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REGULATORY IMPACT STATEMENT and COST-BENEFIT ANALYSIS (RIS)

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Rule Set Information:
ARD assigned rule set number:
2023-5 EQ
Title of proposed rule set:
Hazardous Waste Management

Comparison of Rule(s) to Federal/State/Association Standard

1. Compare the proposed rules to parallel federal rules or standards set by a state or national licensing agency or accreditation association, if any exist.

On October 30, 1986, the state of Michigan received authorization from the United States Environmental Protection Agency (USEPA) to administer the state Hazardous Waste Management Program (HWMP) under Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 111) in lieu of the federal HWMP under the Resource Conservation and Recovery Act of 1976, as amended by the 1984 Hazardous and Solid Waste Amendments (HSWA), and the regulations promulgated pursuant thereto (collectively RCRA). The proposed rules contain revisions based on federal mandates under RCRA as well as Michigan Department of Environment, Great Lakes, and Energy (EGLE) and public recommendations.

Overall, the proposed rules are consistent with, equivalent to, and not less restrictive than the governing federal regulations. The proposed rules do not duplicate similar federal rules except to the extent required to maintain authorization.

The only exception where the proposed rules differ from the federal regulations would be the proposed rules regarding hazardous waste pharmaceuticals and electronic nicotine delivery systems (ENDS) retailers, which are not considered healthcare facilities, as they may be under the federal HWMP.

There are no standards set by a state or national licensing agency or accreditation association.

A. Are these rules required by state law or federal mandate?

The revisions based on the federal HWMP are required to maintain Michigan's delegation as an authorized state. Requirements for authorization are contained in Title 40 of the Code of Federal Regulations (40 CFR) Part 271.

B. If these rules exceed a federal standard, please identify the federal standard or citation, describe why it is necessary that the proposed rules exceed the federal standard or law, and specify the costs and benefits arising out of the deviation.

The only proposed rules that exceed the federal standard pertain to ENDS retailers. The Part 111 rules currently regulate hazardous waste pharmaceuticals as universal wastes. With the promulgation of the hazardous waste pharmaceutical regulations under 40 CFR Part 266, Subpart P, Michigan is required to revise their rules in a manner similar to the governing federal regulations as management of hazardous waste pharmaceuticals as universal wastes is now expressly prohibited (see 84 Federal Register, (FR), 5936, dated February 22, 2019). In evaluating the federal provisions, the state identified a concern with how the term "healthcare facility" was defined and may be construed to include ENDS retailers. The proposed rules make it clear that ENDS retailers are not healthcare facilities and provide for similar management requirements for non-creditable hazardous waste pharmaceuticals (those that are not able to be reused or returned to the manufacturer for credit, i.e., have more value) and hazardous waste ENDS.

2. Compare the proposed rules to standards in similarly situated states, based on geographic location, topography, natural resources, commonalities, or economic similarities.

The USEPA has authorized all of the Region 5 states, which include: Michigan, Wisconsin, Illinois, Indiana, Minnesota, and Ohio. All of these states must administer a general HWMP that is consistent with, equivalent to, and no less stringent than the federal HWMP. However, the status of authorization (measured by number of federal regulations authorized in a given state out of the number of federal regulations requiring authorization) varies across Region 5 from Illinois and Minnesota at 78% to Michigan at 98%, with the remaining states falling somewhere in between. Additionally, it is recognized that each state HWMP may have areas where it is more strident than the federal HWMP due to that state's unique factors, including, in part: geology, hydrology, habitats, population densities, industry, available hazardous waste management facilities, and other environmental factors. State authorization status (i.e., how many and which federal regulations have been authorized) and state specific considerations make a true comparison with other states not feasible (i.e., how do you compare regulation-specific requirements when a state has not even adopted said provisions or been authorized for them). That being said, Michigan, at 98% is the most authorized state in Region 5 and one of the top states nationally.

A. If the rules exceed standards in those states, please explain why and specify the costs and benefits arising out of the deviation.

