Louisville Metro Air Pollution Control District
Preliminary Regulatory Impact Assessment

Regulation 5.15 Version 4
Chemical Accident Prevention Provisions

November 23, 2020

What is the District proposing?

The District is proposing amendments to Regulation 5.15, *Chemical Accident Prevention Provisions*, including adopting those provisions of the Federal Risk Management Plan (RMP) Rule that were recently revised by the U.S. Environmental Protection Agency (U.S. EPA) as well as certain more stringent local chemical accident prevention program provisions, including some modified versions of some provisions recently rescinded by U.S. EPA.

While U.S. EPA adopted amendments to the national program in 2017, after reconsideration it repealed many of the new requirements in late 2019. As the basis for its decision, U.S. EPA explained, "that such levels of government oversight, in conjunction with a rigorous safety management program, can prevent serious accidents. But this level of oversight is very expensive, and not feasible at facilities regulated by the RMP rule on a national basis."[1]. LMAPCD recognizes that EPA's assessment of feasibility at the national level does not necessarily reflect the practicalities of a locally implemented RMP program.

From May to August of 2020 LMAPCD solicited informal comment on adopting any of the full range of options from the current minimum federal standards, to the regulations as they stood prior to December 2019, or any of the range of options proposed by EPA in 2016 in a Notice of Proposed Rulemaking.[2] Based on the informal comments received and its own "understanding of community concerns around chemical facility safety LMAPCD is proposing to adopt limited versions of some of the 2017 amendments, while also keeping some of the 2019 revisions. Specifically, LMAPCD is proposing to:

1. Keep those provisions from the 2017 amendments that apply after an accident but limiting the applicability to processes in North American Industrial Classification System (NAICS) codes 322 (paper manufacturing), 324 (petroleum and coal products manufacturing), and 325 (chemical manufacturing). These provisions relate to requirements for third-party audits;
2. Keep those provisions from the 2017 amendments that apply after an incident that resulted in or reasonably could have resulted in a catastrophic release, but limiting the applicability to processes

[1] Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, 84 Fed. Reg at 69,880 (Dec. 19, 2019).
[2] Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, 81 Fed, Reg. 13,637 (Mar. 14, 2016).

in NAICS codes 322, 324, and 325. These provisions relate to incident investigations and root cause analyses; and

3. Keep provisions relating to safer technology alternatives analyses (STAA) but limit this requirement to new processes in NAICS codes 322, 324, and 325.

What is the purpose of this action?

U.S. EPA adopted the Accidental Release Prevention Requirements (also known as the Risk Management Plan (RMP) Rule) in 1996 pursuant to the Clean Air Act Amendments of 1990 (CAAA), which added paragraph 112(r), *Prevention of accidental releases*.[3] The District initially adopted Regulation 5.15 in October, 1998, and was delegated authority to implement the federal program by U.S. EPA in December, 1999. Several amendments were made to the federal rules between 1997 and 2004. These amendments made various minor changes, including updating the list of regulated chemicals and thresholds, and adding a requirement for an email address to be provided along with emergency contact information.[4] The last update to Regulation 5.15 was in June 2001. The first purpose of this proposed rulemaking is to update Regulation 5.15 to incorporate the various minor amendments made to the federal rules between 2001 and 2004.

In August 2013 President Obama issued an executive order requiring review and improvement of chemical facility safety and security rules and coordination following several high-profile catastrophic incidents at chemical facilities.[5] Pursuant to this order, U.S. EPA issued a Request for Information (RFI)[6] and proposed amendments to the RMP regulations providing various updates.[7] Final amendments, informally called the RMP Amendments Rule, were adopted in January 2017.[8]

The RMP Amendments Rule made a variety of updates to the RMP Program, broadly classified into three different categories: (1) accident prevention program requirements updates, (2) enhancements to the

[3] Accidental Release Prevention Requirements: Risk Management Programs Under Clean Air Act Section 112(r)(7), 61 Fed. Reg. 31668 (June 20, 1996) (codified at 40 C.F.R. pt. 68).
[4] List of Regulated Substances and Thresholds for Accidental Release Prevention, 62 Fed. Reg. 45,130 (Aug. 25, 1997); Accidental Release Prevention Requirements; Interpretations, 62 Fed. Reg. 45,134 (Aug. 25, 1997); List of Regulated Substances and Thresholds for Accidental Release Prevention; Amendments, 63 Fed. Reg. 640 (Jan. 6, 1998); Accidental Release Prevention Requirements; Risk Management Programs Under Clean Air Act Section 112(r)(7); Amendments, 64 Fed. Reg. 964 (Jan. 6, 1999); Amendments to the List of Regulated Substances and Thresholds for Accidental Release Prevention; Flammable Substances Used as Fuel or Held for Sale as Fuel at Retail Facilities, 65 Fed. Reg. 13,243 (Mar. 13, 2000); Accidental Release Prevention Requirements; Risk Management Programs Under the Clean Air Act Section 112(r)(7); Distribution of OffSite Consequence Analysis Information, 65 Fed. Reg. 48,108 (Aug. 4, 2000); Accidental Release Prevention Requirements: Risk Management Program Requirements Under Clean Air Act Section 112(r)(7); Amendments to the Submission Schedule and Data Requirements, 69 Fed. Reg. 18,819 (Apr. 9, 2004); (all codified at 40 C.F.R. pt. 68).
[5] Exec. Order 13,650, Improving Federal Chemical Facility Safety and Security, 78 Fed. Reg. 48,029 (Aug. 7, 2013).
[6] Request for Information, 79 Fed. Reg. 44,603 (July 31, 2014).
[7] Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Proposed Rule, 81 Fed. Reg. 13,637 (Mar. 14, 2016).
[8] Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, 82 Fed. Reg. 4,594 (Jan. 13, 2017) (to be codified at 40 C.F.R. pt. 68). For further information on the RMP Amendments Rule *see* https://www.epa.gov/rmp/final-amendments-risk-management-program-rmp-rule.

emergency preparedness requirements, and (3) increased public availability of chemical hazard information. They are briefly summarized in Table 1.

