the purpose of this rulemaking. In Section R18-2-1501(29), which is the definition for “Smoke Sensitive Area,” “Air Pollution Control Officer was changed” to “ADEQ.” This change was made to clarify ADEQ’s role.

11. An agency’s summary of the public or stakeholder comments made about the rulemaking and the agency response to the comments:

ADEQ thanks all commenters for their input. The following table addresses oral and written comments received from the following entities and organizations during the comment period and the extended comment period: National Park Service (NPS), AZ Department of Forest and Fire Management (DFFM), United States Forest Service (USFS), and Arizona Farm Bureau Federation. The Arizona Farm Bureau Federation submitted both oral and written comments which ADEQ has combined in order to address overlapping comments.

Rule	Comments	Agency Response
N/A	ADEQ received a comment from the National Park Service (NPS) regarding the Department's stakeholder engagement process. In their comment the NPS indicated that they had only received notice of the proposed rulemaking on December 9, 2022, and thus had concerns regarding the implementation of the revision process and the lack of stakeholder involvement. They also requested advanced notification and more time for review.	ADEQ takes stakeholder engagement very seriously and has made every reasonable effort to engage with and accommodate our stakeholders. When this rulemaking began, ADEQ notified three hundred and twenty-four members of the smoke management community, twenty of which were NPS employees, and invited them to engage in and provide feedback for this rulemaking at stakeholder review meetings. In addition to the individual invitations, ADEQ sent out GovDelivery emails to the individuals and groups subscribed to the agency's email updates. Stakeholders received invitations for meetings held on Oct. 25, 2021, Nov. 4, 2021, Nov. 18, 2021, March 29, 2022, July 28, 2022, and Dec. 1, 2022. ADEQ has also met the legal requirements for public notice under Arizona Revised Statutes, Title 41, Chapter 6.
A.A.C. R18-2-1501(4)	Arizona Department of Forest and Fire Management (DFFM): This definition could definitely add workload and liability to DFFM?	This definition was added in response to stakeholder requests to clarify its meaning, but the substantive requirements for assisting agencies have not changed. The requirement under A.A.C. R18-2-1502 that “A F/SLM that is conducting or assisting a prescribed burn shall follow the requirements of this Article” remains the same.
A.A.C. R18-2-1501(6)	United States Forest Service (USFS): ADEQ should consider changing “Burn Plan” to “ADEQ Burn Plan.” This would help differentiate between the ADEQ and the NWCG Burn Plan documents.	For consistency and clarity, ADEQ intends to retain this term as it was adopted. We believe the definition of “Burn Plan” contained in the rule adequately clarifies that the term refers only to the burn plan form provided by ADEQ.
A.A.C. R18-2-1501(10)	USFS: We feel the proposed language in A.A.C. R18-2-1501(10) and R18-2-1505(D)(1) could possibly have future repercussions that could limit or restrict our ability to protect the public from the risk of high intensity, high severity wildfire.	The revisions mentioned in this comment do not result in substantive change to the way the rules are enforced, because Daily Burn Requests have always been subject to final approval only on the business day before the burn in order to review the most up to date meteorological data to evaluate smoke dispersal conditions. These revisions are intended to clarify the burn authorization process and ensure the rule language more closely aligns with actual practice.
A.A.C. R18-2-1501 (10)	USFS: Suggests the following change: “Daily Burn Authorization Process” means the process by which ADEQ reviews and approves, approves with conditions or disapproves “Daily Burn Requests.”	ADEQ agrees with this proposed clarification to the definition, with a revision. The new A.A.C. R18-2-1501(10) will read: “Daily Burn Authorization Process” means the daily process by which ADEQ reviews and approves, approves with conditions or disapproves “Daily Burn Requests” for the following day.
A.A.C. R18-2-1501(21)	DFFM: We should use the NWCG definition. Our Prescribed Fire Burn Plans are a legal template with 21 components. The NWCG Prescribed Fire Implementation Guide provides instructions for all 21 components and also includes instructions for the complexity rating.	For consistency and clarity, ADEQ intends to retain this term as it has been since the rules were initially adopted. We believe the definition of “Burn Plan” contained in the rule adequately clarifies that the term refers only to the burn plan form provided by ADEQ.

A.A.C. R18-2-1501 (22)	DFFM: Suggests adding “Training “AND certification” to the first sentence of the definition. Change definition to read “prescribed fire BURN plan” at the end of the first sentence.	The suggested changes were made prior to publication of the NPRM and are reflected in the proposed rule.
A.A.C. R18-2-1501(25)	USFS: Suggested changing the definition for Smoke Management Prescription under A.A.C. R18-2-15001(25) to: ““Smoke management prescription” means the predetermined meteorological conditions that affect smoke transport and dispersion under which a burn could occur without adversely affecting public health and welfare.”	ADEQ will be proceeding with the proposed definition. The new definition does not increase the regulatory burden on stakeholders since the areas listed in the proposed definition are those that burners must already consider under NWCG definition for “prescription.” The NWCG definition for “prescription” states: “. . . a prescription is measurable criteria that define conditions under which a prescribed fire may be ignited. . . Prescription criteria typically describe environmental conditions such as temperature, humidity and fuel moisture, but may also include safety, economic, public health, geographic, administrative, social, or legal considerations” ¹ Since the proposed definition is codifying geographic considerations (i.e. Class I Visibility Areas), legal considerations (i.e. the National Ambient Air Quality Standards), and economic considerations (i.e. Transportation networks) it is aligned with industry standards and therefore is not more burdensome to stakeholders.
A.A.C. R18-2-1501 (28)	DFFM: Under statutory authority DFFM is responsible for fire suppression, prevention, and the mitigation of hazards fuels on State and private lands in Arizona. DFFM is also responsible for administering all prescribed fire qualifications and certifications.	ADEQ recognizes and respects Arizona DFFM’s authority as the State’s regulatory entity responsible for administering prescribed fire qualifications and certifications, as well as the entity responsible for fire suppression, prevention, and mitigation of hazardous fuels within Arizona. While DFFM is responsible for physical fires, ADEQ has authority under the federal Clean Air Act §§ 169 (A) and (B), as well as, A.R.S. § 49-458.01 to regulate the smoke created by fires within the State.
A.A.C. R18-2-1501 (29)	USFS: We previously submitted comments that this definition be changed. We support the unique sensitivity, professional work, and awareness that has elevated Arizona’s Air Quality and Smoke Management reputation to the current National level of respect. It will may be detrimental to adopt a definition here which attempts to identify all areas of smoke sensitivity and/or concern. We suggest: Smoke sensitive area may include any area with infrastructure and values associated with public health and welfare. This determination may be of short duration. Additionally, short duration impact from prescribed fire implementation may be a much preferred and favorable option when compared to impacts from unplanned wildfires.	ADEQ appreciates this feedback and incorporated the first comment into the current proposed rule prior to publication. The proposed definition in this rule for “Smoke sensitive area” does not “attempt to identify all areas of smoke sensitivity.” Rather, it provides examples of possible smoke sensitive areas that could be considered while reviewing a Burn Request, as stakeholders requested in development of the rule revisions. At the same time, ADEQ believes the definition’s list of examples is not overly prescriptive and provides flexibility for ADEQ and F/SLMs to collaboratively identify areas of potential smoke concern on a case-by-case basis. ADEQ recognizes that impacts to smoke sensitive areas need to be evaluated along with the positive benefits for air quality and forest management from prescribed fire and believes that the rule revisions adequately address the need for flexibility and individual review of each Burn Plan and Daily Burn Request.
A.A.C. R18-2-1501 (29)	USFS: Suggested the following change: “Smoke sensitive areas” means areas where it has been determined that smoke may adversely impact public health and welfare. These areas may be the result of synoptic weather patterns, topography and geographical location and need to be examined on a case-by-case basis where air quality, meteorology, public health and welfare are considered. These areas may only be sensitive for short periods of time and any use of these areas in the “smoke dispersion evaluation” and “Daily Burn Authorization Process” should be weighed against the potential gains in forest health, resource, and public protection from high severity, dangerous wildfire.	ADEQ appreciates this feedback and incorporated the first comment into the current proposed rule prior to publication. The proposed definition in this rule for “Smoke sensitive area” does not “attempt to identify all areas of smoke sensitivity.” Rather, it provides examples of possible smoke sensitive areas that could be considered while reviewing a Burn Request, as stakeholders requested in development of the rule revisions. At the same time, ADEQ believes the definition’s list of examples is not overly prescriptive and provides flexibility for ADEQ and F/SLMs to collaboratively identify areas of potential smoke concern on a case-by-case basis. ADEQ recognizes that impacts to smoke sensitive areas need to be evaluated along with the positive benefits for air quality and forest management from prescribed fire and believes that the rule revisions adequately address the need for flexibility and individual review of each Burn Plan and Daily Burn Request.
A.A.C. R18-2-1502	DFFM: Arizona DFFM is currently conducting hazard fuels reduction efforts including prescription fire implementation on private land.	The changes made to A.A.C. R18-2-1502 will not impact the projects of F/SLM.
A.A.C. R18-2-1504	DFFM: The title for rule A.A.C. R18-2-1504 is confusing to F/SLM’s. We consider this title as reference to the NWCG Prescribed Fire Burn Plan. Could this be changed to ADEQ Prescribed Fire Plan? or ADEQ Prescribed Fire Registration Plan?	For consistency and clarity, ADEQ intends to retain the title of this rule and the term for Prescribed Burn Plans as they have been since the rules were initially passed. We believe the definition of “Burn Plan” contained in the rule adequately clarifies that the term refers only to the burn plan form provided by ADEQ.
A.A.C. R18-2-1505	DFFM: Suggest changing “control” to mitigation measures in section (E).	ADEQ agrees with this suggestion and A.A.C. R18-2-1505(E) will now read, in relevant part: “. . . the F/SLM shall take appropriate action to reduce further smoke impacts, ensure safe and appropriate fire mitigation . . .”