The proposed rules do not appear to exceed the standards of the other Region 5 states. Given the complexity of RCRA, the number of states in Region 5, the considerations outlined in item 2 above, and a state's ability to be more stringent than the federal HWMP, it is not feasible to compare all aspects of the rules with those of other states. That being said, with respect to the three federal regulations included in the proposed rules, the Region 5 states vary as to whether a regulation has been adopted and authorized [Yes (Y)/No (N)-Y/N] as shown below:

	Airbags	Pharmaceuticals	Ignitable Method
Illinois:	Y/N	Y/N	N/N
Indiana:	Y/N	N/N	Y/N
Michigan:	N/N	N/N	N/N
Minnesota:	N/N	N/N	N/N
Ohio:	Y/N	Y/N	N/N
Wisconsin:	Y/N	Y/N	N/N

3. Identify any laws, rules, and other legal requirements that may duplicate, overlap, or conflict with the proposed rules.

The proposed revisions do not duplicate, overlap, or conflict with any other laws, rules, or legal requirements.

A. Explain how the rules have been coordinated, to the extent practicable, with other federal, state, and local laws applicable to the same activity or subject matter. This section should include a discussion of the efforts undertaken by the agency to avoid or minimize duplication.

The proposed rules have been coordinated with the federal HWMP, as applicable, to ensure compliance with the federal requirements. As part of EGLE's ongoing review process, staff reviews the federal HWMP and other state programs that may have an impact on the state's HWMP to ensure there are no conflicts.

Purpose and Objectives of the Rule(s)

4. Identify the behavior and frequency of behavior that the proposed rules are designed to alter.

The federal revisions to HWMP relate to the safe management of recalled airbags, pharmaceutical wastes, and the modernization of the test methodology for ignitable liquids. The current state HWMP does not incorporate these safe management practices. The proposed rules would address these same goals and behaviors of the federal HWMP at the state level.

Currently, recalled airbags are subject to retention orders related to a federal litigation. The orders require retention of these hazardous wastes beyond the regulatory time periods established under current rule. The federal revisions provide for longer retention periods and associated management standards without compromising human health or the environment. These revisions will allow those retaining the wastes to not be out of compliance with existing requirements.

Whereas currently pharmaceutical waste may be managed as universal waste, the proposed rules would require such waste to be managed in accordance with the new federal pharmaceutical waste standards.

The regulated community would be required to follow the updated test methodology for ignitable liquids.

In general, the proposed rules are aimed at reducing the rate of noncompliance of the regulated community with existing HWMP requirements and maintaining protection of human health, safety, welfare, and the environment.

A. Estimate the change in the frequency of the targeted behavior expected from the proposed rules.

The changes related to the safe management of recalled airbags will provide generators with less burdensome options for managing the waste than are currently available without diminishing the level of protection provided by the requirements. A change in the frequency of compliance cannot be estimated due to the fact that there is not a unique hazardous waste number associated with airbags specifically. However, it is expected that most generators will utilize the options afforded by the new streamlined standards.

The changes to the rules governing management of hazardous waste pharmaceuticals result in more restrictive requirements than exist under the current universal waste provisions for these wastes. However, the USEPA has advised both Michigan and Florida that neither state will be allowed to continue offering management of pharmaceutical hazardous waste as universal wastes as an option.

All regulated entities will be required to use the updated methodology when testing liquid waste for the hazardous characteristic of ignitability.

B. Describe the difference between current behavior/practice and desired behavior/practice.

Consistent terminology and more plain language, less burdensome management waste management options should result in regulated entities being able to understand the requirements better and minimize misinterpretations thereby enhancing overall compliance.

C. What is the desired outcome?

The revisions are designed to reduce the rate of noncompliance of the regulated community with state HWMP requirements while providing for proper management of wastes and maintain protection of human health, safety welfare, and the environment.

5. Identify the harm resulting from the behavior that the proposed rules are designed to alter and the likelihood that the harm will occur in the absence of the rule.