Table 1: Summary of RMP Amendments Rule Provisions

(Category) Rule Provision	Brief explanation	Frequency
(1) Third-party audit	Requires regulated facilities with Program 2 or 3 processes to contract with an independent third party to perform a compliance audit	After an RMP reportable accident.
(1) Incident Investigation Root cause analysis	Requires all facilities with Program 2 or 3 processes to conduct a root cause analysis as part of an incident investigation.	After a catastrophic release or a near-miss.
(1) Safer Technology Alternatives Analysis (STAA)	Adds an element to the process hazard analysis (PHA) that requires facilities with Program 3 regulated processes in NAICS codes 322 (paper manufacturing), 324 (petroleum and coal products manufacturing), and 325 (chemical manufacturing) to conduct a safer technology and alternatives analysis (STAA) as part of their PHA, and to evaluate the practicability of any inherently safer technology (IST) identified (no requirement to implement safer technologies)	Every 5 years
(2) Emergency response coordination activities	Owners or operators of all facilities with Program 2 or 3 processes are required to coordinate with the local emergency response agencies to determine how the source is addressed in the community emergency response plan and to ensure that local response organizations are aware of the regulated substances at the source, their quantities, the risks presented by covered processes, and the resources and capabilities at the facility to respond to an accidental release of a regulated substance. Additionally, all facilities with Program 2 or 3 processes are required to conduct notification exercises to ensure that their emergency contact information is accurate and complete.	At least once a year.
(2) Emergency Response Exercises	Requires that all facilities subject to the emergency response program requirements of subpart E of the rule (or ‘‘responding facilities’’) conduct field exercises and tabletop exercises. Frequency is established in consultation with local emergency response officials	Full field exercises at least every ten years; tabletop exercises at least once every three years.
(3) Information sharing	Various enhancements to the public availability of chemical hazard information. The rule requires all facilities to provide certain basic information to the public upon request. The owner or operator of the facility shall provide ongoing notification of availability of information elements on a company Web site, social media platforms, or through some other publicly accessible means. The rule also requires all facilities to hold a public meeting for the local community within 90 days of an RMP reportable accident.	Ongoing; community meeting within 90 days of reportable accident

U.S. EPA received a number of petitions for reconsideration, including from the Commonwealth of Kentucky, and subsequently convened a proceeding for reconsideration of the RMP Amendments Rule.[9] U.S. EPA then issued several delays to the implementation of the RMP Amendments Rule [10] and eventually proposed to rescind or modify various portions.[11] The final RMP Reconsideration Rule was signed and published at the end of 2019.[12] The full docket for both the RMP Amendments Rule and the RMP Reconsideration Rule are combined and available at Regulations.gov.[13] A summary of the provisions rescinded and modified by the RMP Reconsideration Rule is in Table 2.

Table 2: Summary of RMP Reconsideration Rule Rescissions and Modifications

(Category) Rule Provision	Brief explanation of modifications
(1) Third-party audit	Rescinded.
(1) Incident Investigation Root cause analysis	Rescinded.
(1) Safer Technology Alternatives Analysis (STAA)	Rescinded.
(2) Emergency response coordination activities	Retained.
(2) Emergency Response Exercises	Modified by removing minimum frequency for field exercises and establishing more flexible scope and documentation provisions for both field and table-top exercises.
(3) Information sharing	Retained requirement for all facilities to hold a public meeting for the local community within 90 days of an RMP reportable accident. All other provisions rescinded.

The second purpose of this proposed rulemaking is to adopt the provisions kept or modified by the Reconsideration Rule, which remain part of the minimum requirements to retain local delegation of the program from EPA. The final purpose is to adopt modified versions of certain provisions from the RMP Amendments Rule that were rescinded by the Reconsideration Rule. The provisions that were kept or modified by the Reconsideration Rule and modified versions of some provisions rescinded by the Reconsideration Rule but proposed for adoption in this rulemaking are summarized below in Table 3.

[9] Letter from E. Scott Pruitt, Administrator, U.S. EPA, to Justin Savage, Esq. (Mar. 13, 2017).
[10] Delay of Effective Date for 30 Final Regulations Published by the Environmental Protection Agency Between October 28, 2016 and January 17, 2017, 82 Fed. Reg. 8,499 (Jan. 26, 2017) (to be codified at 40 C.F.R. various pt.s); Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Further Delay of Effective Date, 82 Fed. Reg. 13,968 (Mar. 16, 2017) (to be codified at 40 C.F.R. pt. 68); Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act; Further Delay of Effective Date, 82 Fed. Reg. 27,133 (June 14, 2017) (to be codified at 40 C.F.R. pt. 68). On August 17, 2018 the U.S. Court of Appeals for the D.C. Circuit vacated this last delay rule. Air Alliance Houston, et al., v. EPA, 906 F.3d 1049 (D.C. Cir. 2018).
[11] Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, 83 Fed. Reg. 24,850 (May 30, 2018).
[12] Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, 84 Fed. Reg. 69,834 (Dec. 19, 2019) (to be codified at 40 C.F.R. pt. 68). For further information on the RMP Reconsideration Rule *see* https://www.epa.gov/rmp/final-risk-management-program-rmp-reconsideration-rule.
[13] https://www.regulations.gov/docket?D=EPA-HQ-OEM-2015-0725.

Table 3: Summary of RMP Amendments and Reconsideration Rule Provisions proposed for adoption, with modifications, in this Proposed Rulemaking