<p>A.A.C. R18-2-1505</p>	<p>The NPS and USFS: Both agencies have submitted comments disagreeing with the Department's proposed changes to A.A.C. R18-2-1505(A) which would require F/SLM planning a prescribed burn to complete and submit a Daily Burn Request form for each day ignitions will take place. The comments covered multiple aspects of planning a prescribed burn but focused on the following: Burn Request authorization decisions restricted to only being made the day prior to the planned ignition will raise the cost per acre for projects making some projects cost prohibitive causing them to limit the size and number of projects that can be complete in a year; stakeholders believe that the original intent of A.A.C. R18-2-1505 was not to limit Burn Requests to single day events; and the current language in A.A.C. R18-2-1505 and 1506 adequately outlines the process.</p>	<p>ADEQ disagrees with the comments related to the Department's proposed changes to A.A.C. R18-2-1505(A), which would require F/SLM planning a prescribed burn to complete and submit a Daily Burn Request form for each day ignitions will take place. However, ADEQ thanks the NPS and USFS for their comments and will take this opportunity to reiterate that the purpose of the revision to A.A.C. R18-2-1505 is to maintain the status quo. While ADEQ has had extensive conversations with the USFS Air Quality Specialist assigned to Arizona regarding this change and ADEQ's interpretation of the language proposed, there seems to be a misinterpretation in regards to the amended rules requirements. The revised language in these rules does not impact current practice of submitting, reviewing, and approving burn requests. The proposed revisions do not require burners to submit the "Daily Burn Request" form on each separate day of the burn. Rather, ADEQ is requiring that the burners submit a "Daily Burn Request" form for each day they plan to ignite, with the ability to submit multiple requests on the same day. For example, if the burners are planning on burning for five days they can submit all of their Daily Burn Request Forms on the same day- as long as the forms are submitted any time before 2 p.m. the business day before the burn is to take place. ADEQ has always approved burns the business day before the burn is to take place in order to allow timely assessment of meteorological and smoke dispersion conditions before approval of any burn. As the prescribed burn community knows, weather patterns change quickly and the updated rule will allow ADEQ to evaluate each burn day based on the most current and accurate air quality information available. This change is not intended to limit the prescribed burning process or to impact resources. In the event that it does have a negative impact on burners ADEQ commits to amending the rule to ensure it meets the objective for all parties. Furthermore, ADEQ's Smoke Management Team is readily available to speak with F/SLM and the public about any concerns or upcoming projects.</p>
<p>A.A.C. R18-2-1506</p>	<p>DFFM: Regarding A.A.C. R18-2-1506(12) (Impacts to transportation): Doesn't the definition of Smoke Sensitive Areas cover impacts to transportation?</p>	<p>While it is true that transportation is included as one example of a possible smoke sensitive area, ADEQ believes it is valuable to reiterate the importance of evaluating impacts to transportation during the Daily Burn Request review within the rule itself.</p>
<p>A.A.C. R18-2-1506</p>	<p>USFS: Suggests removing "including transportation corridors" from A.A.C. R18-2-1506(10) as it is already implied in the language "smoke sensitive areas."</p>	<p>While it is true that transportation is included as one example of a possible smoke sensitive area, ADEQ believes it is valuable to reiterate the importance of evaluating impacts to transportation during the Daily Burn Request review within the rule itself.</p>
<p>A.A.C. R18-2-1506</p>	<p>NSPS: Best to include a comprehensive list of smoke-sensitive areas instead of only highlighting one ("Transportation Corridors").</p>	<p>ADEQ has included examples of smoke-sensitive areas under A.A.C. R18-2-1501(29). With that said, ADEQ believes it is valuable to reiterate the importance of evaluating the impacts to transportation during the Daily Burn Request review process as well.</p>
<p>A.A.C. R18-2-1506</p>	<p>USFS: A.A.C. R18-2-1506 Please see comment for A.A.C. R18-2-1501(10).</p>	<p>Please refer to the response for A.A.C. R18-2-1501(10).</p>
<p>A.A.C. R18-2-1508</p>	<p>The Arizona Farm Bureau Federation: "Although, we understand the Environmental Protection Agency (EPA) now only statutorily recognizes two types of fire, wildfire and prescribed fire, it is important that ADEQ recognize that wildland fire use, using wildfires to manage natural resources, is still employed by federal agencies even if the term is no longer used."</p>	<p>ADEQ understands the Farm Bureau's comment, but disagrees with their conclusion. While the term "wildland fire" might still be employed by federal agencies, the term "wildland fire use," is an outdated term to describe a NWCG fire management strategy. The U.S. Forest Service, and the Arizona DFFM have advised ADEQ that removing "wildland fire use" is appropriate moving forward. As ADEQ cited in the notice of proposed rulemaking, EPA removed the term in the Agency's 2016 Final Rule for the Treatment of Data Influenced by Exceptional Events "wildland fire use" was not codified. ² In the document EPA stated "[w]hen the [smoke management program] SMP elements were developed for the 1998 Interim Air Quality Policy on Wildland and Prescribed Fires, the language reflected actions consistent with addressing three types of wildland fire (i.e., wildfire, prescribed fire and wildland fire use fire.) Fire terminology now recognizes two types of wild-land fire: Wildfire and prescribed fire. We chose not to include provisions in regulatory text that do not reflect current terminology."³ EPA's action is consistent with the changes made in the 2009 Updated Policy for Implementation of Federal Wildland Fire Management Policy published by the United States Department of the Interior, Bureau of Land Management. Removing this term ensures consistency in the terminology used throughout the industry and ensures understanding throughout the prescribed fire community.</p>

<p>A.A.C. R18-2-1508</p>	<p>The Arizona Farm Bureau Federation: “we are concerned that with the before mentioned rule changes, ADEQ is creating incentives for fire managers and administrators to rely too heavily on managed wildland fire -- which ADEQ would eliminate any oversight and air quality reporting. This is regardless of the fact that intentional ignitions, which are said to accomplish the same goals of prescribed burning, are much riskier to control, and may or may not employ best practices for smoke emission.”</p>	<p>Repealing A.A.C. R18-2-1508 does not keep ADEQ from regulating the emissions from the fires formerly referred to as “wildland fires.” Wildland fires will now be regulated as wildfires and prescribed fires under Article 15.</p> <p>Regarding the Farm Bureau’s written comment that intentional ignitions are much riskier to control and may or may not employ best practices to control smoke emissions, the Department is uncertain what the Farm Bureau is asserting since prescribed fires are a category of intentional ignition and have a demonstrated track record of being quite safe while advancing multiple land management and environmental protection goals.</p> <p>The impact of intentional ignitions or prescribed fires is based on a number of factors, including: the materials being burned; weather conditions; size of the fire; and how long the fire will be smoldering.⁴ Prescribed fires consume smaller amounts of fuel and often produce less smoke than wildfires due to the smoke management techniques implemented by burners and because the days selected for the activity are based on ideal meteorological conditions. One study notes that “the impacts of prescribed fires are typically constrained to local communities and persist for a short duration, whereas the impacts of high-intensity wildfires are often long-term (weeks to months) and far-reaching.”⁵</p> <p>In EPA’s September 2021 Comparative Assessment of the Impacts of Prescribed Fire Versus Wildfire (CAIF): A case Study in the Western U.S., EPA found that “predicted concentrations of [particulate matter of] 2.5 [micrograms or less] from prescribed fires are smaller in magnitude and shorter in duration than actual wildfires.” Another study in 2019 determined that “[s]moke from prescribed fire is, in general, localized to small regions and has a less widespread impact on air quality.”⁶</p> <p>The impacts of prescribed fire versus wildfires were illustrated in a two year, study in Fresno, California titled “the impact of prescribed fire versus wildfire on the immune and cardiovascular systems of children” where researchers evaluated the respiratory outcomes and markers of immune function among school-aged children who had been exposed to wildfire or prescribed burn smoke.⁷ The study showed that the children in the wildfire group exhibited greater evidence of adverse respiratory health outcomes, than the children in the prescribed fire group.⁸ Furthermore, monitoring before, during, and after the fire event demonstrated that prescribed burns likely did not contribute substantially to PM2.5 levels, with concentrations actually decreasing from pre- to post fire.⁹</p> <p>Based on the evidence available ADEQ has found prescribed fires intentional ignitions to be one of the best available methods to mitigate future wildfire harms and achieve other land management objectives.</p>
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<p>A.A.C. R18-2-1508</p>	<p>The Arizona Farm Bureau Federation: “Consequently, ADEQ’s proposed rule revisions create a disparity of expectations and reporting between managed wildfire and prescribed burning. Under A.R.S. § 49-458.01 regardless of whether the EPA uses the term Wildland fire use, the state is still responsible to meet certain air quality standards and the state has expressed the need to support best practices for reducing the major threat of wildfires in Arizona.</p>	<p>The Department thanks the Arizona Farm Bureau Federation for their oral and written comments. As mentioned previously, repealing A.A.C. R18-2-1508 does not keep ADEQ from regulating the emissions from the fires formally referred to as “wildland fires.” Wildland fires will now be regulated as wildfires and prescribed fires under Article 15.</p> <p>ADEQ has the authority to regulate emissions from prescribed and open burn ignitions under A.R.S. § 49-501. As the Farm Bureau mentioned in their comments, A.R.S. § 49-458.01(A)(7) does mention “wildland fires” and “wildland fire use” however, the statute also states: “[t]he state implementation plan revisions submitted to the administrator shall address any of the following as necessary to submit an approvable plan: . . . Programs related to emissions from fire sources defined as wildland fire, including wildfire, prescribed natural fire, wildland fire use, prescribed fire and agricultural burning conducted and occurring on federal, state and private lands.” In other words, these fire sources may be regulated under the state’s regional haze program, but only as necessary to develop a federally-approvable state implementation plan.</p> <p>ADEQ, with the aid of federal and state agencies, has determined that Arizona state implementation plan revisions are not required to address emissions from “wildland fire” or “wildland fire use” under the prescribed burn program, because these terms are no longer in use at the federal level for smoke management purposes.</p> <p>This decision is based partially on the advice of federal and state agencies, as well as the evolution of the nation’s prescribed fire programs over the last twenty years. A.R.S. § 49-458.01 was last amended in 2004 and codified aspects of 40 CFR § 51.308 and 51.309 which regulates the regional haze program requirements. However, shortly after A.R.S. § 49-458.01 was amended EPA began collecting its own emissions data on prescribed and wildfire data.¹⁰</p> <p>Due to advances in emission monitoring technology, in 2015 EPA amended the Air Emissions Reporting Requirements (AERR) rule to eliminate the mandatory requirements for states to report emissions from wildfires and prescribed fires under 40 CFR Part 51.¹¹ ADEQ has ensured that all the requirements under 40 CFR §§ 51.308 and 51.309 were met under the proposed rules. Therefore, maintaining controls for “wildland fire” and “wildland fire use” is no longer necessary under A.R.S. § 49-458.01.</p> <p>Furthermore, as ADEQ cited in the notice of proposed rulemaking, EPA removed the term in the Agency’s 2016 Final Rule for the Treatment of Data Influenced by Exceptional Events and “wildland fire use” was not re-codified.¹² In this document EPA stated “[w]hen the [smoke management program] SMP elements were developed for the 1998 Interim Air Quality Policy on Wildland and Prescribed Fires, the language reflected actions consistent with addressing three types of wildland fire (i.e., wildfire, prescribed fire and wildland fire use fire.) Fire terminology now recognizes two types of wild-land fire: Wildfire and prescribed fire. We chose not to include provisions in regulatory text that do not reflect current terminology.”¹³ EPA’s action is consistent with the changes made in the 2009 Updated Policy for Implementation of Federal Wildland Fire Management Policy published by the United States Department of the Interior, Bureau of Land Management. Removing this term ensures consistency in the terminology used throughout the industry and ensures understanding throughout the prescribed fire community.</p> <p>This revision will not create a disparity of expectations and reporting between managed wildfire and prescribed burning because as mentioned previously, EPA actively gathers emissions information on prescribed and wildfires and releases this information in the National Emissions Inventory (NEI).¹⁴</p>
<p>A.A.C. R18-2-1508</p>	<p>The Arizona Farm Bureau Federation: “[w]e also understand that emissions from wildfires are covered and evaluated under the EPA’s Exceptional Events Rule and recognize the importance of this rule for addressing natural events that occur outside of the control of human actions. Because fire managers use wildfires to manage watersheds for natural resource benefits, it’s important that ADEQ’s rule maintains accountability to ensure fires and emissions are managed and reported accordingly. And the “wholesale repeal of A.A.C. R18-2-1508 leaves ADEQ with little information regarding the use of wildfires for the management of natural resources except what may be gathered under other areas of the rule in areas addressing wildfire.”</p>	<p>ADEQ disagrees with the Farm Bureau in its conclusion. The repeal of A.A.C. R18-2-1508 does not affect ADEQ’s authority to ensure fires and emissions are managed and reported accordingly. We disagree that this repeal will leave the Department with “little information regarding the use of wildfires for the management of natural resources except what may be gathered under other areas of the rule in areas addressing wildfire.” The requirements for F/SLMs to report emissions and any other relevant information from wildfire events upon request from ADEQ are now contained in A.A.C. R18-2-1507(E). Therefore, under the revised rules, ADEQ maintains the same authority as it currently does to “ensure fires and emissions are managed and reported accordingly.”</p>