The proposed rules contain revisions addressing multiple subject areas. Increasing the rate of compliance with state requirements and providing for an appropriate level of hazardous waste management will help to ensure that hazardous waste is not mismanaged which, in turn, reduces the threats and risks to human health, safety, welfare, and the environment.

A. What is the rationale for changing the rules instead of leaving them as currently written?

As an authorized state, Michigan is required to continually revise its HWMP to ensure that it is consistent with, equivalent to, and at least as stringent as the federal HWMP. The majority of proposed revisions are necessary to maintain the federal authorization. Failure to maintain such authorization by incorporating federal revisions will jeopardize the state's authorization and may result in the withdrawal of authorization and loss of approximately $4 million in annual federal funding. Loss of authorization would also result in the dual regulation of the regulated community by both the USEPA and EGLE.

6. Describe how the proposed rules protect the health, safety, and welfare of Michigan citizens while promoting a regulatory environment in Michigan that is the least burdensome alternative for those required to comply.

The state HWMP, and its federal counterpart, are designed to ensure proper characterization, identification, and management of hazardous waste from cradle to grave to ensure protection of human health, safety, welfare, and the environment and to encourage waste minimization. When feasible (i.e., authorization, resources, and legal requirements allow), EGLE has made, and continues to explore opportunities to make, improvements to the state HWMP. These improvements are designed to make the requirements clear to the regulated community, thereby minimizing incorrect interpretations and the need for outside assistance, increasing a party's ability to comply, and reducing burdens on the regulated community and EGLE. These benefits should result in cost savings to entities while maintaining environmental and health, safety, and welfare protection.

7. Describe any rules in the affected rule set that are obsolete or unnecessary and can be rescinded.

There are no rules in this rule set that are obsolete or unnecessary and can be rescinded.

Fiscal Impact on the Agency

Fiscal impact is an increase or decrease in expenditures from the current level of expenditures, i.e. hiring additional staff, higher contract costs, programming costs, changes in reimbursements rates, etc. over and above what is currently expended for that function. It does not include more intangible costs for benefits, such as opportunity costs, the value of time saved or lost, etc., unless those issues result in a measurable impact on expenditures.

8. Please provide the fiscal impact on the agency (an estimate of the cost of rule imposition or potential savings for the agency promulgating the rule).

The majority of the proposed revisions are either enhancements to existing rules or provide further options for how certain materials may be managed under the rules.

Some of the recalled airbag management options may result in less waste being required to be managed as hazardous which will, in turn, reduce the state's revenue from hazardous waste handler fees.

Other changes like no longer being able to handle hazardous waste pharmaceuticals as universal waste may increase revenue from handler fees.

The revisions relating to laboratory methodology will not have any fiscal impact on EGLE. The proposed rules related to test methods for ignitable liquids will be implemented using existing resources.

9. Describe whether or not an agency appropriation has been made or a funding source provided for any expenditures associated with the proposed rules.

As with the implementation of the existing rules, EGLE receives funding from both the USEPA and the state. The USEPA provides EGLE with an annual grant of approximately $4 million. State funding is derived from a mix of legislative appropriations, hazardous waste user charges (HWUC), licensing fees, and corrective action cost recovery. The current HWUC system, established in statute, has a sunset provision. As such and as discussed in the Environmental Advisory Rules Committee's findings, EGLE continues to evaluate options for a new HWUC system that will generate the state funding necessary to continue to administer the state HWMP. Meanwhile, EGLE continues to explore long-term funding sources for the state HWMP.

10. Describe how the proposed rules are necessary and suitable to accomplish their purpose, in relationship to the burden(s) the rules place on individuals. Burdens may include fiscal or administrative burdens, or duplicative acts.

The proposed rules would not impact individuals at the agency.

A. Despite the identified burden(s), identify how the requirements in the rules are still needed and reasonable compared to the burdens.

The proposed rules would not place any additional burden on individuals at the agency.

Impact on Other State or Local Governmental Units

11. Estimate any increase or decrease in revenues to other state or local governmental units (i.e. cities, counties, school districts) as a result of the rule. Estimate the cost increases or reductions for other state or local governmental units (i.e. cities, counties, school districts) as a result of the rule. Include the cost of equipment, supplies, labor, and increased administrative costs in both the initial imposition of the rule and any ongoing monitoring.