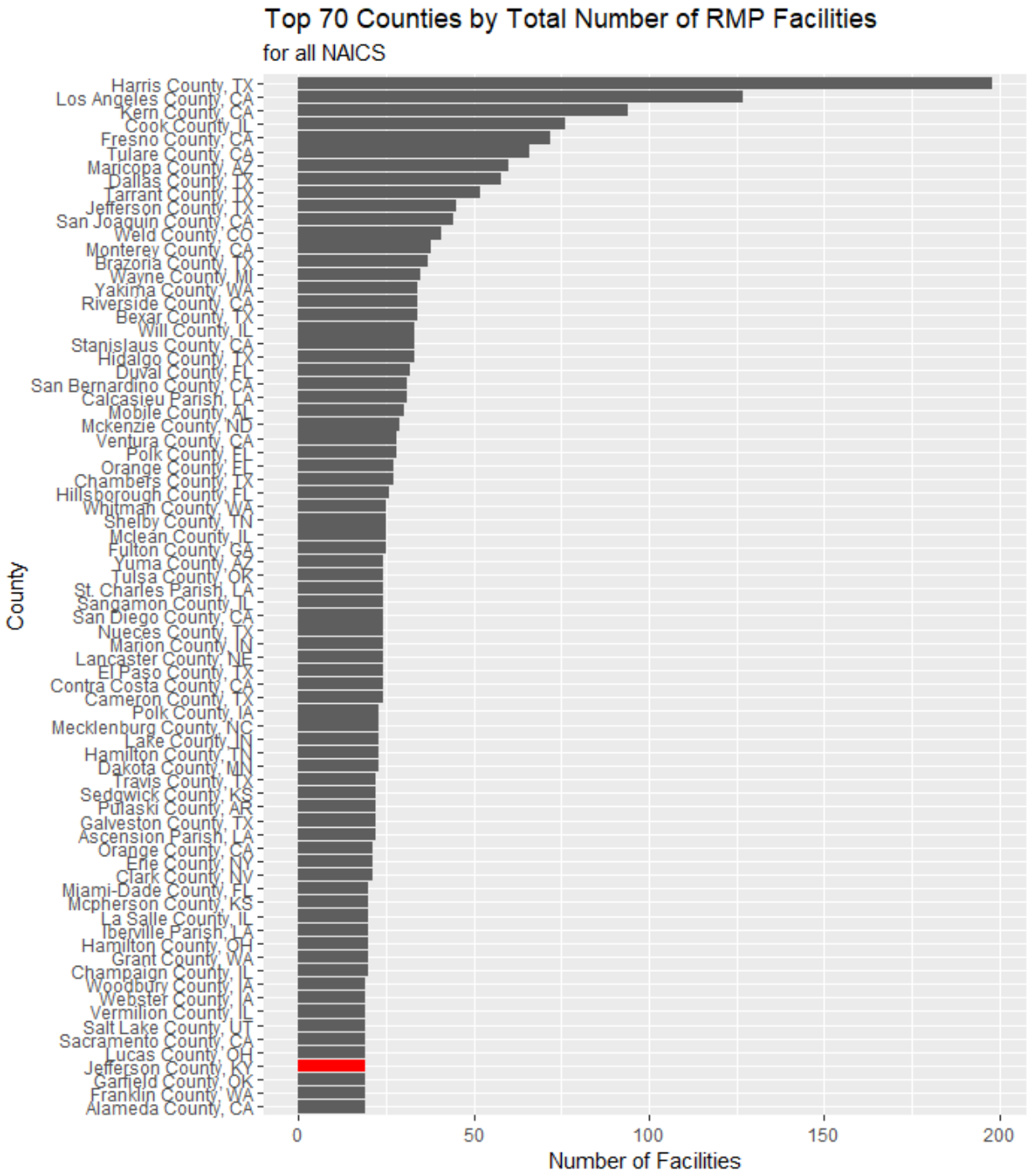
(Category) Rule Provision	Proposed Sections	Brief explanation of modifications from Reconsideration Rule Version
(1) Third-party audit	§§3.6.5 to 3.7 & §§4.8.6 to 4.9	Proposed for processes in NAICS codes 322, 324, and 325.
(1) Incident Investigation Root cause analysis	§§3.8.4.7 and 4.10.4.7	Proposed for processes in NAICS codes 322, 324, and 325.
(1) Safer Technology Alternatives Analysis (STAA)	§4.2.3.8	Proposed for new processes.
(2) Emergency response coordination activities	§5.2	No changes.
(2) Emergency Response Exercises	§5.7	No changes.
(3) Information sharing	§8.2.2	No Changes.

What are the estimated costs and savings of this action?

How many facilities are affected by this proposal?

Nationally there are approximately 12,500 facilities which have Risk Management Programs (RMPs). There are 19 such facilities within Louisville Metro. This ties Louisville for 70th in the nation for number of facilities per county. *See* Figure 1.

Figure 1: Number of RMP Facilities by County[14]