A.A.C. R18-2-1508	The Arizona Farm Bureau Federation: "It is important that ADEQ hold federal and state agencies who continue to use wildfire for resource management benefits accountable to Arizona and its citizens as to these decisions and their impact on air quality, just as it does with its prescribed burning."	ADEQ works in partnership with the Arizona Department of Forest and Fire Management, United States Forest Service, the Bureau of Land Management, and many other agencies to manage the impacts of prescribed burns. ADEQ does not have statutory authority to approve or disapprove the use or management of wildfires (human caused or natural) for resource benefits. ADEQ only has the authority to regulate prescribed fires with respect to emissions and collect information pertaining to wildfires. Under R18-2-1514, ADEQ does have regulatory authority to address noncompliance with the smoke management rules using fines or a burn moratorium.
A.A.C. R18-2-1508	The Arizona Farm Bureau Federation: "Fire management plans and Land/Resource Management Plans provide federal agencies with the management responses to wildfire on federal lands based on the objectives established therein. Although we have not seen any such plans for any of Arizona's forests, does ADEQ review these plans when it meets with F/SLM to evaluate the program and set annual emission goals as noted under A.A.C. R18-2- 1503? If so, ADEQ should ensure information is provided regarding wildfire management objectives that include the use of purposeful ignitions and how emissions are monitored and reported.	ADEQ only reviews and approves the prescribed burn smoke management plans submitted to ADEQ under these rules. ADEQ does not review the overarching burn plans, fire management plans, or Land/Resource Management Plans that the F/SLM submit to federal agencies because the Department does not have the authority to regulate fire management plans, only the emissions from prescribed burns. Instead, ADEQ uses its own Burn Plans to collect emissions information and sets annual emissions goals based on the plans and the Annual meeting we hold with the F/SLMs. The information collected by ADEQ includes emissions information pertaining to the emissions required by A.A.C. R18-2-1504 which includes "the land management objective or purpose for the burn such as restoration or maintenance of ecological function and indicators of fire resiliency (A.A.C. R18-2-1504 (7)). More information about how emissions are monitored and reported is available on the Department's website under programs, wildfire support.
A.A.C. R18-2-1511	The Arizona Farm Bureau Federation: "The wholesale repeal of A.A.C. R18-2-1508 and A.A.C. R18-2-1511 (B) leaves ADEQ with little information regarding the use of wildfires for the management of natural resources except what may be gathered under other areas of the rule in areas addressing wildfire.	Thank you for your comment. However, the Department disagrees with the Farm Bureau in its conclusion. The repeal of A.A.C. R18-2-1508 and A.A.C. R18-2-1511(B) does not affect ADEQ's authority to ensure fires and emissions are managed and reported accordingly. We disagree that this repeal will leave the Department with "little information regarding the use of wildfires for the management of natural resources except what may be gathered under other areas of the rule in areas addressing wildfire." The requirements for F/SLMs to report emissions and any other relevant information from wildfire events upon request from ADEQ are now contained in A.A.C. R18-2-1507(E). Therefore, under the revised rules, ADEQ maintains the same authority as it currently does to "ensure fires and emissions are managed and reported accordingly."

¹ See NWCG Glossary of Wildland Fire, PMS 205).

² See 81 FR 68216, 68247 Oct. 3, 2016.

³ *Id.*

⁴ Can Prescribed Fires Mitigate Health Harm?, A Review of Air Quality and Public Health Implications of Wildfire and Prescribed Fire, PSE Health Energy, Lee Ann L. Hill, et. al pg. 25.

⁵ *Id.*

⁶ Hu, Y., Ai, H. H., Odman, M. T., Vaidyanathan, A., & Russell, A. G. (2019a). Development of a WebGIS-Based Analysis Tool for Human Health Protection from the Impacts of Prescribed Fire Smoke in Southeastern USA. *International Journal of Environmental Research and Public Health*, 16(11), 1981. <https://doi.org/10.3390/ijerph16111981>.

⁷ Prunicki, M., Kelsey, R., Lee, J., Zhou, X., Smith, E., Haddad, F., Wu, J., & Nadeau, K. (2019). The impact of prescribed fire versus wildfire on the immune and cardiovascular systems of children. *Allergy*, 74(10), 1989–1991. <https://doi.org/10.1111/all.13825>.

⁸ *Id.*

⁹ *Id.*

¹⁰ Laws 2004, Ch. 129, § 1.

¹¹ 80 FR 8,788, 8,789, Feb. 19, 2015.

¹² See 81 FR 68216, 68247, Oct. 3, 2016.

¹³ *Id.*

¹⁴ 80 FR 8,788, 8,792, Feb. 19, 2015.

12. All agencies shall list other matters prescribed by statute applicable to the specific agency or to any specific rule or class of rules. Additionally, an agency subject to Council review under A.R.S. §§ 41-1052 and 41-1055 shall respond to the following questions:

A.R.S. § 49-458.01(A)(7) requires that the ADEQ Director submit to U.S. Environmental Protection Agency (EPA) SIP revisions to address regional haze visibility impairment in mandatory federal class I areas. The SIP revisions submitted to EPA must address programs related to emissions from fire sources including those emissions from prescribed fires conducted and occurring on federal, state and private lands.

a. Whether the rule requires a permit, whether a general permit is used and if not, the reasons why a general permit is not used:

The rules provide the F/SLM with an agency authorization which under Article 15 is referred to as the Daily Burn Authorization Process. This rulemaking is exempt from the use of a general permit under A.R.S. § 41-1037 because a general permit is not technically feasible and would not meet the applicable statutory requirements under A.R.S. § 49-501(B)(2), (4)-(5) and (C). Furthermore, any efforts to incorporate a general permit into this rulemaking would result in additional regulatory requirements and costs being placed on the permit applicant.

b. Whether a federal law is applicable to the subject of the rule, whether the rule is more stringent than federal law and if so, citation to the statutory authority to exceed the requirements of federal law:

Article 15 reflects the mandates of the federal regional haze SIP requirements under 40 CFR 51.308 and 51.309. However,

the rules under Article 15 are not more stringent than federal law.

- c. **Whether a person submitted an analysis to the agency that compares the rule’s impact of the competitiveness of business in this state to the impact on business in other states:**
No such analysis was submitted.

- 13. **A list of any incorporated by reference material as specified in A.R.S. § 41-1028 and its location in the rule:**
Not applicable

- 14. **Whether the rule was previously made, amended or repealed as an emergency rule. If so, cite the notice published in the Register as specified in R1-1-409(A). Also, the agency shall state where the text was changed between the emergency and the final rulemaking packages:**
Not applicable

- 15. **The full text of the rules follows:**

**TITLE 18. ENVIRONMENTAL QUALITY
CHAPTER 2. DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL**

ARTICLE 15. FOREST AND RANGE MANAGEMENT BURNS

Section

- R18-2-1501. Definitions
- R18-2-1502. Applicability
- R18-2-1503. Annual Registration, Program Evaluation and Planning
- R18-2-1504. Prescribed Burn Plan
- R18-2-1505. Prescribed Burn Requests and Authorization
- R18-2-1506. Smoke Dispersion Evaluation
- R18-2-1507. Prescribed Burn Accomplishment; Wildfire Reporting
- R18-2-1508. ~~Wildland Fire Use: Plan, Authorization, Monitoring; Inter-agency Consultation; Status reporting~~ Repealed
- R18-2-1509. Emission Reduction and Smoke Management Techniques
- R18-2-1510. ~~Smoke Management Techniques~~ Repealed
- R18-2-1511. Monitoring
- R18-2-1512. Burner Qualifications
- R18-2-1513. Public Notification and Awareness Program; Regional Coordination
- R18-2-1514. Surveillance and Enforcement
- R18-2-1515. Forms; ~~Electronic Copies~~; and Information Transfers

ARTICLE 15. FOREST RANGE AND MANAGEMENT BURNS

R18-2-1501. Definitions

In addition to the definitions contained in A.R.S. § 49-501 and R182-101, in this Article:

1. “Activity fuels” means those fuels created by human activities such as thinning or logging.
2. “ADEQ” means the Arizona Department of Environmental Quality.
3. “Annual emissions goal” means the annual establishment in cooperation with the F/SLMs, under R18-2-1503(G), of a planned quantifiable value of emissions reduction from prescribed fires and fuels management activities.
4. “Assisting” means an agency or organization providing personnel, services, or other resources to the agency with direct responsibility for prescribed fire management.
5. “Burn Accomplishment Form” means the online database form as provided by the director to be completed for each approved or approved with conditions Daily Burn Request, with details of the conducted prescribed burn.
- 4-6. “Burn plan” for the purposes of this article means ~~the ADEQ~~ the ADEQ online database form as provided by the director that includes information on the conditions under which a burn will occur with details of the burn and smoke management prescriptions.
- 5-7. “Burn prescription” means, with regard to a burn project, the pre-determined area, fuel, and weather conditions required to attain planned resource management objectives.
- 6-8. “Burn project” means an active or planned prescribed burn, ~~including a wildland fire use incident.~~
9. “Daily Burn Request” means the online database form as provided by the director that allows burners to request for permission to ignite on a single specific day, submitted under an acknowledged Burn Plan.
10. “Daily Burn Authorization Process” means the daily process by which ADEQ reviews and approves, approves with conditions, or disapproves “Daily Burn Requests” for the following day.
11. “Director” means the Director of ADEQ.
12. “Duff” means forest floor material consisting of decomposing needles and other natural materials.
- 8-13. “Emission reduction techniques (ERT)” means methods for controlling emissions from prescribed fires to minimize the amount of emission output per unit of area burned.
- 9-14. “Federal land manager (FLM)” means any department, agency, delegee, or agent of the federal government, including the following:
 - a. United States Forest Service,