The proposed rules will not have any impact on revenues to other cities, counties, or school districts.

12. Discuss any program, service, duty, or responsibility imposed upon any city, county, town, village, or school district by the rules.

The proposed rules do not impose any new program, service, duty, or responsibility upon any city, county, town, village, or school district.

A. Describe any actions that governmental units must take to be in compliance with the rules. This section should include items such as record keeping and reporting requirements or changing operational practices.

The proposed rules do not impose any new requirements on any governmental units.

13. Describe whether or not an appropriation to state or local governmental units has been made or a funding source provided for any additional expenditures associated with the proposed rules.

The proposed rules do not impose any new requirements on governmental units and would not result in any additional appropriations at the state or local government units.

Rural Impact

14. In general, what impact will the rules have on rural areas?

The proposed rules do not have a specific impact on rural areas that is different than non-rural areas.

A. Describe the types of public or private interests in rural areas that will be affected by the rules.

The imposition of the proposed rules will not result in additional costs to public or private interests simply due to their rural location.

Environmental Impact

15. Do the proposed rules have any impact on the environment? If yes, please explain.

Yes, the proposed rules have an impact on the environment in that the entire state HWMP is designed to ensure proper characterization, identification, and management of hazardous waste so as to protect of human health, safety, welfare, and the environment.

Small Business Impact Statement

16. Describe whether and how the agency considered exempting small businesses from the proposed rules.

EGLE did not consider exempting small businesses from the proposed rules. The ability to provide for any exemption from regulation is tied to the federal HWMP and the state's authorization. The state HWMP cannot be less stringent than the governing federal HWMP.

17. If small businesses are not exempt, describe (a) the manner in which the agency reduced the economic impact of the proposed rules on small businesses, including a detailed recitation of the efforts of the agency to comply with the mandate to reduce the disproportionate impact of the rules upon small businesses as described below (in accordance with MCL 24.240(1)(a-d)), or (b) the reasons such a reduction was not lawful or feasible.

The state HWMP follows the federal HWMP in that it establishes a stratified system of management requirements based on the waste type, monthly generation quantities, length of time waste remains on-site, and how a facility handles the waste from a recycling, storage, treatment, and/or disposal perspective. Those that generate small amounts of a given hazardous waste are generally subject to less restrictive standards. While there is not necessarily a direct relationship between the size of a business and the type and quantity of hazardous waste generated, it is not unreasonable to conclude that most small businesses generate smaller quantities of waste. So, while not specifically exempted by size alone, smaller businesses will likely be able to take advantage of less restrictive management requirements.

A. Identify and estimate the number of small businesses affected by the proposed rules and the probable effect on small businesses.

Aside from licensed treatment, storage, and disposal facilities (TSDFs), entities regulated under the state HWMP are not required to provide information regarding their number of employees or annual expenses or sales. With respect to TSDFs, EGLE requires information regarding key positions directly responsible for hazardous waste operations, not information regarding all employees. The type of data submitted to EGLE is related to the type and quantity of hazardous waste generated monthly and annually, the duration of accumulation or storage on-site, and subsequent waste management methods and companies involved in that management (transporter, TSDF, etc.). Some very small quantity generators may only have a handful of employees while some generators may have hundreds of employees throughout its sites (e.g., General Motors). All small businesses would be required to comply with applicable state HWMP rules, but depending on the volume of waste generated, they may have less restrictive management requirements.

B. Describe how the agency established differing compliance or reporting requirements or timetables for small businesses under the rules after projecting the required reporting, record-keeping, and other administrative costs.

EGLE did not establish differing compliance or reporting requirements or timetables specific to small businesses in and of themselves. Rather, all requirements are based on waste types, generation rates, and methods of management as noted above. The proposed rules do not impose new requirements on the smallest generators (based on monthly generation rates).