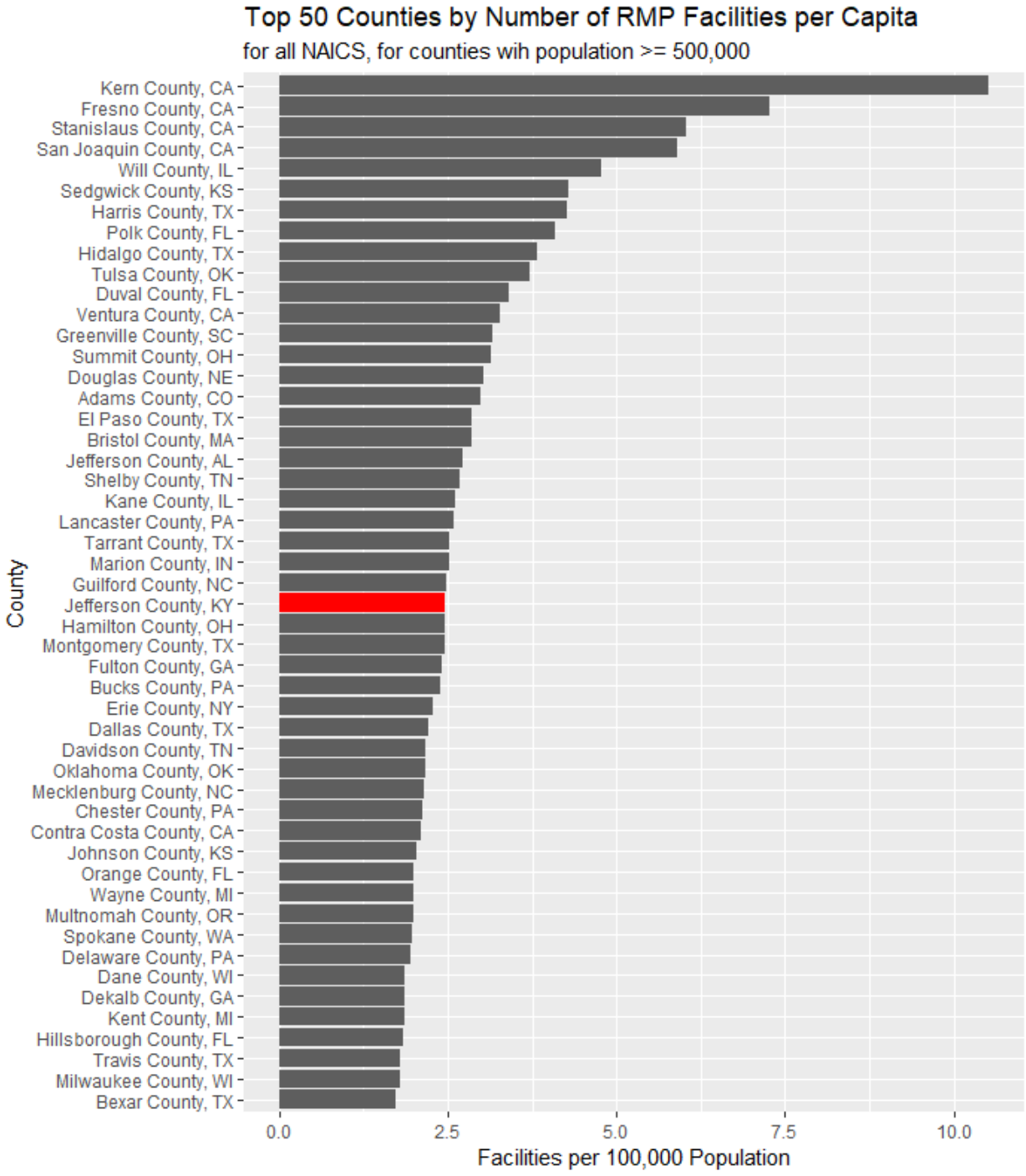


Adjusted for population and looking at counties containing medium to larger cities[15] Louisville ranks significantly higher, at 26th in the nation, with 2.6 RMP facilities per 100,000 people. *See* Figure 2.

[14] Information on facilities nationally from RTK.net.

[15] Because RMP facilities include those that possess certain quantities of anhydrous ammonia, often used as a fertilizer, several rural counties with exceedingly small populations and a single facility skew the list if looking at all counties on a per capita basis.

Figure 2: RMP Facilities per capita for Medium & Large Cities



What is the range of facilities affected by this proposal?

The RMP Regulations divide facilities into three different program levels. Program 1 contains processes that would not affect the public in the case of a worst-case release and with no accidents within the past five years. Program 2 contains processes not eligible for Program 1, but not subject to Program 3.

Program 3 contains processes not eligible for Program 1 and either subject to the U.S. Occupational Safety and Health Administration's (OHSA's) Process Safety Management (PSM) rules, or within one of ten specified North American Industrial Classification System (NAICS) codes.[16]

This proposed rulemaking further provides that the third-party audit, incident investigation root cause analysis, and STAA provisions would only be applicable to facilities in NAICS codes 322 (paper manufacturing), 324 (petroleum and coal products manufacturing), and 325 (chemical manufacturing). Table 4 presents a summary of facilities in Louisville Metro by program level and NAICS code.

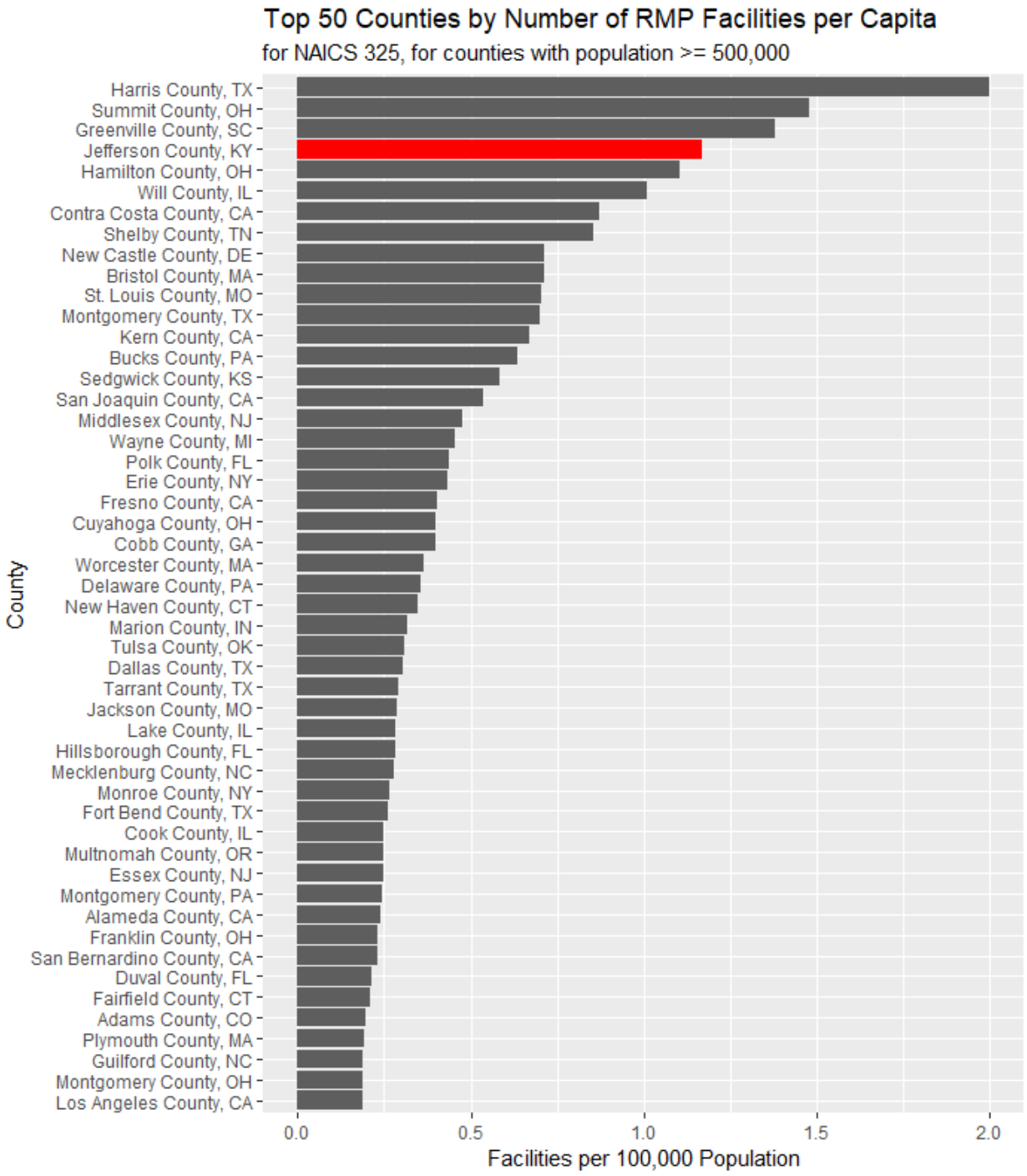
Table 4: Louisville Facilities by Program Level and NAICS Code

NAICS Code	Industry	Program Level	Number of Facilities
221	Utilities	3	1
311	Food Manufacturing	3	2
325	Chemical Manufacturing	3	9
326	Plastics and Rubber Products Manufacturing	3	1
424	Merchant Wholesalers, Nondurable Goods	2	2
424	Merchant Wholesalers, Nondurable Goods	3	1
493	Warehousing and Storage	2	1
493	Warehousing and Storage	3	2

Further, considering again the number of facilities per capita, when looking specifically at the number of facilities in NAICS code 325 (chemical manufacturing), Louisville is fourth in the nation in number of facilities per capita. *See* Figure 3.