- b. United States Fish and Wildlife Service,
 - c. National Park Service,
 - d. Bureau of Land Management,
 - e. Bureau of Reclamation,
 - f. Department of Defense,
 - g. Bureau of Indian Affairs, and
 - h. ~~and~~ Natural Resources Conservation Service.
- ~~10-15.~~“F/SLM” means a federal land manager or a state land manager.
- ~~14-16.~~“Local fire management officer” means a person designated by a F/SLM as responsible for fire management in a local district or area.
- ~~12.~~ ~~“Mop-up” means the act of extinguishing or removing burning material from a prescribed fire to reduce smoke impacts.~~
- ~~13-17.~~“National Wildfire Coordinating Group” means the national inter-agency group of federal and state land managers that shares similar ~~wildfire suppression programs~~ wildfire management programs and has established standardized inter-agency training courses and qualifications for fire management positions.
18. “New Burn Plan” means a Burn Plan that has never been submitted to ADEQ.
- ~~14-19.~~“Non-burning alternatives to fire” means techniques that replace fire for at least five years as a means to treat activity fuels created to achieve a particular land management objective (e.g., reduction of fuel-loading, manipulation of fuels, enhancement of wildlife habitat, and ecosystem restoration). These alternatives are not used in conjunction with fire. Techniques used in conjunction with fire are referred to as emission reduction techniques (ERTs).
- ~~15-20.~~“Planned resource management objectives” means public interest goals in support of land management agency objectives including silviculture, wildlife habitat management, grazing enhancement, fire hazard reduction, wilderness management, cultural scene maintenance, weed abatement, watershed rehabilitation, vegetative manipulation, and disease and pest prevention.
- ~~16-21.~~“Prescribed burning” means the controlled application of fire to wildland fuels that are in either a natural or modified state, under certain burn and smoke management prescription conditions that have been specified by the ~~land manager~~ F/SLM in charge of or assisting the burn, to attain planned resource management objectives. Prescribed burning does not include a fire set or permitted by a public officer to provide instruction in ~~fire fighting~~ fire-fighting methods, or construction or residential burning under R18-2-602.
- ~~17-22.~~“Prescribed fire manager” means a person designated by a F/SLM as responsible for prescribed burning for that land manager. “Prescribed Fire Burn Boss” means a person designated by their respective F/SLM with the requisite training and certification to ensure that all ADEQ prescribed fire burn plan specifications and requirements are met before, during, and after a prescribed fire. This includes the following NWCG positions: Prescribed Fire Burn Boss Type 1, Prescribed Fire Burn Boss Type 2, and Prescribed Fire Burn Boss Type 3. A private burner does not qualify as a Burn Boss under this article.
23. “Private Burner” means a private person or company assisted by a F/SLM in conducting a prescribed burn under this article. A person not covered under this definition shall be regulated under A.R.S. § 49-501 and A.A.C. R18-2-602.
24. “Revised Burn Plan” means any Burn Plan that has been submitted to ADEQ by way of the online database which has remaining un-accomplished acres available and has been revised.
- ~~18-25.~~“Smoke management prescription” means the predetermined meteorological conditions that affect smoke transport and dispersion under which a burn could occur without adversely affecting public health and welfare, including transportation networks, considering such factors as National Ambient Air Quality Standard and Class I Visibility Areas.
- ~~19-26.~~“Smoke management techniques (SMT)” means management and dispersion practices used during a prescribed burn ~~or wildland fire use incident~~ which affect the direction, duration, height, or density of smoke.
- ~~20-27.~~“Smoke management unit” means any of the geographic areas defined by ADEQ whose area is based on primary watershed boundaries and whose outline is determined by diurnal windflow patterns that allow smoke to follow predictable drainage patterns. A map of the state divided into the smoke management units is on file with ADEQ.
- ~~21-28.~~“State land manager (SLM)” means any department, agency, or political subdivision of the state government including the following:
- a. State Land Department,
 - b. Department of Transportation,
 - c. Department of Game and Fish,
 - d. ~~and~~ Parks Department,
 - e. Local and Municipal Governments and Agencies.
 - f. Arizona Department of Forestry and Fire Management, and
 - g. Fire Districts.
29. “Smoke Sensitive Area” means areas where ADEQ determines that smoke and air pollutants can adversely affect public health or welfare. Such areas may include, but are not limited to cities, towns, villages, campgrounds, trails, populated recreational areas, hospitals, nursing homes, schools, roads, airports, public events, shopping centers, and mandatory Class I areas.
- ~~22-30.~~“Wildfire” means an unplanned ~~wildland fire subject to appropriate control measures~~ ignition, such as lightning, unauthorized and accidental human fires. Wildfires include those incidents where suppression may be limited for safety, economic, or resource concerns.
23. “Wildland fire use” means a wildland fire that is ignited by natural causes, such as lightning, and is managed using the same controls and for the same planned resource management objectives as prescribed burning.

R18-2-1502. Applicability

- A. A F/SLM that is conducting or assisting a prescribed burn shall follow the requirements of this Article.
- B. A private burner may conduct burns under this article if assisted by an F/SLM or municipal burner with whom ADEQ has entered into a memorandum of agreement shall follow the requirements of this Article.

- C. The provisions of this Article apply to all areas of the state except ~~Indian Trust lands.~~ Tribal Nations and Communities land which has the same meaning as the term defined in 18 U.S.C. § 1151. All federally managed lands and all state lands, parks, and forests are under the jurisdiction of ADEQ in matters relating to air pollution from prescribed burning.
- D. ~~Notwithstanding subsection (C), ADEQ and any Indian tribe may enter into a memorandum of agreement to implement this Article.~~ Notwithstanding subsection (C), any Tribal Nations and Communities may enter into a memorandum of agreement with ADEQ to implement this article.
- ~~E. ADEQ and any private or municipal prescribed burner may enter into a memorandum of agreement to implement this Article.~~

R18-2-1503. Annual Registration, Program Evaluation and Planning

- A. ~~Each F/SLM shall register annually with ADEQ on a form prescribed by ADEQ, all planned burn projects, including areas planned for wildland fire use. ADEQ shall hold a meeting after January 31 and before April 1 of each year between ADEQ and F/SLM to evaluate the program and set the annual emissions goals to minimize prescribed fire emissions to the maximum extent feasible using emission reduction techniques and non-burning alternatives to fire subject to economic, technical, and safety feasibility criteria, and consistent with land management objectives.~~
- B. ~~Each planned year extends from January 1 of the registration year to December 31 of the same year. Each F/SLM shall use best efforts to register before December 31 and no later than January 31 of each year. Outside of the annual meeting, ADEQ may request additional information about future prescribed burns to support regional coordination of smoke management, annual emission goal setting using ERTs, and non-burning alternatives to fire.~~
- C. ~~A F/SLM shall include the following information on the registration form:~~
- ~~1. The F/SLM's name, address, and business telephone number;~~
 - ~~2. The name, address, and business telephone number of an air quality representative who will provide technical support to ADEQ for decisions regarding prescribed burning. The same air quality representative may be selected by more than one F/SLM;~~
 - ~~3. All prescribed burn projects and potential wildland fire use areas planned for the next year;~~
 - ~~4. Maximum project and annual acres to be burned, maximum daily acres to be burned, fuel types within project area, and planned use of emission reduction techniques to support the annual emissions goal for each prescribed burn project;~~
 - ~~5. Planned use of any smoke management techniques for each prescribed burn project;~~
 - ~~6. Maximum project and annual acres projected to be burned, maximum daily acres projected to be burned, and a map of the anticipated project area, fuel types and loading within the planned area for an area the F/SLM anticipates for wildland fire use;~~
 - ~~7. A list of all burn projects that were completed during the previous year;~~
 - ~~8. Project area for treatment, treatment type, fuel types to be treated, and activity fuel loading to support the annual emissions goal for areas to be treated using non-burning alternatives to fire; and~~
 - ~~9. The area treated using non-burning alternatives to fire during the previous year including the number of acres, the specific types of alternatives utilized, and the location of these areas. At least once every five years, ADEQ shall request long-term projections of future prescribed fire activity from the F/SLM to support planning for visibility impairment and assessment of air quality concerns by ADEQ.~~
- D. ~~After consultation with the F/SLM, ADEQ may request additional information for registration of prescribed burns and wildland fire use to support regional coordination of smoke management, annual emission goal setting using ERTs, and non-burning alternatives to fire. F/SLM may submit topics to discuss at the yearly meeting by contacting ADEQ.~~
- ~~E. A F/SLM may amend a registration at any time with a written submission to ADEQ.~~
- ~~F. ADEQ accepts a facsimile or other electronic method as a means of complying with the deadline for registration. If an electronic means is used, the F/SLM shall deliver the original paper registration form to ADEQ for its records. ADEQ shall acknowledge in writing the receipt of each registration.~~
- ~~G. ADEQ shall hold a meeting after January 31 and before April 1 of each year between ADEQ and F/SLMs to evaluate the program and cooperatively establish the annual emission goal. The annual emission goal shall be developed to minimize prescribed fire emissions to the maximum extent feasible using emission reduction techniques and alternatives to burning subject to economic, technical, and safety feasibility criteria, and consistent with land management objectives.~~
- ~~H. At least once every five years, ADEQ shall request long-term projections of future prescribed fire and wildland fire use activity from the F/SLMs to support planning for visibility impairment and assessment of other air quality concerns by ADEQ.~~

R18-2-1504. Prescribed Burn Plan

Each F/SLM planning a prescribed burn shall complete and submit to ADEQ the "Burn Plan" form supplied by ADEQ no later than 14 days before the date on which the F/SLM requests permission to burn. ADEQ shall consider the information supplied on the Burn Plan Form as binding conditions under which the burn shall be conducted. A Burn Plan shall be maintained by ADEQ until notification from the F/SLM of the completion of the burn project. ~~Revisions~~ The Burn Plan provisions listed in A.A.C. R18-2-1504(1)-(5), may be revised no later than 2:00 p.m. the business day before the burn. Any other revision to the Burn Plan for a burn project shall be submitted in writing no later than 14 days before the date on which the F/SLM requests permission to burn. ADEQ shall not act on the Daily Burn Request until the Burn Plan is submitted by the F/SLM and acknowledged as complete by ADEQ. To facilitate the Daily Burn Authorization Process ~~authorization process~~ under R18-2-1505, the Burn Plan Form ~~the F/SLM shall include on the Burn Plan form:~~

1. An emergency telephone number that is answered 24 hours a day, seven days a week;
2. Burn prescription;
3. Smoke management prescription;
4. The name of the person submitting the Burn Plan on behalf of the F/SLM;
5. Any other information to support the Burn Plan needed by ADEQ to assist in the Daily Burn Authorization Process for smoke management purposes, prevention of negative impacts on smoke sensitive areas, or assessment of contribution to visibility impairment of Class I areas.
- 4-6. The total number of acres in the project to be burned, the quantity and type of fuel, type of burn, and the ignition technique to be used;

- ~~5.7.~~ The land management objective or purpose for the burn such as restoration or maintenance of ecological function and indicators of fire resiliency;
- ~~6.8.~~ A map depicting the potential impact of the smoke unless waived either orally or in writing by ADEQ. The potential impact shall be determined by mapping both the daytime and nighttime smoke path and down-drainage flow for 15 miles from the burn site, with smoke-sensitive areas delineated. The map shall use the appropriate scale to show the impacts of the smoke adequately;
- ~~7.9.~~ Modeling of smoke impacts unless waived either orally or in writing by ADEQ, for burns greater than 250 acres per day, or greater than 50 acres per day if the burn is within 15 miles of a Class I Area, an area that is nonattainment for particulates, a carbon monoxide nonattainment area, or other smoke-sensitive area. In consultation with the F/SLM, ADEQ shall provide guidelines on modeling;
- ~~8.~~ ~~The name of the official submitting the Burn Plan on behalf of the F/SLM; and~~
- ~~9.~~ ~~After consultation with the F/SLM, any other information to support the Burn Plan needed by ADEQ to assist in the Daily Burn authorization process for smoke management purposes or assessment of contribution to visibility impairment of Class I areas.~~