C. Describe how the agency consolidated or simplified the compliance and reporting requirements for small businesses and identify the skills necessary to comply with the reporting requirements.

EGLE did not consolidate or simplify the compliance and reporting requirements specific to small businesses. Rather all requirements are based on waste types, generation rates, and methods of management as noted above. The proposed rules do not impose new requirements on the smallest generators (based on monthly generation rates).

D. Describe how the agency established performance standards to replace design or operation standards required by the proposed rules.

Businesses that generate smaller amounts of hazardous waste are generally subject to less restrictive standards, some of which are more like performance standards than detailed design or operation standards.

18. Identify any disproportionate impact the proposed rules may have on small businesses because of their size or geographic location.

The proposed rules will not have a disproportionate impact on small businesses because of their size or geographic location. Impact is based on the waste type, generation rate, or method of management.

19. Identify the nature of any report and the estimated cost of its preparation by small businesses required to comply with the proposed rules.

The proposed rules do not impose any reporting requirements unique to small businesses.

20. Analyze the costs of compliance for all small businesses affected by the proposed rules, including costs of equipment, supplies, labor, and increased administrative costs.

The cost of compliance, including costs of equipment, supplies, labor, and administration with respect to implementation of the proposed rules is dependent upon such factors as the type of hazardous waste involved; the level of generation; the level of management; the regulatory option selected if more than one is available; and the level of in-house expertise available and necessary to ensure proper management. These variables, while not directly related to the size of the business, can all impact the costs of compliance for small businesses and large businesses alike.

21. Identify the nature and estimated cost of any legal, consulting, or accounting services that small businesses would incur in complying with the proposed rules.

The nature of legal, consulting, or accounting services with respect to implementation of the rules is highly variable for large and small businesses alike. These costs would be dependent upon the specific rule; the type of hazardous waste involved; the level of generation; the level of management; the regulatory option selected if more than one is available; and the level of in-house expertise available and necessary to ensure proper management.

22. Estimate the ability of small businesses to absorb the costs without suffering economic harm and without adversely affecting competition in the marketplace.

EGLE does not anticipate that small businesses will suffer economic harm or competition in the marketplace as a result of these revisions.

23. Estimate the cost, if any, to the agency of administering or enforcing a rule that exempts or sets lesser standards for compliance by small businesses.

If EGLE implemented a rule that exempts or sets lesser standards for compliance by small businesses, Michigan would be out of compliance with the federal HWMP and would lose our federal authorization and associated grant funding.

24. Identify the impact on the public interest of exempting or setting lesser standards of compliance for small businesses.

If small businesses were exempt or held to lesser standards simply by virtue of the size of their business instead of the volume of hazardous waste they generate, there would be negative impacts to the environment which could also threaten the health and welfare of individuals and communities and could also jeopardize Michigan's HWMP authorization.

25. Describe whether and how the agency has involved small businesses in the development of the proposed rules.

EGLE has involved members for the regulated community, special interest groups, government officials, USEPA program staff, and EGLE staff in the review of the proposed rules. On November 28, 2022, a notice of availability of the proposed rules was sent out to approximately 50 persons as part of EGLE, Materials Management Division's, HWMP short list distribution and review process. The short list is composed of select organizations (i.e., trade associations, councils, legal firms, environmental groups, and consulting firms) and industry representatives that represent a variety of interested parties potentially affected by the HWMP. These individuals were notified of the availability of the proposed rules and were invited to provide comments. The deadline for submission of comments was January 12, 2023. EGLE received comments from the USEPA, one EGLE staff, one business, and two associations/councils. EGLE reviewed those comments and followed up with the short list members who provided comments as necessary to seek clarification. The proposed rules were revised accordingly.

A. If small businesses were involved in the development of the rules, please identify the business(es).

The short list includes various councils, associations, and groups that may represent small businesses. Comments were provided though the councils associations, etc., which represent the interests of many businesses, including small businesses.