[16] 40 C.F.R. §68.10(g)-(i).

Figure 3: RMP Facilities in NAICS 325 per capita for Medium and Large Cities



What are the estimated capital and operating costs and savings associated with compliance with the proposed action for affected facilities?

The RMP Amendments Rule laid out a summary of annualized costs in Table 2 of the final rule.[17] U.S. EPA further broke down these costs into unit estimates (i.e., cost per facility or process), and facilities were broken down by type based on NAICS code and size based on number of full-time employees (FTEs), in Chapters 4 and 5 of the Regulatory Impact Analysis (RIA).[18] The RMP Reconsideration Rule largely accepted these cost estimates.[19]

This proposed rulemaking would only adopt provisions more stringent than the federal minimum standards that are generally applicable based on some precondition being met at a facility. Therefore, any cost being incurred as a result of these provisions would be dependent on the facility. The cost estimates for the three provisions that are more stringent than the federal minimum requirements are summarized in Tables 5 & 6. Costs for the third-party audit & root cause incident investigation in Table 5 are per source. LMAPCD is relying on the cost estimates from the EPA RIA, which were largely accepted in the Reconsideration Rulemaking as well (see previous paragraph).

Table 5: Cost Summary per facility for third-party audit & root cause incident investigation[20]

Facility Type	Third Party Audit	Root Cause Incident Investigation
Small (0-19 FTEs)	$87,438	$11,135
Medium (20-99 FTEs)	$92,572	$11,135
Large (100+ FTEs)	$95,537	$11,135

Costs for the STAA provisions are separated into the estimated cost for an initial analysis for a new process and the estimated cost for a practicability assessment for a process for which inherently safer technologies and designs are identified. These cost estimates are likely at the very high end of the range as the estimates in the RMP Amendments Rule RIA were for all existing processes at existing facilities in NAICS 322, 324, and 325.

Table 6: Cost summary per process for STAA[21]

Facility Type	STAA Initial Analysis	STAA Practicability Assessment
Small (0-19 FTEs)/Medium (20-99 FTEs)	$9,795	$27,607
Large (100+ FTEs)	$56,006	$1,380,000
Paper Manufacturing	$9,795	$163,059

As stated above, this proposal would only adopt provisions more stringent than the federal minimum standards that are applicable based on some precondition being met. For the third-party audit and root cause incident investigation provisions this precondition is an accident, or catastrophic incident or near miss in a covered process at a Program 2 or 3 source in NAICS 322, 324, or 325. An STAA and initial

[17] 82 Fed. Reg. at 4,597.
[18] Docket ID EPA-HQ-OEM-2015-0725-0734.
[19] *See* Table 3, 84 Fed. Reg. at 69,838-39.
[20] *See* Exhibits 5-2 & 5-6 in the RIA, *supra*, note 18. Note that only costs for "complex" processes are presented here, as the proposal would only apply to facilities EPA considered complex in the RIA.
[21] *See* Exhibit 5-7 in the RIA, *supra*, note 18. The costs for small/medium and large facilities apply to those in NAICS 324 & 325.

analysis is only required for new processes at Program 3 sources in NAICS 322,324, or 325. For this reason, actual total costs will be dependent on the occurrence of these preconditions and therefore difficult, if not impossible, to estimate.

EPA utilized national RMP reported accidents on a 10-year annual average for third-party audit requirements and also assumed one catastrophic incident or near miss for each reported accident. In the May 2020 Advanced Notice of Proposed Rulemaking (ANPR) preceding this proposal the District estimated costs locally using this national data, as well as information on the number and types of local facilities to estimate local costs for the third-party audit and root cause incident investigation provisions. The costs for "complex" facilities (defined by EPA as those in NAICS 322, 324, and 325, and therefore subject to this proposal), are shown below, in Table 7.

Table 7: Third-party audit and root cause incident investigation estimated frequency and total annual costs

Provision	Facility Size	Cost per Facility	Number of Facilities	Annual Frequency[22]	Total Annual Cost
Third Party Audit	Small	$87,438.00	0	0.012242	$0
Third Party Audit	Medium	$92,572.00	8	0.021556	$15,963.60
Third Party Audit	Large	$95,537.00	1	0.103171	$9,856.60
Incident Investigation Root Cause Analysis	All[23]	$11,135.00	9	0.091	$9,153.28

Based on local history and experience, the District believes this is likely at the very high end of the rangeof the likelihood or frequency of accidents or catastrophic incidents and near misses moving forward in Louisville.

In contrast with the RMP Amendments Rule, the STAA provisions in this proposal would only apply to new facilities. Therefore, there are no national numbers available as part of U.S. EPA's rulemaking to estimate how frequently new processes in NAICS 322, 324, and 325 are constructed, making the total costs for STAA initial analysis and practicability assessments even more difficult to assess. Based on local experience, however, the District believes that this is likely to happen less than once per year, and likely even less frequently.

What are the estimated costs for the District to implement this proposal?

APCD administers the current RMP Rule as part of its Industrial Compliance program with less than one full time employee (FTE) and in collaboration with the Louisville Metro Emergency Management

[22] Based on number of accidents & estimated near misses nationally at facility type, size, and program level averaged over 10 years. See EPA RIA, *supra* note 18, for more info.
[23] The annual frequency between the Program Levels 2 & 3 was estimated by EPA separately, however there are no Program Level 2 facilities in NAICS 322, 324, or 325.

Agency, which provides one-half FTE for inspections through a Memorandum of Understanding (MOU) between the two agencies. The District does not believe that additional resources would be required to implement the proposed revisions, as generally the requirements are for additional steps by the facilities, and oversight would occur within the current review and inspection process.

What are the alternatives and feasibility of those alternatives?

What are the approaches for reducing emissions?

The primary purpose of the RMP rules is not reducing overall emissions but preventing and improving response to accidental releases. As stated in the RMP Amendments Rule:

> Both EPA's 40 CFR part 68 RMP regulation 13 and Occupational Safety and Health Administration's (OSHA) 29 CFR 1910.119 Process Safety Management (PSM) standard were authorized in the CAA Amendments of 1990. This was in response to a number of catastrophic chemical accidents occurring worldwide that had resulted in public and worker fatalities and injuries, environmental damage, and other community impacts….
>
> The 1990 CAA Amendments added accidental release provisions under section 112(r). The statute required EPA to develop a list of at least 100 regulated substances for accident prevention and related thresholds (CAA section 112(r)(3) through (5)), and authorized EPA to issue accident prevention regulations (CAA section 112(r)(7)(A)). The statute also required EPA to develop ''reasonable regulations'' requiring facilities with over a [threshold quantity] of a regulated substance to undertake accident prevention steps and submit a ''risk management plan'' to various local, state, and Federal planning entities (CAA section 112(r)(7)(B)).