R18-2-1505. Prescribed Burn Requests and Authorization

- A. Each F/SLM planning a prescribed burn, shall complete and submit to ADEQ the “Daily Burn Request” form supplied by ADEQ for each day the F/SLM will complete ignitions. The Daily Burn Request form shall include:
 1. The contact information of the F/SLM conducting the burn;
 2. Acknowledgement that a qualified Prescribed Fire Burn Boss is conducting the burn;
 - ~~2.3. Each day of the burn; Date of the ignition;~~
 - ~~3.4.~~ The area to be burned on the day for which the Burn Request is submitted, with reference to the Burn Plan, including size, legal location to the section, and latitude and longitude to the minute;
 - ~~4.5.~~ Projected smoke impacts; and
 - ~~5.6.~~ Any local conditions or circumstances known to the F/SLM that, ~~if conveyed to ADEQ,~~ could impact the Daily Burn Authorization Process ~~authorization process or the burn.~~
- B. After consultation ~~with the F/SLM, ADEQ may request and upon request by ADEQ, the F/SLM shall provide~~ additional information related to the burn or any ongoing prescribed fires or wildfires such as: reports, digital photographs, meteorological, smoke dispersion, or air quality conditions to supplement the Daily Burn Request form and to aid in the Daily Burn Authorization Process ~~authorization process. F/SLM may coordinate with ADEQ prior to submitting a Daily Burn Request to discuss potential air quality impacts or other concerns.~~
- C. The F/SLM shall submit the Daily Burn Request form to ADEQ as expeditiously as practicable, but no later than 2:00 p.m. of the business day preceding the burn. ~~An original form, a facsimile, or an electronic information transfer are acceptable submittals.~~
- D. An F/SLM shall not ignite a prescribed burn without receiving the approval of ADEQ, as follows:
 1. ADEQ shall only approve, approve with conditions, or disapprove a burn on ~~the same business day as the Burn Request submitted; the business day before the burn is to take place.~~
 2. If ADEQ fails to address a Burn Request by ~~10:00 p.m. of the business day on which the request is submitted; 10:00 p.m. the business day before the burn is to take place~~ the Burn Request is approved by default after the burner makes a good faith effort to contact ADEQ to confirm that the Burn Request was received: by exhausting available methods of communication, which may include contracting the ADEQ smoke management team directly, as well as the main number for the ADEQ air quality division, and leaving voicemails if there is no response.
 3. ADEQ may communicate its decision by verbal, written, or electronic means. ADEQ shall provide a written or electronic reply if requested by the F/SLM.
- E. If weather conditions cease to conform to those in the smoke management prescription of either the Burn Plan or ~~an Approval with Conditions; any conditions on the approval of the applicable Burn Request,~~ the F/SLM shall take appropriate action to reduce further smoke impacts, ensure safe and appropriate fire ~~control mitigation,~~ and notify the public ~~when necessary; as per the requirements established by the National Wildfire Coordinating Group or F/SLM equivalent. After consultation with ADEQ, the smoke management prescription or burn plan may be modified. The F/SLM may modify the smoke management prescription in the Burn Plan after consultation with ADEQ. A F/SLM conducting a burn shall contact ADEQ if there is any change in the burn conditions that ceases to conform with the Burn Plan and could cause negative impacts to smoke sensitive areas and communicate what areas of the submitted smoke management prescription in the Burn Plan need to be modified.~~
- F. The F/SLM shall ensure that there is appropriate industry-standard signage and notification to protect public safety on transportation corridors including roadways and airports during a prescribed fire.

R18-2-1506. Smoke Dispersion Evaluation

ADEQ shall approve, approve with conditions, or disapprove a Daily Burn Request submitted under R18-2 1505, by using the following factors for each smoke management unit:

1. Analysis of the emissions from burns in progress and residual emissions from previous burns on a day-to-day basis;
2. ~~Analysis of emissions from active wildland fire use incidents, and active multiple day burns, and consideration of potential long-term emissions estimates;~~
- ~~3.2.~~ Analysis of the emissions from wildfires ~~greater than 100 acres~~ and consideration of their potential long-term growth;
- ~~4.3.~~ Local burn conditions;
- ~~5.4.~~ Burn prescription and smoke management prescription from the applicable Burn Plan;
- ~~6.5.~~ Existing and predicted local air quality; i.e. meteorological or smoke modeling;
- ~~7.6.~~ Local and synoptic meteorological conditions;
- ~~8.7.~~ Type and location of areas to be burned;
- ~~9.8.~~ Protection of the national visibility goal for Class I Areas under § 169A(a)(1) of the Clean Air Act and 40 CFR 51.309;
- ~~10.9.~~ Assessment of duration and intensity of smoke emissions to minimize cumulative impacts;

- ~~11-10.~~ Minimization of smoke impacts in Class I Areas, areas that are non-attainment for particulate matter, carbon monoxide, and ozone non-attainment areas, or other ~~smoke sensitive~~ smoke sensitive areas including transportation corridors; and
- ~~12-11.~~ Protection of the National Ambient Air Quality Standards.

R18-2-1507. Prescribed Burn Accomplishment; Wildfire Reporting

- A. Each F/SLM conducting a prescribed burn shall complete and submit to ADEQ the “Burn Accomplishment” form supplied by ADEQ. For each burn approval, the F/SLM shall submit a Burn Accomplishment form to ADEQ ~~by 2:00 p.m. of the business day~~ within seven calendar days following the approved burn. The F/SLM shall include the following information on the Burn Accomplishment form:
1. Any known conditions or circumstances that could impact ~~the subsequent~~ Daily Burn approvals~~decision process~~;
 2. The date, location, fuel type, fuel loading, and acreage accomplishments;
 3. The ERTs and SMTs described in R18-2-1509 ~~and R182-1510, respectively~~, and may include any further ERTs and SMTs that become available, that the F/SLM used to reduce emissions or manage the smoke from the burn.
- B. The F/SLM shall submit the Burn Accomplishment form as an ~~original form, a facsimile, or an electronic information transfer.~~ electronic submittal.
- C. ADEQ shall maintain a record of Daily Burn Requests, Burn Plan Form Burn Approvals/Conditional Approvals/Denials and Burn Accomplishments for five years. Burn Approvals with Conditions, Denials, and Burn Accomplishments data for five years.
- D. The F/SLM in whose jurisdiction a wildfire occurs shall make available to ADEQ no later than the day after the activity all required information for wildfire incidents that burned more than 100 acres per day in timber or slash fuels or 300 acres per day in brush or grass fuels. For each day of a wildfire incident that exceeds the daily activity threshold, the F/SLM shall provide the location, an estimate of predominant fuel type and quantity consumed, and an estimate of the area blackened that day. ADEQ may request information about a burn prior to the submission of the Burn Accomplishment Form.
- E. The F/SLM in whose jurisdiction a wildfire occurs shall, upon request, make available to ADEQ no later than the day after the request is made and may include any necessary information for wildfire incidents, including the location, and estimate of predominant fuel type and quantity consumed, and an estimate of the area blackened that day. The F/SLM shall participate in air quality coordination calls upon request by ADEQ.

R18-2-1508. Wildland Fire Use: Plan, Authorization, Monitoring, Inter-agency Consultation; Status Reporting Repealed

- ~~A.~~ In order for ADEQ to participate in the wildland fire use decision making process, the F/SLM shall notify ADEQ as soon as practicable of any wildland fire use incident projected to attain or attaining a size of 50 acres of timber fuel or 250 acres of brush or grass fuel.
- ~~B.~~ For each wildland fire use incident that has been declared as such by the F/SLM, the F/SLM shall complete and submit to ADEQ a Wildland Fire Use Burn Plan in a format approved by ADEQ in cooperation with the F/SLM. The F/SLM shall submit the Wildland Fire Use Burn Plan to ADEQ as soon as practicable but no later than 72 hours after the wildland fire use incident is declared or under consideration for such designation. The F/SLM shall include the following information in the Wildland Fire Use Burn Plan:
1. An emergency telephone number that is answered 24 hours a day, seven days a week;
 2. Anticipated burn prescription;
 3. Anticipated smoke management prescription;
 4. The estimated daily number of acres, quantity, and type of fuel to be burned;
 5. The anticipated maximum allowable perimeter or size with map;
 6. Information on the condition of the area to be burned, such as whether it is in maintenance or restoration, its ecological function, and other indicators of fire resiliency;
 7. The anticipated duration of the wildland fire use incident;
 8. The anticipated long-range weather trends for the site;
 9. A map depicting the potential impact of the smoke. The potential impact shall be determined by mapping both the daytime and nighttime smoke path and down-drainage flow for 15 miles from the wildland fire use incident, with smoke sensitive areas delineated. Mapping is mandatory unless waived either orally or in writing by ADEQ. The map shall use the appropriate scale to show the impacts of the smoke adequately; and 10. Modeling or monitoring of smoke impacts, if requested by ADEQ after consultation with the F/SLM.
- ~~C.~~ ADEQ shall approve or disapprove a Wildland Fire Use Burn Plan within three hours of receipt. ADEQ shall consult directly with the requesting F/SLM before disapproving a Wildland Fire Use Burn Plan. If ADEQ fails to address the Wildland Fire Use Burn Plan within the time allotted, the Plan is approved by default under the condition that the F/SLM makes a good faith effort to contact ADEQ to confirm that the Plan was received. Approval by ADEQ of a Wildland Fire Use Burn Plan is binding upon ADEQ for the duration of the wildland fire use incident, unless smoke from the incident creates a threat to public health or welfare. If a threat to public health or welfare is created, ADEQ shall consult with the F/SLM regarding the situation and develop a joint action plan for reducing further smoke impacts.
- ~~D.~~ The F/SLM shall submit a Daily Status Report for each wildland fire use incident to ADEQ for each day of the burn that the fire burns more than 100 acres in timber or slash fuels or 300 acres in brush or grass fuels. The F/SLM shall include a synopsis of smoke behavior, future daily anticipated growth, and location of the activity of the wildland fire use incident in the Daily Status Report.
- ~~E.~~ The F/SLM shall consult with ADEQ prior to initiating human-made ignition on the wildland fire use incident when greater than 250 acres is anticipated to be burned by the ignition. Emergency human-made ignition on the incident for protection of public or fire-fighter safety does not require consultation with ADEQ regardless of the size of the area to be burned.
- ~~F.~~ The F/SLM shall ensure that there is appropriate signage and notification to protect public safety on transportation corridors including roadways and airports during a wildland fire use incident.

R18-2-1509. Emission Reduction and Smoke Management Techniques

- A. Each F/SLM conducting a prescribed burn shall implement as many Emission Reduction Techniques and Smoke Management Techniques as are feasible subject to economic, technical, and safety feasibility criteria, and land management objectives.