Cost-Benefit Analysis of Rules (independent of statutory impact)

26. Estimate the actual statewide compliance costs of the rule amendments on businesses or groups.

Federal HWMP revisions are proposed under either RCRA or HSWA authorities. Such revisions may be more or less stringent than the existing state HWMP. States are not required to revise their HWMPs to comply with less stringent provisions. RCRA authority-based revisions only take effect in Michigan when the state rules are revised, regardless of stringency. HSWA authority-based revisions, however, take effect immediately regardless of when the state rules are revised unless the revisions are less stringent and are, therefore, optional. These optional revisions only take effect in Michigan if, and when, the state rules are revised. The proposed rules contain federal revisions based on both authorities. Compliance cost/savings for these revisions are provided based on information included in each respective FR.

-Safe Management of Recalled Airbags (RCRA authority, optional, RCRA Revision Checklist 240). These revisions are associated with the Preservation Order (Order) established between Takata and the federal Department of Transportation with respect to recalled airbags manufactured by the company. The Order remains in place until the completion of the recall process. In 83 FR 61552, dated November 30, 2018, the USEPA notes pre-rule, the airbags are fully regulated as hazardous wastes and that is the baseline upon which cost savings are evaluated. The USEPA estimates that the rule will result in an estimated total cost savings of $7.6 million to $56.9 million for the duration of the Takata recalls. Annual cost savings are estimated at $1.7 million to $13 million. Apportioned equally among all 50 states, that equates to an estimated annual cost savings of $34,000 to $260,000 on average. That being said, given the significant presence of the automotive industry in Michigan, it is expected that Michigan businesses will experience even larger cost savings.

-Management Standards for Hazardous Waste Pharmaceuticals and Amendment to the P075 Listing for Nicotine (both RCRA and HSWA authorities, required except for exemptions from P075 listing, RCRA Revision Checklist 241). The majority of the revisions are RCRA-based. The prohibition on sewering aspect of these revisions is HWSA -based and already in effect in Michigan. In 84 FR 5816, dated February 22, 2019, the USEPA estimates that the annual cost savings to be realized from being fully regulated as a hazardous waste to being regulated as a hazardous waste under the "Pharma" rules is $13 million to $15 million, or roughly $260,000 to $300,000 on average per state.

-Modernizing Ignitable Liquids Determinations (RCRA authority, optional, RCRA Revision Checklist 243). In 85 FR 40594, dated July 7, 2020, the USEPA characterizes this revision as deregulatory in nature and it is not considered a significant regulatory action. The federal regulatory impact analysis for the regulation estimated annualized cost savings of $78,000 to $477,000, depending on the type of laboratory. Again, apportioning the cost savings evenly among all states, that results in an estimated cost savings of $1,560 to $9,540 on average per state.

The majority of the state-initiated changes are for clarification purposes and do not change HWMP implementation or compliance costs or are establishing less restrictive standards and will reduce compliance costs while maintaining the protection of human health, safety, welfare, and the environment.

All costs/benefit analyses of the proposed revisions are complicated by the fact that the requirements with which a regulated party must comply are highly dependent upon the waste type, level of generation, if the waste is accumulated on-site, how the waste is subsequently managed (recycled on-site or off-site; stored, treated, or disposed of on site or off-site, and transportation distances. Decisions regarding these items are often dependent on the level of in-house expertise available and necessary to ensure proper statutory and regulatory interpretations and implementation of applicable requirements.

A. Identify the businesses or groups who will be directly affected by, bear the cost of, or directly benefit from the proposed rules.

The proposed revisions pertain to all business sectors.

-The recalled airbags rules will impact only those entities required to maintain these hazardous wastes for long periods of time under the litigation order.

-The pharmaceutical rules will impact entities that generate, transport, treat, store, or dispose of pharmaceutical hazardous wastes such as healthcare facilities, those involving retail pharmaceutical operations, and reverse distributors.

-The updated liquid ignitability methodology will only directly impact those laboratories that conduct analyses to determine if a waste exhibits the hazardous characteristic of ignitability. Characteristically ignitable hazardous waste is one of the most common types of hazardous waste generated across all business sectors.