The general measures required in the RMP rule fall into two broad categories: (1) accident prevention program requirements, and (2) emergency preparedness requirements. The proposed rulemaking also contains miscellaneous other requirements, such as the information availability and public meeting requirements of the RMP Amendments Rule and Reconsideration.

Provisions of the first kind, accident prevention program requirements, are found in 40 C.F.R. Part 68 Subparts B – Hazard Assessment; and C & D – Prevention Programs. These provisions generally require a comprehensive Process Hazard Analysis (PHA) for processes and chemicals covered by the RMP rules, as well as a documented prevention plan for Program 2 & 3 facilities. This is also where the requirements in the RMP Amendments Rule for an STAA for certain facilities are found, including incident investigations and root cause analysis after accidents or near misses, as well as third party audits after reportable accidents.

The second kind of RMP provisions, emergency preparedness requirements, are generally found at 40 C.F.R. Part 68 Subpart E – Emergency Response. These requirements largely contain requirements for coordination with local authorities, response programs for certain responding facilities, and response exercises.

Overall requirements for a Risk Management Plan are found at 40 C.F.R. Part 68 Subpart G. This plan is required to contain elements of the prevention plan, as well as things like an offsite consequence analysis.

The options for updating these provisions are generally contained above, in the section titled "What is the purpose of this Advance Notice?", and specifically in Tables 2 and 3.

What are the estimated levels of emissions reductions?

Because the RMP rules are not designed to decrease overall emissions levels, but rather to decrease chemical accidents and increase preparedness, the RMP Amendments Rule classified the benefits of the requirements differently. Table 8 summarizes the classes of benefits that rule specified.

Table 8: Categories of Benefits of RMP Amendments Rule Provisions

Requirement	Benefits
1. Third-party audits	Prevention of future RMP facility accidents Mitigation of future RMP facility accidents Prevention of future non-RMP accidents at RMP facilities Mitigation of future non-RMP accidents at RMP facilities
2. Root cause analysis	
3. Safer technology and alternatives analysis	
4. Emergency coordination	Mitigation of future RMP facility accidents Improved information Mitigation of future non-RMP accidents at RMP facilities
5. Emergency response exercises	
6. Public meetings	Improved information Mitigation of future RMP facility accidents

U.S. EPA was not able to quantitatively estimate the benefits of the RMP Rule because it would be impossible to estimate the number and consequences of accidents avoided specifically due to the rule provisions. They did provide a summary of quantified damages from RMP facilities nationally, however, which is duplicated below.

Table 9: Summary of Quantified Damages (from RMP Amendments Rule)

	Unit Value	10-year total	Average/year	Average/accident
On-site				
Fatalities	$8.6	$497.8	$49.8	$0.33
Injuries	0.05	105.2	10.5	0.69
Property Damage		2054.9	205.5	1.4
On-site Total		2657.9	265.8	1.8
Offsite				
Fatalities	8.6	8.6	0.86	0.01
Hospitalizations	0.4	6.8	0.68	0.004
Medical Treatment	0.001	14.8	1.5	0.01
Evacuations[24]	0.0	7.0	0.70	0.004
Sheltering in Place[25]	0.0	40.9	4.1	0.03
Property Damage		11.4	1.1	0.007
Offsite total		89.5	8.9	0.06
Total		2747.3	274.7	1.8

For the same reasons that it would be impossible to project the cost benefits of the avoided accidents of the RMP Amendments Rule, it would be impossible to calculate the projected number of accidents locally, and likewise the potential benefits of the various potential provisions. However, the Regulatory Impact Assessment for the RMP Rule Amendments provides information for the number of accidents per facility by NAICS code, including NAICS code 325, Chemical Manufacturing, where there were 0.36 accidents per facility over the ten-year period analyzed. Knowing this, it is possible to estimate potential impacts for the nine Chemical Manufacturing facilities in Louisville over the next ten years using the following equation:

$$9\ Chemical\ Facilities * \frac{\frac{0.36\ accidents}{facility}}{10\ years} = \frac{3.24\ accidents}{10\ years}$$

[24] The unit value for evacuations is less than two hundred dollars and for sheltering in place is less than one hundred dollars so when expressed in rounded millions the value represented in the table is zero.
[25] See previous note.

Table 10: Summary of Quantified Damages from Potential Accidents at Louisville Chemical Facilities

	Unit Value	Average/accident	10-year Louisville Estimate	Average/year
On-site				
Fatalities	$8.6	$0.33	$1.07	$0.11
Injuries	0.05	0.69	2.24	0.22
Property Damage		1.4	4.54	0.45
On-site Total		1.8	7.84	0.78
Offsite				
Fatalities	8.6	0.01	0.03	0.00
Hospitalizations	0.4	0.004	0.01	0.00
Medical Treatment	0.001	0.01	0.03	0.00
Evacuations[26]	0.0	0.004	0.01	0.00
Sheltering in Place[27]	0.0	0.03	0.10	0.01
Property Damage		0.007	0.02	0.00
Offsite total		0.06	0.21	0.02
Total		1.8	16.10	1.61

The RMP Amendments Rule also identified several categories of benefits for which only a qualitative summary was available due either to the lack of data, or the impossibility of predicting an occurrence. These benefits included the number of avoided catastrophes, avoided lost productivity, avoided emergency response costs, avoided transaction costs, avoided property value impacts, and avoided environmental impacts. As recently stated by EPA's Science Advisory Board (SAB), "in contexts involving low-probability risks of catastrophic losses, policy makers and members of the public may wish to consider policies that reduce the likelihood of severe losses even though doing so may mean accepting a lower expected payoff."[28]

What are the rationales for each alternative?

The rationales for both the provisions from the RMP Amendments Rule and the scaled-back Reconsideration rule are broadly laid out in the preambles to both. The District has chosen to propose a "middle road" between the two based on local experience and judgment, as well as feedback received on the May, 2020 ANPR.