- B.** Emission Reduction Techniques include:
1. Reducing biomass to be burned by use of techniques such as yarding or consolidation of unmerchandiseable material, multi-product timber sales, or public firewood access, when economically feasible;
 2. Reducing biomass to be burned by fuel exclusion practices such as preventing the fire from consuming dead snags or dead and downed woody material through lining, application of fire-retardant foam, or water;
 3. Using mass ignition techniques such as aerial ignition by helicopter to produce high intensity fires of high fuel density areas such as logging slash decks;
 4. Burning only fuels essential to meet resource management objectives;
 5. Minimizing consumption and smoldering by burning under conditions of high fuel moisture of duff and litter;
 6. Minimizing fuel consumption and smoldering by burning under conditions of high fuel moisture of large woody fuels;
 7. Minimizing soil content when slash piles are constructed by using brush blades on material-moving equipment and by constructing piles under dry soil conditions or by using hand piling methods;
 8. Burning fuels in piles or windrows;
 9. Using a backing fire in grass fuels;
 10. Burning fuels with an air curtain destructor, as defined in R18-2-101, operated according to manufacturer specifications and meeting applicable state or local opacity requirements;
 11. Extinguishing or mopping-up of smoldering fuels;
 12. Chunking of piles and other consolidations of burning material to enhance flaming and fuel consumption, and to minimize smoke production;
 13. Burning before litter fall; green-up of fuels, recently cut large fuels cure in areas with fuels reduction activity, and just before precipitation to reduce fuel smoldering and consumption;
 14. Burning before green up of fuels; Reduce the area burned, by only burning a portion of the area within a designated perimeter or through mosaic burning.
 15. ~~Burning before recently cut large fuels cure in areas with activity; and~~
 16. ~~Burning just before precipitation to reduce fuel smoldering and consumption.~~

C. Smoke management techniques include:

1. Burning from March 15 through September 15, when meteorological conditions allow for good smoke dispersion;
2. Igniting burns under good-to-excellent ventilation conditions;
3. Suspending operations under poor smoke dispersion conditions;
4. Considering smoke impacts on local community activities and land users;
5. Burning piles when other burns are not feasible, such as when snow or rain is present;
6. Using mass ignition techniques such as aerial ignition by helicopter to produce high combustion efficiency with short duration impacts;
7. Using all opportunities that meet the burn prescription and all burn locations to spread smoke impacts over a broader time period and geographic area;
8. Burning during optimum mid-day dispersion hours, with all ignitions in a burn unit completed by 3:00 p.m. to prevent trapping smoke in inversion or diurnal windflow patterns;
9. Providing information on the adverse impacts of using green or wet wood as fuel when public firewood access is allowed;
10. Implementing maintenance burning in a periodic rotation to shorten prescribed fire duration and reduce excessive fuel accumulations that could result in excessive smoke production in a wildfire; and
11. Using fire-management strategies to shift smoke into more favorable smoke dispersion seasons.

R18-2-1510. Smoke Management Techniques Repealed

A. Each F/SLM conducting a prescribed burn shall implement as many Smoke Management Techniques as are feasible subject to economic, technical, and safety feasibility criteria, and land management objectives.

B. ~~Smoke management techniques include-~~

1. ~~Burning from March 15 through September 15, when meteorological conditions allow for good smoke dispersion;~~
2. ~~Igniting burns under good to excellent ventilation conditions;~~
3. ~~Suspending operations under poor smoke dispersion conditions;~~
4. ~~Considering smoke impacts on local community activities and land users;~~
5. ~~Burning piles when other burns are not feasible, such as when snow or rain is present;~~
6. ~~Using mass ignition techniques such as aerial ignition by helicopter to produce high intensity fires with short duration impacts;~~
7. ~~Using all opportunities that meet the burn prescription and all burn locations to spread smoke impacts over a broader time period and geographic area;~~
8. ~~Burning during optimum mid-day dispersion hours, with all ignitions in a burn unit completed by 3:00 p.m. to prevent trapping smoke in inversions or diurnal windflow patterns;~~
9. ~~Providing information on the adverse impacts of using green or wet wood as fuel when public firewood access is allowed;~~
10. ~~Implementing maintenance burning in a periodic rotation to shorten prescribed fire duration and to reduce excessive fuel accumulations that could result in excessive smoke production in a wildfire; and~~
11. ~~Using wildland fire use strategies to shift smoke into more favorable smoke dispersion seasons.~~

R18-2-1511. Monitoring

A. ADEQ may require a F/SLM to monitor air quality before ~~or~~, during, or after a prescribed burn or a wildland fire use incident if as reasonably necessary to assess smoke impacts. Air quality monitoring may be conducted using both federal and non-federal reference ~~method~~ methods, as well as other techniques including but not limited to digital photographs, video calling, webcams, visibility monitors, and air quality sensors.

- ~~B.~~ ADEQ may require a F/SLM to monitor weather before or during a prescribed burn or a wildland fire use incident, if necessary to predict or assess smoke impacts. After consultation with the F/SLM, ADEQ may also require the F/SLM to establish burn site or area representative remote automated weather stations or their equivalent, having telemetry that allows retrieval on a real-time basis by ADEQ. An F/SLM shall give ADEQ notice and an opportunity to comment before making any change to a long-term established remote automated weather station.
- ~~C.B.~~ A F/SLM shall employ the following types of monitoring, unless Unless waived by ADEQ, a F/SLM shall conduct a test burn at the burn site to verify the needed wind speed, direction, and stability, for burns greater than 250 acres per day, or greater than 50 acres per day if the burn is within 15 miles of a Class I Area, an area that is non-attainment for particulate matter, carbon monoxide, or ozone, or other smoke sensitive smoke sensitive area:
1. Smoke plume measurements, using a format supplied by ADEQ; and
 2. The release of pilot balloons (PIBALs) at the burn site to verify needed wind speed, direction, and stability. Instead of pilot balloons, a test burn at the burn site may be used for specific prescribed burns on a case-by-case basis as approved by ADEQ, to verify needed wind speed, direction, and stability.
- ~~D.C.~~ An F/SLM shall make monitoring information required under subsection ~~(C)~~ (B) available to ADEQ on the business day following the burn ignition, if an instantaneous method was not used to convey the information.
- ~~E.D.~~ The F/SLM shall keep on file for one year following the burn date any monitoring information required under this Section.

R18-2-1512. Burner Qualifications

- A. All burn projects shall be conducted by personnel trained in prescribed fire and smoke management techniques as required by the F/SLM in charge of the burn and established by National Wildfire Coordinating Group training qualifications. All burn projects shall be conducted by personnel trained and certified in prescribed fire and smoke management techniques. Burn project personnel shall be trained in the fire and smoke management techniques required by the F/SLM in charge of the burn or the training requirements established by the National Wildfire Coordinating Group.
- B. A Prescribed Fire Boss or other local Fire Management Officer of the F/SLM having jurisdiction over prescribed burns shall have smoke management training obtained through one of the following: A Prescribed Fire Burn Boss of the F/SLM with jurisdiction over the prescribed burn shall have smoke management training obtained through one of the following:
1. Successful completion of a National Wildfire Coordinating Group or F/SLM-equivalent course addressing smoke management; or
 2. Attendance at an ADEQ-approved smoke management workshop.

R18-2-1513. Public Notification and Awareness Program; Regional Coordination

- A. The Director shall maintain a public education and awareness program webpage, in cooperation with the F/SLM and other interested parties, to inform the general public of the smoke management program ~~conduct a public education and awareness program in cooperation with F/SLMs and other interested parties to inform the general public of the smoke management program~~ described by this Article. The webpage shall inform the public about the health risks and impacts from smoke and prescribed fires; how smoke management techniques can protect air quality; program shall include smoke impacts from prescribed fires and the role of prescribed fire in natural ecosystems.
- B. ADEQ shall make ~~annual registration~~, prescribed burn approval, and wildfire and wildland fire use activity information readily available to the public and to facilitate regional coordination efforts and public notification.
- C. ADEQ shall ensure all publicly available information concerning smoke management, including electronic material, is updated annually, or as new information is published.

R18-2-1514. Surveillance and Enforcement

- A. An F/SLM conducting a prescribed burn shall permit and provide safe escort to ADEQ to for the purpose of entering and inspecting ~~enter and inspect~~ burn sites ~~unannounced~~ to verify the accuracy of the Daily Burn Request, Burn Plan, or Accomplishment data as well as matching burn approval with actual conditions, smoke dispersion, and air quality impacts. Onground site inspection procedures and aerial surveillance shall be coordinated by ADEQ and the F/SLM for safety purposes.
- B. ADEQ may use remote automated weather station data if necessary to verify current and previous meteorological conditions at or near the burn site.
- C. ADEQ may audit burn accomplishment data, smoke dispersion measurements, or weather measurements from previously conducted burns, if necessary to verify conformity with, or deviation from, procedures and authorizations approved by ADEQ.
- D. Deviation from procedures and authorizations approved by ADEQ constitute a violation of this Article. Violations may require containment or ~~map-up~~ appropriate smoke mitigation action of any active burns and may also require, in the Director's discretion, a five-day moratorium on ignitions by the responsible F/SLM. Violations of this Article are also subject to a civil penalty of not more than \$10,000 per day per violation under A.R.S. § 49-463.

R18-2-1515. Forms; Electronic Copies; and Information Transfers

- A. ~~ADEQ shall make available on paper and in electronically readable format any form required to be developed by ADEQ and completed by a F/SLM. ADEQ shall make all forms for completion by a F/SLM available in electronic format as provided by the director.~~
- B. After consultation with an F/SLM, ADEQ may require the F/SLM to provide data ~~in a manner that facilitates electronic transfers of information, or completed forms in an electronic format as provided by the director.~~

Exhibit III: Final Rules Published in A.A.C.