B. What additional costs will be imposed on businesses and other groups as a result of these proposed rules (i.e. new equipment, supplies, labor, accounting, or recordkeeping)? Please identify the types and number of businesses and groups. Be sure to quantify how each entity will be affected.

The proposed revisions pertain to hazardous waste generators, transporters, and TSDFs. Since the majority of the revisions provide flexibility or less restrictive management standards, additional costs are not likely and in fact savings are anticipated.

27. Estimate the actual statewide compliance costs of the proposed rules on individuals (regulated individuals or the public). Include the costs of education, training, application fees, examination fees, license fees, new equipment, supplies, labor, accounting, or recordkeeping.

The proposed rules are not generally applicable to individuals (i.e., the general public). Exemptions are already in place for household hazardous wastes. As such, the imposition of the proposed rules will not require individuals to incur compliance costs, including education, training, fees, new equipment, supplies, labor, accounting, or recordkeeping.

A. How many and what category of individuals will be affected by the rules?

The proposed rules are generally not applicable to individuals.

B. What qualitative and quantitative impact do the proposed changes in rules have on these individuals?

The proposed rules do not directly impact individuals.

28. Quantify any cost reductions to businesses, individuals, groups of individuals, or governmental units as a result of the proposed rules.

The proposed rules contain many revisions that will likely result in cost reductions to businesses. Such cost reductions result from a combination of less regulation of certain waste streams, increased flexibility in management options, elimination of dual regulation to the extent possible, and clear regulations that do not lend themselves to misinterpretation. The savings realized are dependent on the type of waste and quantity of waste generated and subsequent management decisions made by the regulated parties.

29. Estimate the primary and direct benefits and any secondary or indirect benefits of the proposed rules. Please provide both quantitative and qualitative information, as well as your assumptions.

Many persons will benefit directly from the proposed rules, including generators, transporters, TSDFs, recyclers, environmental consultants, legal firms, and persons who manufacture and market various goods associated with compliance with the state HWMP requirements. The proposed rules contain direct benefits, including:
- The recalled airbag rules provide an avenue to compliance for entities required to retain these hazardous wastes longer than allowed under the existing rules without obtaining a hazardous waste management facility operating license. These rules support the retention of recalled airbags that have been identified as evidence as part of ongoing federal litigation.
- The pharmaceutical rules provide a streamlined set of management standards for such hazardous waste when compared to the federal HWMP. The promulgation of these rules will ensure consistent management requirements nationwide. Cost savings will also be realized.
- The updated liquid ignitability test method will result in improved analyses, less use of mercury thermometers, and cost savings.

Some of the more significant secondary benefits are:
- The proposed rules will allow Michigan to maintain its authorization for the state HWMP. This authorization limits the amount of dual federal and state regulation of the regulated community to the extent possible.
- The clarification and consistency provided for in the proposed rules serves to improve the overall quality of the rules and provide the regulated community and those that apply the regulations with a more readable set of rules. In addition, these revisions ensure consistency with other state programs, where applicable, and alleviate confusion and inconsistent regulatory interpretations. This should increase compliance rates.
- The proposed rules will remove some regulatory barriers and reduced resource demands, both monetary and nonmonetary, on the regulated community and EGLE. This is particularly true of the addition of exemptions and alternate options from management as a fully regulated hazardous waste.

30. Explain how the proposed rules will impact business growth and job creation (or elimination) in Michigan.

As a whole, the proposed rules have the potential to impact the approximately 21,900 very small quantity hazardous waste generators, 1,789 small quantity hazardous waste generators, 611 large quantity hazardous waste generators, 324 hazardous waste transporters, and 255 TSDFs already located or doing business in Michigan. These figures are based on an April 3, 2023, query from EGLE's Waste Data System (WDS), and the figures may fluctuate.

Environmental consultants, attorneys, and other professionals may be impacted by the proposed revisions, as the need to secure these services is dependent upon the nature of the regulated activity and the level of expertise within a given business.