Broadly, the RMP Amendments Rule aimed to "improve safety at facilities that use and distribute hazardous chemicals."[29] Further, "[w]hen considering the rule's likely benefits that are due to avoiding

[26] See *supra*, note 24.
[27] See *supra*, note 24.
[28] *Science Advisory Board (SAB) Consideration of the Scientific and Technical Basis of EPA's Proposed Rule titled "Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process."* at 14. *Available at* https://yosemite.epa.gov/sab/sabproduct.nsf/WebBoard/0A312659C8AC185D852585F80049803C/$File/EPA-SAB-20-012.pdf.
[29] 82 Fed. Reg. at 4594.

some portion of the monetized accident impacts, as well as the additional non-monetized benefits described previously, EPA believes the costs of the rule are reasonable in comparison to its benefits."[30]

In contrast, the RMP Reconsideration Rule stated that its purpose was "to make changes to the Risk Management Program regulations (40 CFR part 68) to reduce chemical facility accidents without disproportionately increasing compliance costs or otherwise imposing regulatory requirements that are not reasonable or practicable."[31] With regard to the potential costs and benefits, the Reconsideration Rule largely agreed with the cost estimates of the Amendments Rule, but stated that it believed the benefits of the Amendments Rule were likely overestimated, in large part because accidents over the past ten years were already in decline on average.[32] Furthermore, U.S. EPA stated that it believed that a more tailored approach, often by seeking similar measures through injunctive relief, was more appropriate.[33] When looking at comparable programs throughout the country as part of the Reconsideration Rule, U.S. EPA identified the New Jersey Toxic Catastrophe Prevention Act (TCPA) as most comparable to the provisions of the Amendments Rule. Similar programs in Contra Costa County and the City of Richmond, California (jointly administered by Contra Costa Health Services), which only covered eight facilities, each of which was audited at least once every three years, were deemed incomparable.

Even in the scaled-back Reconsideration Rule U.S. EPA stated, "The experience of these programs demonstrates that such levels of government oversight, in conjunction with a rigorous safety management program, can prevent serious accidents. But this level of oversight is very expensive, and not feasible at facilities regulated by the RMP rule on a national basis."[34]

In this rulemaking, the District is proposing what it believes to be a more "tailored" approach precisely through local regulatory action. As discussed above, Louisville has a disproportionate number of chemical facilities compared to similar jurisdictions throughout the country. Furthermore, Louisville is one of only nine locations where the RMP Program is locally administered.[35] U.S. EPA administers the program for the remainder of the 12,500 RMP facilities nationally, of which it aims to inspect three percent in FY2020-21.[36] The District, like Contra Costa Health Services, inspects one-third of all 19 RMP Facilities (nine of which would be covered by the STAA provisions in the RMP Amendments Rule) in Louisville Metro each year.

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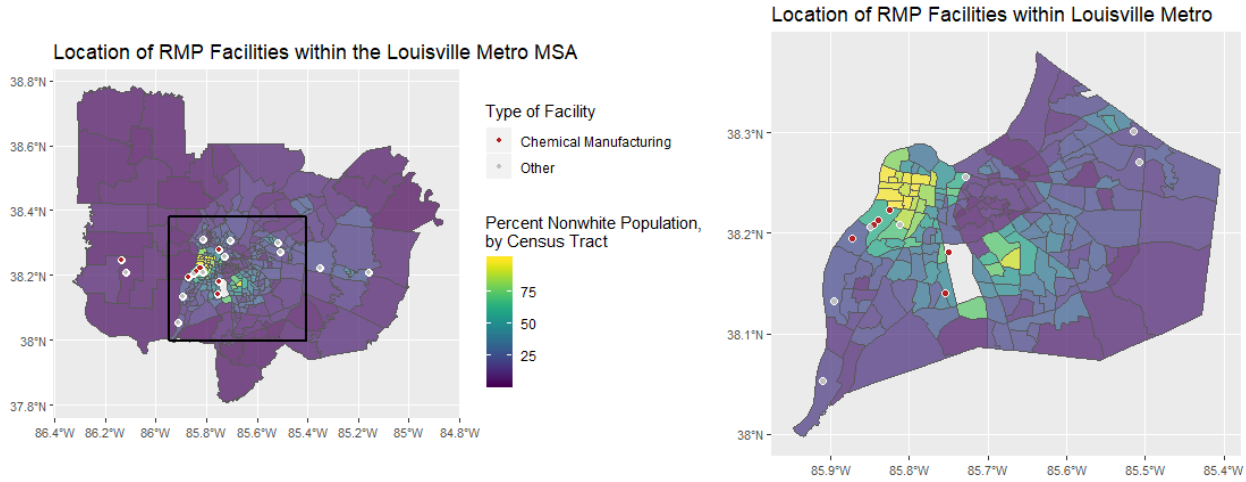
[30] 82 Fed. Reg. at 4598.
[31] 84 Fed. Reg. at 69,836.
[32] 84 Fed. Reg. at 69,852.
[33] *See*, *e.g.*, 84 Fed. Reg. at 69,843.
[34] 84 Fed. Reg at 69880.
[35] The others are the states of Delaware, Florida, Georgia, Mississippi, New Jersey, North Carolina, North Dakota, Ohio, and South Carolina. In addition, within North Carolina's state program, Forsyth County (NC), Buncombe County (NC), and Mecklenburg County (NC) locally administer the program. *See* https://emergencymanagement.zendesk.com/hc/en-us/articles/212087047-States-with-authority-to-implement-enforce-the-risk-management-program-rule. Allegheny County, PA recently voluntarily withdrew from local administration. Commonwealth of Pennsylvania; Allegheny County Health Department, Withdrawal of Section 112(l) Delegation Authority for the Chemical Accident Prevention Regulations, 84 Fed. Reg. 7825 (Apr. 4, 2019) (to be codified at 40 C.F.R. pt. 63).
[36] Office of Enforcement and Compliance Assurance National Program Guidance Fiscal Years 2020-2021 (June 7, 2019) at 16.

Furthermore, in the RMP Reconsideration Rule, U.S. EPA stated that it "agrees that RMP facilities are more likely to be located in EJ [Environmental Justice] communities…[h]owever, neither this information, nor any submitted by commenters, allows EPA to more accurately characterize the effects of the Reconsideration proposal upon those communities."[37] One specific community mentioned by commenters was Louisville.[38]

U.S. EPA defines Environmental Justice (EJ) as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." Further, U.S. EPA states that, "This goal will be achieved when everyone enjoys: the same level of protection from environmental health hazards…."[39] EJ communities are those that have been historically or are currently denied environmental justice, including minority and low-income communities. For example, looking at more local data, it is clear that most RMP facilities – including nine of eleven NAICS 325, Chemical Manufacturing, facilities – are clustered within the urban core of the Louisville area and in close proximity to predominantly minority neighborhoods, particularly in west Louisville. Figure 4 shows the locations of RMP facilities within the Louisville KY-IN Metropolitan Statistical Area (MSA), and within Louisville Metro specifically, along with the percent non-white population.