A.A.C. § R18-2-1501

This document is current through Volume 29, Issue 28, published July 14, 2023

R18-2-1501. Definitions [Effective August 7, 2023]

In addition to the definitions contained in A.R.S. § 49-501 and R182-101, in this Article:

1. “Activity fuels” means those fuels created by human activities such as thinning or logging.
2. “ADEQ” means the Arizona Department of Environmental Quality.
3. “Annual emissions goal” means the annual establishment in cooperation with the F/SLMs, under R18-2-1503(G), of a planned quantifiable value of emissions reduction from prescribed fires and fuels management activities.
4. “Assisting” means an agency or organization providing personnel, services, or other resources to the agency with direct responsibility for prescribed fire management.
5. “Burn Accomplishment Form” means the online database form as provided by the director to be completed for each approved or approved with conditions Daily Burn Request, with details of the conducted prescribed burn.
6. “Burn plan” for the purposes of this article means the ADEQ online database form as provided by the director that includes information on the conditions under which a burn will occur with details of the burn and smoke management prescriptions.
7. “Burn prescription” means, with regard to a burn project, the pre-determined area, fuel, and weather conditions required to attain planned resource management objectives.
8. “Burn project” means an active or planned prescribed burn.
9. “Daily Burn Request” means the online database form as provided by the director that allows burners to request for permission to ignite on a single specific day, submitted under an acknowledged Burn Plan.
10. “Daily Burn Authorization Process” means the daily process by which ADEQ reviews and approves, approves with conditions, or disapproves “Daily Burn Requests” for the following day.
11. “Director” means the Director of ADEQ.
12. “Duff” means forest floor material consisting of decomposing needles and other natural materials.
13. “Emission reduction techniques (ERT)” means methods for controlling emissions from prescribed fires to minimize the amount of emission output per unit of area burned.
14. “Federal land manager (FLM)” means any department, agency, delegee, or agent of the federal government, including the following:
 - a. United States Forest Service,
 - b. United States Fish and Wildlife Service,
 - c. National Park Service,
 - d. Bureau of Land Management,
 - e. Bureau of Reclamation,
 - f. Department of Defense,

- g.** Bureau of Indian Affairs, and
- h.** Natural Resources Conservation Service.
- 15.** “F/SLM” means a federal land manager or a state land manager.
- 16.** “Local fire management officer” means a person designated by a F/SLM as responsible for fire management in a local district or area.
- 17.** “National Wildfire Coordinating Group” means the national inter-agency group of federal and state land managers that shares similar wildfire management programs and has established standardized inter-agency training courses and qualifications for fire management positions.
- 18.** “New Burn Plan” means a Burn Plan that has never been submitted to ADEQ.
- 19.** “Non-burning alternatives to fire” means techniques that replace fire for at least five years as a means to treat activity fuels created to achieve a particular land management objective (e.g., reduction of fuel-loading, manipulation of fuels, enhancement of wildlife habitat, and ecosystem restoration). These alternatives are not used in conjunction with fire. Techniques used in conjunction with fire are referred to as emission reduction techniques (ERTs).
- 20.** “Planned resource management objectives” means public interest goals in support of land management agency objectives including silviculture, wildlife habitat management, grazing enhancement, fire hazard reduction, wilderness management, cultural scene maintenance, weed abatement, watershed rehabilitation, vegetative manipulation, and disease and pest prevention.
- 21.** “Prescribed burning” means the controlled application of fire to wildland fuels that are in either a natural or modified state, under certain burn and smoke management prescription conditions that have been specified by the F/SLM in charge of or assisting the burn, to attain planned resource management objectives. Prescribed burning does not include a fire set or permitted by a public officer to provide instruction in fire-fighting methods, or construction or residential burning under R18-2-602.
- 22.** “Prescribed Fire Burn Boss” means a person designated by their respective F/SLM with the requisite training and certification to ensure that all ADEQ prescribed fire burn plan specifications and requirements are met before, during, and after a prescribed fire. This includes the following NWCG positions: Prescribed Fire Burn Boss Type 1, Prescribed Fire Burn Boss Type 2, and Prescribed Fire Burn Boss Type 3. A private burner does not qualify as a Burn Boss under this article.
- 23.** “Private Burner” means a private person or company assisted by a F/SLM in conducting a prescribed burn under this article. A person not covered under this definition shall be regulated under A.R.S. § 49-501 and A.A.C. R18-2-602.
- 24.** “Revised Burn Plan” means any Burn Plan that has been submitted to ADEQ by way of the online database which has remaining un-accomplished acres available and has been revised.
- 25.** “Smoke management prescription” means the predetermined meteorological conditions that affect smoke transport and dispersion under which a burn could occur without adversely affecting public health and welfare, including transportation networks, considering such factors as National Ambient Air Quality Standard and Class I Visibility Areas.
- 26.** “Smoke management techniques (SMT)” means management and dispersion practices used during a prescribed burn which affect the direction, duration, height, or density of smoke.
- 27.** “Smoke management unit” means any of the geographic areas defined by ADEQ whose area is based on primary watershed boundaries and whose outline is determined by diurnal windflow patterns that allow smoke to follow predictable drainage patterns. A map of the state divided into the smoke management units is on file with ADEQ.

- 28.** “State land manager (SLM)” means any department, agency, or political subdivision of the state government including the following:
- a.** State Land Department,
 - b.** Department of Transportation,
 - c.** Department of Game and Fish,
 - d.** Parks Department,
 - e.** Local and Municipal Governments and Agencies,
 - f.** Arizona Department of Forestry and Fire Management, and
 - g.** Fire Districts.
- 29.** “Smoke Sensitive Area” means areas where ADEQ determines that smoke and air pollutants can adversely affect public health or welfare. Such areas may include, but are not limited to cities, towns, villages, campgrounds, trails, populated recreational areas, hospitals, nursing homes, schools, roads, airports, public events, shopping centers, and mandatory Class I areas.
- 30.** “Wildfire” means an unplanned ignition, such as lightning, unauthorized and accidental human fires. Wildfires include those incidents where suppression may be limited for safety, economic, or resource concerns.

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1502

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R18-2-1502. Applicability [Effective August 7, 2023]

- A.** A F/SLM that is conducting or assisting a prescribed burn shall follow the requirements of this Article.
- B.** A private burner may conduct burns under this article if assisted by an F/SLM.
- C.** The provisions of this Article apply to all areas of the state except Tribal Nations and Communities land which has the same meaning as the term defined in 18 U.S.C. § 1151. All federally managed lands and all state lands, parks, and forests are under the jurisdiction of ADEQ in matters relating to air pollution from prescribed burning.
- D.** Notwithstanding subsection (C), any Tribal Nations and Communities may enter into a memorandum of agreement with ADEQ to implement this article.

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1503

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R18-2-1503. Annual, Program Evaluation and Planning [Effective August 7, 2023]

- A. ADEQ shall hold a meeting after January 31 and before April 1 of each year between ADEQ and F/SLM to evaluate the program and set the annual emissions goals to minimize prescribed fire emissions to the maximum extent feasible using emission reduction techniques and non-burning alternatives to fire subject to economic, technical, and safety feasibility criteria, and consistent with land management objectives.
- B. Outside of the annual meeting, ADEQ may request additional information about future prescribed burns to support regional coordination of smoke management, annual emission goal setting using ERTs, and non-burning alternatives to fire.
- C. At least once every five years, ADEQ shall request long-term projections of future prescribed fire activity from the F/SLM to support planning for visibility impairment and assessment of air quality concerns by ADEQ.
- D. F/SLM may submit topics to discuss at the yearly meeting by contacting ADEQ.

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1504

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R18-2-1504. Prescribed Burn Plan

Each F/SLM planning a prescribed burn shall complete and submit to ADEQ the “Burn Plan” form supplied by ADEQ no later than 14 days before the date on which the F/SLM requests permission to burn. ADEQ shall consider the information supplied on the Burn Plan Form as binding conditions under which the burn shall be conducted. A Burn Plan shall be maintained by ADEQ until notification from the F/SLM of the completion of the burn project. The Burn Plan provisions listed in A.A.C. R18-2-1504(1)-(5), may be revised no later than 2:00 p.m. the business day before the burn. Any other revision to the Burn Plan for a burn project shall be submitted in writing no later than 14 days before the date on which the F/SLM requests permission to burn. ADEQ shall not act on the Daily Burn Request until the Burn Plan is submitted by the F/SLM and acknowledged as complete by ADEQ. To facilitate the Daily Burn Authorization Process under R18-2-1505, the Burn Plan Form shall include:

1. An emergency telephone number that is answered 24 hours a day, seven days a week;
2. Burn prescription;
3. Smoke management prescription;
4. The name of the person submitting the Burn Plan on behalf of the F/SLM;
5. Any other information to support the Burn Plan needed by ADEQ to assist in the Daily Burn Authorization Process for smoke management purposes, prevention of negative impacts on smoke sensitive areas, or assessment of contribution to visibility impairment of Class I areas.
6. The total number of acres in the project to be burned, the quantity and type of fuel, type of burn, and the ignition technique to be used;
7. The land management objective or purpose for the burn such as restoration or maintenance of ecological function and indicators of fire resiliency;
8. A map depicting the potential impact of the smoke unless waived either orally or in writing by ADEQ. The potential impact shall be determined by mapping both the daytime and nighttime smoke path and down-drainage flow for 15 miles from the burn site, with smoke-sensitive areas delineated. The map shall use the appropriate scale to show the impacts of the smoke adequately;
9. Modeling of smoke impacts unless waived either orally or in writing by ADEQ, for burns greater than 250 acres per day, or greater than 50 acres per day if the burn is within 15 miles of a Class I Area, an area that is nonattainment for particulates, a carbon monoxide nonattainment area, or other smoke-sensitive area. In consultation with the F/SLM, ADEQ shall provide guidelines on modeling;

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1505

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R18-2-1505. Prescribed Burn Requests and Authorization [Effective August 7, 2023]

A. Each F/SLM planning a prescribed burn, shall complete and submit to ADEQ the “Daily Burn Request” form supplied by ADEQ for each day the F/SLM will complete ignitions. The Daily Burn Request form shall include:

1. The contact information of the F/SLM conducting the burn;
2. Acknowledgement that a qualified Prescribed Fire Burn Boss is conducting the burn;
3. Date of the ignition;
4. The area to be burned on the day for which the Burn Request is submitted, with reference to the Burn Plan, including size, legal location to the section, and latitude and longitude to the minute;
5. Projected smoke impacts; and
6. Any local conditions or circumstances known to the F/SLM that, could impact the Daily Burn Authorization Process or the burn.

B. After consultation and upon request by ADEQ, the F/SLM shall provide additional information related to the burn or any ongoing prescribed fires or wildfires such as: reports, digital photographs, meteorological, smoke dispersion, or air quality conditions to supplement the Daily Burn Request form and to aid in the Daily Burn Authorization Process. F/SLM may coordinate with ADEQ prior to submitting a Daily Burn Request to discuss potential air quality impacts or other concerns.

C. The F/SLM shall submit the Daily Burn Request form to ADEQ as expeditiously as practicable, but no later than 2:00 p.m. of the business day preceding the burn.

D. An F/SLM shall not ignite a prescribed burn without receiving the approval of ADEQ, as follows:

1. ADEQ shall only approve, approve with conditions, or disapprove a burn on the business day before the burn is to take place.
2. If ADEQ fails to address a Burn Request by 10:00 p.m. the business day before the burn is to take place the Burn Request is approved by default after the burner makes a good faith effort to contact ADEQ to confirm that the Burn Request was received. by exhausting available methods of communication, which may include contracting the ADEQ smoke management team directly, as well as the main number for the ADEQ air quality division, and leaving voicemails if there is no response.
3. ADEQ may communicate its decision by verbal, written, or electronic means. ADEQ shall provide a written or electronic reply if requested by the F/SLM.

E. If weather conditions cease to conform to those in the smoke management prescription of either the Burn Plan or any conditions on the approval of the applicable Burn Request, the F/SLM shall take appropriate action to reduce further smoke impacts, ensure safe and appropriate fire mitigation, and notify the public as per the requirements established by the National Wildfire Coordinating Group or F/SLM equivalent. The F/SLM may modify the smoke management prescription in the Burn Plan after consultation with ADEQ. A F/SLM conducting a burn shall contact ADEQ if there is any change in the burn conditions that ceases to conform with the Burn Plan and could cause negative impacts to smoke sensitive areas and

communicate what areas of the submitted smoke management prescription in the Burn Plan need to be modified.

F. The F/SLM shall ensure that there is industry-standard signage and notification to protect public safety on transportation corridors including roadways and airports during a prescribed fire.