A number of businesses may manufacture various goods used in complying with the state HWMP requirements who choose to market their products and services to the regulated community in Michigan. These are largely market-driven and are highly dependent upon the nature of the waste, the regulated activity, the regulated communities existing equipment, the level of expertise within a given business, and advances in waste minimization and management technologies.

31. Identify any individuals or businesses who will be disproportionately affected by the rules as a result of their industrial sector, segment of the public, business size, or geographic location.

The optional federal and the state-initiated proposed rules will not have a disproportionate effect on any individuals or businesses as a result of their industrial sector, segment of the public, business size, or geographic location. It is recognized that not all sectors will be impacted by the federally required revisions to the requirements governing hazardous waste pharmaceuticals as not all businesses generate or manage said wastes.

Not all businesses generate pharmaceutical waste, so the proposed changes to these rules would uniquely impact only those businesses which generate or manage this type of waste. The level of impact is not sector-specific but based on the type and quantity of hazardous waste pharmaceuticals generated and accumulated, and how it is subsequently managed.

32. Identify the sources the agency relied upon in compiling the regulatory impact statement, including the methodology utilized in determining the existence and extent of the impact of the proposed rules and a cost-benefit analysis of the proposed rules.

With respect to revisions based on the federal regulations, EGLE relied primarily on information in the FRs in compiling this statement. EGLE used information provided by stakeholders, the USEPA, and EGLE's WDS to compile information for revisions recommended to by EGLE and the public.

A. How were estimates made, and what were your assumptions? Include internal and external sources, published reports, information provided by associations or organizations, etc., that demonstrate a need for the proposed rules.

Estimates were made using information provided as part of discussions with stakeholders, the USEPA, and EGLE staff data from EGLE's WDS database, the rule-specific FRs, and the USEPA's authorization website. Where possible information and data were extrapolated as an average from federal estimates based on Michigan being 1 of 50 states nationwide, and with staff knowledge of relevant state business sectors.

Alternative to Regulation

33. Identify any reasonable alternatives to the proposed rules that would achieve the same or similar goals.

In conjunction with the development of each rules package, EGLE evaluates the scope of the proposed revisions and alternatives to rule revision. Alternatives for the federally required revisions and those federal revisions that were optional, but strongly encouraged to be incorporated, were not considered due to the implications to the state's authorization.

Alternatives considered with respect to the state-initiated revisions included not pursuing the proposed revisions and relying solely on the statute, where applicable, or on guidance. Since many of the revisions are aimed at improving the overall clarity of the rules and reducing burdens to the regulated community and were requested by the regulated community, not pursuing the revisions would result in the lack of clarity that often leads to confusion, inconsistent interpretations, non-compliance, unnecessary burdens, and low-risk, low-hazardous wastes continuing to be fully regulated as hazardous waste.

A. Please include any statutory amendments that may be necessary to achieve such alternatives.

No statutory amendments are necessary.

34. Discuss the feasibility of establishing a regulatory program similar to that proposed in the rules that would operate through private market-based mechanisms. Please include a discussion of private market-based systems utilized by other states.

The state HWMP is a delegated federal program requiring specific standards at the state government level. The same is true of other states that have delegated HWMPs, most of which do. However, it warrants pointing out that within the parameters of Michigan's HWMP, hazardous waste management currently functions in a market driven manner in that the level of regulation is dependent on the type and amount of hazardous waste generated and the type of hazardous waste management conducted. The proposed rules are consistent with the state's hazardous waste planning policies and the market-based approach thereof. Flexibility has been incorporated into the rules were possible without sacrificing the level of health, safety, welfare, and environmental protections provided.

35. Discuss all significant alternatives the agency considered during rule development and why they were not incorporated into the rules. This section should include ideas considered both during internal discussions and discussions with stakeholders, affected parties, or advisory groups.

Based on the requirements for maintaining federal authorization, EGLE did not consider any significant alternatives to these rule revisions during internal discussions or as part of discussions with short list members or the USEPA.

Additional Information

36. As required by MCL 24.245b(1)(c), please describe any instructions regarding the method of complying with the rules, if applicable.

This provision is not applicable to the proposed revisions.