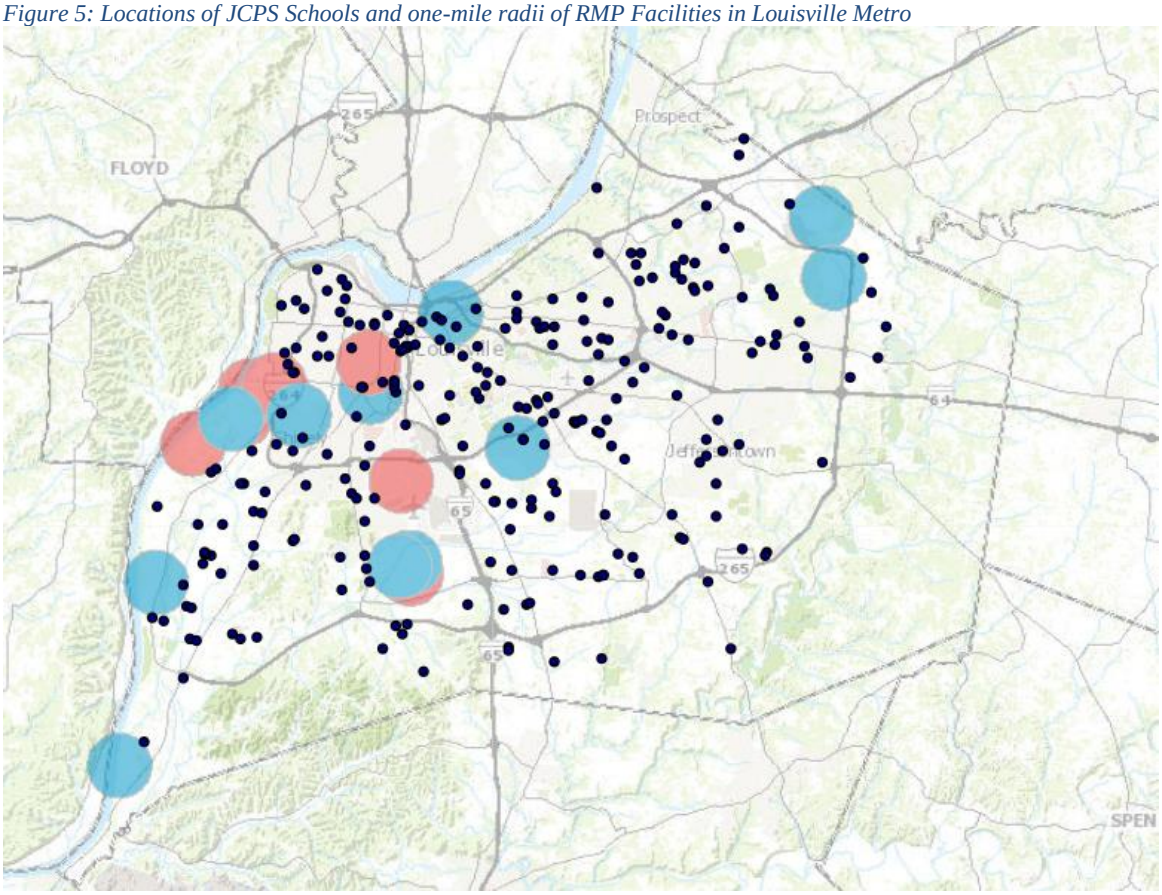
Figure 4: Locations of RMP Facilities within Louisville Metro, and Percent Non-white population.



In addition to EJ concerns, due to the concentration of these and other covered facilities in the urban area of Louisville, several sensitive populations reside close to these facilities. For instance, Figure 5 shows Jefferson County Public Schools (JCPS) within or near one-mile radii around RMP facilities (Chemical Manufacturing plants are in red, all others are in blue).

[37] 84 Fed. Reg. at 69,854.
[38] 84 Fed. Reg. at 69,853.
[39] From https://www.epa.gov/environmentaljustice

Figure 5: Locations of JCPS Schools and one-mile radii of RMP Facilities in Louisville Metro



What are the minimum standards under the Clean Air Act or other federal or state requirements?

§112(l) of the CAAA allows for delegation of programs for the implementation and enforcement of §112(r) requirements. Paragraph (5) requires disapproval of a state request for delegation if, among other things, "the authorities contained in the program are not adequate to assure compliance by all sources within the State with each applicable standard, regulation or requirement established by the Administrator under this section." In order to maintain delegation for implementation, therefore, the District must at a minimum adopt the provisions retained and modified in the RMP Reconsideration Rule, as it is a "regulation or requirement established by the Administrator under this section."

Report on Public Outreach Efforts

The ANPR was released publicly on May 27, 2020 and was announced publicly at the regular meeting of the Louisville Metro Air Pollution Control Board on May 20, 2020. The announcement was sent to all members of the Louisville Metro Air Pollution Control Board; all persons who have requested to be notified of proposed changes to any District regulations; EPA Region 4; and the Kentucky Division for Air Quality.

This ANPR opened a 90-day informal public comment period, from May 27, 2020 to August 25, 2020. During this period informal comments were accepted by the Board Secretary-Treasurer Rachael

Hamilton. In addition, two public meetings were held virtually, due to the COVID-19 pandemic. These meetings were held during the evenings of July 15 and August 20 and served as question-and-answer sessions with the public.

Drafts of proposed Regulations will be brought to the Strategy Committee of the Louisville Metro Air Pollution Control Board for review on December 9, 2020. Prior to that date and any formal review period, LMAPCD intends to host an additional public meeting to answer any questions from the public about the proposal being brought to the Committee. If approved by the Committee for release for public comment, they will be proposed for formal review on December 11, 2020, and sent to: to all members of the Louisville Metro Air Pollution Control Board; all persons who have requested to be notified of proposed changes to any District regulations; EPA Region 4; and the Kentucky Division for Air Quality.

The public will have an opportunity to comment at the meeting of the Strategy Committee of the Air Pollution Control Board, during the formal public comment period, and at a public hearing prior to consideration by the full Board.