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

This document is current through Volume 29, Issue 28, published July 14, 2023

R18-2-1506. Smoke Dispersion Evaluation [Effective August 7, 2023]

ADEQ shall approve, approve with conditions, or disapprove a Daily Burn Request submitted under R18-2-1505, by using the following factors for each smoke management unit:

1. Analysis of the emissions from burns in progress and residual emissions from previous burns on a day-to-day basis;
2. Analysis of the emissions from wildfires greater than 100 acres and consideration of their potential long-term growth;
3. Local burn conditions;
4. Burn prescription and smoke management prescription from the applicable Burn Plan, i.e. meteorological or smoke modeling;
5. Existing and predicted local air quality;
6. Local and synoptic meteorological conditions;
7. Type and location of areas to be burned;
8. Protection of the national visibility goal for Class I Areas under § 169A(a)(1) of the Clean Air Act and 40 CFR 51.309;
9. Assessment of duration and intensity of smoke emissions to minimize cumulative impacts;
10. Minimization of smoke impacts in Class I Areas, areas that are non-attainment for particulate matter, carbon monoxide, and ozone non-attainment areas, or other smoke sensitive areas including transportation corridors;
11. Protection of the National Ambient Air Quality Standards.

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1507

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R18-2-1507. Prescribed Burn Accomplishment; Wildfire Reporting [Effective August 7, 2023]

A. Each F/SLM conducting a prescribed burn shall complete and submit to ADEQ the “Burn Accomplishment” form supplied by ADEQ. For each burn approval, the F/SLM shall submit a Burn Accomplishment form to ADEQ within seven calendar days following the approved burn. The F/SLM shall include the following information on the Burn Accomplishment form:

1. Any known conditions or circumstances that could impact subsequent Daily Burn approvals;
2. The date, location, fuel type, fuel loading, and acreage accomplishments;
3. The ERTs and SMTs described in R18-2-1509 and may include any further ERTs and SMTs that become available, that the F/SLM used to reduce emissions or manage the smoke from the burn.

B. The F/SLM shall submit the Burn Accomplishment form as an electronic submittal.

C. ADEQ shall maintain a record of Daily Burn Requests, Burn Plan Form, Burn Approvals with Conditions, Denials, and Burn Accomplishments data for five years.

D. ADEQ may request information about a burn prior to the submission of the Burn Accomplishment Form.

E. The F/SLM in whose jurisdiction a wildfire occurs shall, upon request, make available to ADEQ no later than the day after the request is made and may include any necessary information for wildfire incidents, including the location, and estimate of predominant fuel type and quantity consumed, and an estimate of the area blackened that day. The F/SLM shall participate in air quality coordination calls upon request by ADEQ.

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1508

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R18-2-1508. Repealed

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Repealed by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1509

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R18-2-1509. Emission Reduction and Smoke Management Techniques [Effective August 7, 2023]

- A. Each F/SLM conducting a prescribed burn shall implement as many Emission Reduction Techniques and Smoke Management Techniques as are feasible subject to economic, technical, and safety feasibility criteria, and land management objectives.
- B. Emission Reduction Techniques include:
1. Reducing biomass to be burned by use of techniques such as yarding or consolidation of unmerchandisable material, multi-product timber sales, or public firewood access, when economically feasible;
 2. Reducing biomass to be burned by fuel exclusion practices such as preventing the fire from consuming dead snags or dead and downed woody material through lining, application of fire-retardant foam, or water;
 3. Using mass ignition techniques such as aerial ignition by helicopter to produce high intensity fires of high fuel density areas such as logging slash decks;
 4. Burning only fuels essential to meet resource management objectives;
 5. Minimizing consumption and smoldering by burning under conditions of high fuel moisture of duff and litter;
 6. Minimizing fuel consumption and smoldering by burning under conditions of high fuel moisture of large woody fuels;
 7. Minimizing soil content when slash piles are constructed by using brush blades on material-moving equipment and by constructing piles under dry soil conditions or by using hand piling methods;
 8. Burning fuels in piles or windrows;
 9. Using a backing fire in grass fuels;
 10. Burning fuels with an air curtain destructor, as defined in R18-2-101, operated according to manufacturer specifications and meeting applicable state or local opacity requirements;
 11. Extinguishing or mopping-up of smoldering fuels;
 12. Chunking of piles and other consolidations of burning material to enhance flaming and fuel consumption, and to minimize smoke production;
 13. Burning before litter fall, green-up of fuels, recently cut large fuels cure in areas with fuels reduction activity, and just before precipitation to reduce fuel smoldering and consumption;
 14. Reduce the area burned, by only burning a portion of the area within a designated perimeter or through mosaic burning.
- C. Smoke management techniques include:

1. Burning from March 15 through September 15, when meteorological conditions allow for good smoke dispersion;
2. Igniting burns under good-to-excellent ventilation conditions;
3. Suspending operations under poor smoke dispersion conditions;
4. Considering smoke impacts on local community activities and land users;
5. Burning piles when other burns are not feasible, such as when snow or rain is present;
6. Using mass ignition techniques such as aerial ignition by helicopter to produce high combustion efficiency with short duration impacts;
7. Using all opportunities that meet the burn prescription and all burn locations to spread smoke impacts over a broader time period and geographic area;
8. Burning during optimum mid-day dispersion hours, with all ignitions in a burn unit completed by 3:00 p.m. to prevent trapping smoke in inversion or diurnal windflow patterns;
9. Providing information on the adverse impacts of using green or wet wood as fuel when public firewood access is allowed;
10. Implementing maintenance burning in a periodic rotation to shorten prescribed fire duration and reduce excessive fuel accumulations that could result in excessive smoke production in a wildfire; and
11. Using fire-management strategies to shift smoke into more favorable smoke dispersion seasons.

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1510

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18-2-1510. Repealed

History

Adopted effective October 8, 1996 (Supp. 96-4). Former Section R18-2-1510 renumbered to R18-2-1511; new R18-2-1510 made by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Repealed by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1511

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R18-2-1511. Monitoring [Effective August 7, 2023]

- A.** ADEQ may require a F/SLM to monitor air quality before, during, or after a prescribed burn as reasonably if necessary to assess smoke impacts. Air quality monitoring may be conducted using both federal and non-federal reference methods, as well as other techniques including but not limited to digital photographs, video calling, webcams, visibility monitors, and air quality sensors.
- B.** Unless waived by ADEQ, a F/SLM shall conduct a test burn at the burn site to verify the needed wind speed, direction, and stability, for burns greater than 250 acres per day, or greater than 50 acres per day if the burn is within 15 miles of a Class I Area, an area that is non-attainment for particulate matter, carbon monoxide, or ozone, or other smoke sensitive area.
- C.** An F/SLM shall make monitoring information required under subsection (B) available to ADEQ on the business day following the burn ignition, if an instantaneous method was not used to convey the information.
- D.** The F/SLM shall keep on file for one year following the burn date any monitoring information required under this Section.

History

Adopted effective October 8, 1996 (Supp. 96-4). Former Section R18-2-1511 renumbered to R18-2-1512; new R18-2-1511 renumbered from R18-2-1510 and amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1512

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R18-2-1512. Burner Qualifications [Effective August 7, 2023]

A. All burn projects shall be conducted by personnel trained and certified in prescribed fire and smoke management techniques. Burn project personnel shall be trained in the fire and smoke management techniques required by the F/SLM in charge of the burn or the training requirements established by the National Wildfire Coordinating Group.

B. A Prescribed Fire Burn Boss of the F/SLM with jurisdiction over the prescribed burn shall have smoke management training obtained through one of the following:

- 1.** Successful completion of a National Wildfire Coordinating Group or F/SLM-equivalent course addressing smoke management; or
- 2.** Attendance at an ADEQ-approved smoke management workshop.

History

Adopted effective October 8, 1996 (Supp. 96-4). Former Section R18-2-1512 renumbered to R18-2-1513; new R18-2-1512 renumbered from R18-2-1511 and amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); new R18-2-1512 renumbered from R18-2-1511 and amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1513

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R18-2-1513. Public Notification and Awareness Program; Regional Coordination [Effective August 7, 2023]

- A.** The Director shall maintain a public education and awareness program webpage, in cooperation with the F/SLM and other interested parties, to inform the general public of the smoke management program described by this Article. The webpage shall inform the public about the health risks and impacts from smoke and prescribed fires; how smoke management techniques can protect air quality; and the role of prescribed fire in natural ecosystems.
- B.** ADEQ shall make prescribed burn approval, and wildfire activity information readily available to the public and to facilitate regional coordination efforts and public notification.
- C.** ADEQ shall ensure all publicly available information concerning smoke management, including electronic material, is updated annually, or as new information is published.

History

Adopted effective October 8, 1996 (Supp. 96-4). Former Section R18-2-1513 renumbered to R18-2-1514; new R18-2-1513 renumbered from R18-2-1512 and amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1514

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R18-2-1514. Surveillance and Enforcement [Effective August 7, 2023]

- A.** An F/SLM conducting a prescribed burn shall permit and provide safe escort to ADEQ for the purpose of entering and inspecting burn sites to verify the accuracy of the Daily Burn Request, Burn Plan, or Accomplishment data as well as matching burn approval with actual conditions, smoke dispersion, and air quality impacts. On-ground site inspection procedures and aerial surveillance shall be coordinated by ADEQ and the F/SLM for safety purposes.
- B.** ADEQ may use remote automated weather station data if necessary to verify current and previous meteorological conditions at or near the burn site.
- C.** ADEQ may audit burn accomplishment data, smoke dispersion measurements, or weather measurements from previously conducted burns, if necessary to verify conformity with, or deviation from, procedures and authorizations approved by ADEQ.
- D.** Deviation from procedures and authorizations approved by ADEQ constitute a violation of this Article. Violations may require containment or appropriate smoke mitigation action of any active burns and may also require, in the Director's discretion, a five-day moratorium on ignitions by the responsible F/SLM. Violations of this Article are also subject to a civil penalty of not more than \$10,000 per day per violation under A.R.S. § 49-463.

History

Adopted effective October 8, 1996 (Supp. 96-4). Former Section R18-2-1514 repealed; new R18-2-1514 renumbered from R18-2-1513 and amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

A.A.C. § R18-2-1515

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R18-2-1515. Forms and Electronic Copies; Information Transfers [Effective August 7, 2023]

- A. ADEQ shall make all forms for completion by a F/SLM available in electronic format as provided by the director.
- B. After consultation with an F/SLM, ADEQ may require the F/SLM to provide data or completed forms in an electronic format as provided by the director.

History

Adopted effective October 8, 1996 (Supp. 96-4). Amended by final rulemaking at 10 A.A.R. 388, effective March 16, 2004 (Supp. 04-1); Amended by final rulemaking at 26 A.A.R. 1427, effective August 7, 2023 (supp 23-1).

NOTE: PROPOSED SIP REVISION – These items will be attached after completion of the SIP public process.

Appendix B: Procedural Requirements and Authority – SIP

Exhibit IV: Delegation of Authority

Exhibit V: Authorizing Statutes

Exhibit VI: Public Notice and Affidavit of Publication

Exhibit VII: Public Hearing Agenda

Exhibit VIII: Public Hearing Sign-in Sheet

Exhibit IX: Public Hearing Officer Certification

Exhibit X: Public Hearing Transcript

Exhibit XI: Compilation of Comments and State Responses

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