Hazardous Waste Management Program Implementation Costs Report

November 2023

Hazardous Waste Subcommittee

Association of State and Territorial Solid Waste Management Officials (ASTSWMO)

Acknowledgements

This report was prepared by the Hazardous Waste Funding Workgroup within the ASTSWMO Hazardous Waste Subcommittee:

Paula Bansch (IN), Workgroup Chair
Melissa Ferree (DE), Hazardous Waste Subcommittee Chair
Bill Shafford (TX)
Robin Thomas (AZ)

The Workgroup extends its appreciation to members of the Hazardous Waste Subcommittee and Task Forces for their input and support.

A special thank you to all of the States and Territories who provided cost data for their respective RCRA Subtitle C programs.

The program recommendations have been approved by the ASTSWMO Board of Directors.

Disclaimer

The Hazardous Waste Management Program Implementation Costs Report was prepared by the Hazardous Waste Funding Workgroup within the Hazardous Waste Subcommittee of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO).

This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement X1-84053001 to ASTSWMO. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA or ASTSWMO endorse trade names or recommend the use of commercial products mentioned in this document.

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Executive Summary

At the request of the ASTSWMO Board of Directors, the Hazardous Waste Funding Workgroup (Workgroup) within the Hazardous Waste Subcommittee has prepared a new Hazardous Waste Management Program Implementation Costs report. State and Tribal Assistance Grant (STAG) funding is provided by EPA to the 48 authorized States, Washington, DC, and Guam. These 50 entities are referred to in the remainder of the report as the authorized hazardous waste programs. This report reflects cost data received in the form of survey responses from all 50 authorized hazardous waste programs.

Through the information obtained for this report, the total cost of operating the RCRA Subtitle C program in the 50 authorized hazardous waste programs is $186,807,140. EPA implements the hazardous waste program in the two States that are not authorized, Alaska and Iowa, and thus STAG funding appropriated for those two State programs is retained at the EPA Regional office. The EPA Regions were not surveyed to determine the cost of implementing the hazardous waste program in these two States. Extrapolating the survey data to all 50 States, Washington, DC, and Guam to account for the cost of these two State programs estimates the cost of operating the RCRA Subtitle C program nationally in Fiscal Year (FY) 2022 was about $194 million.

As appropriated in FY2022, the STAG allocation of $98,200,000, along with the States required 25% match of $32,733,333, combine for a total of $130,933,333. As such, STAG funding fell $63 million short of the total cost to run the program in FY2022. This $63 million difference was covered by the States in what is commonly referred to as States' "over-match" of STAG. This overmatch results in States actually matching 48% of the grant funding.

STAG funding allocated to States has remained stagnant since at least 1995. The STAG allocation in FY1995 was $97,049,700, while in FY2022 it was $98,200,000. Had the FY1995 allocation been adjusted for inflation, in FY2022, the STAG funding allocation would have been $186,385,648[1]. Had STAG funding simply been adjusted for inflation since 1995, STAG funding would have fallen only about $8 million short in FY2022. This data is shown in Figure 1:

[1] Inflation data calculated using tool at https://www.inflationtool.com/us-dollar/1995-to-present-value?amount=97049700&year2=2023&frequency=yearly

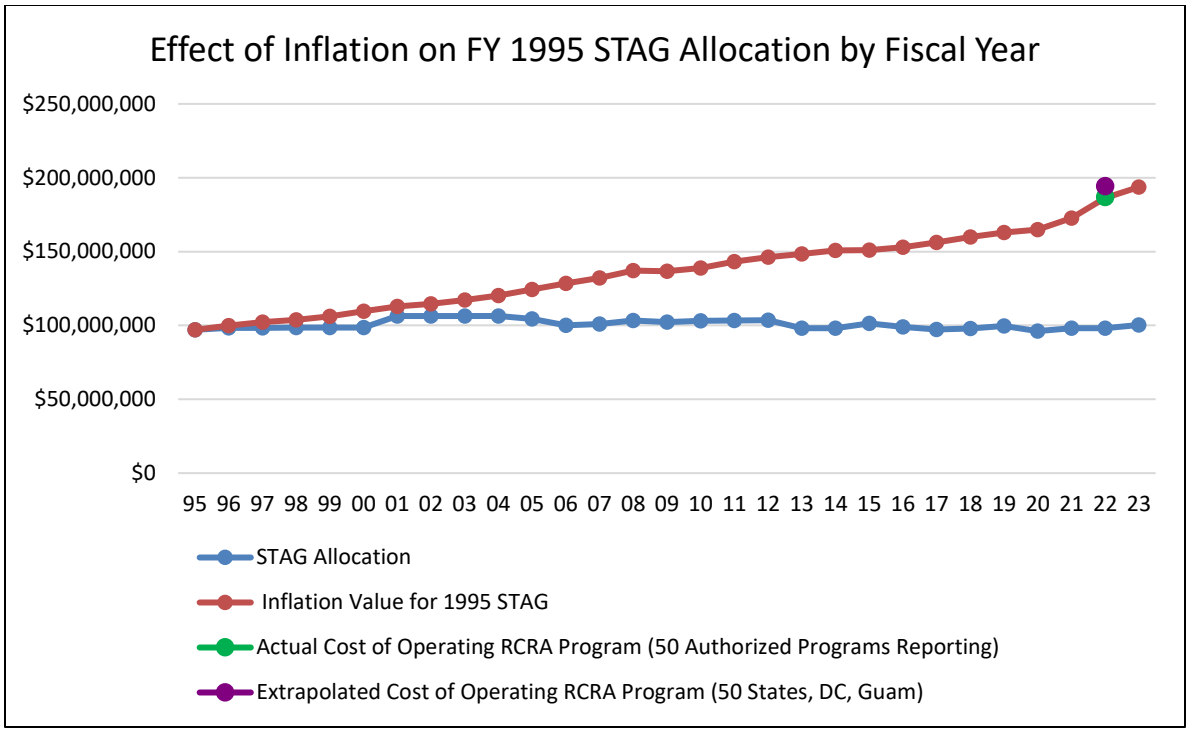

Figure 1: STAG allocation from FY1995 through FY2022 compared to effect on inflation on FY1995 STAG allocation

Information from the survey reflects significant underfunding, while at the same time shows States' costs are increasing. Data obtained from States through ASTSWMO's Hazardous Waste Subcommittee in FY2018 estimated the cost of operating the RCRA Subtitle C program nationally was about $156 million as compared to $194 million in FY2022.

Survey responses show States have experienced increases in fringe costs by an average of 24% since FY2018. Additionally, the U.S. Bureau of Labor Statistics estimates State and local government employee total compensation, including salaries and benefits, has increased 126% since 1995.[2] During this same period, inflation increased 92%. An increase in total compensation costs and inflation while STAG funding remains the same in effect results in direct funding cuts yielding fewer employees, all while hazardous waste programs are facing an increase in regulatory requirements necessitating an increase in oversight and implementation resources.

Summary of Key Cost Data:

- Total cost of operating the RCRA Subtitle C program in the 50 authorized hazardous waste programs in FY2022: $186,807,140.
- As appropriated in FY2022, the STAG allocation of $98,200,000, along with the States' required 25% match of $32,733,333, combine for a total of $130,933,333 in funding.

[2] Comparing Current Dollar Employment Cost Index from December 1995 to December 2002 (https://www.bls.gov/web/eci/eci-seasonal-dataset.xlsx)

- Had the FY1995 STAG allocation of $97,049,700 been adjusted for inflation, in FY2022, the STAG funding allocation would have been $186,385,648.
- Extrapolating the survey data to all 50 States, Washington, DC, and Guam, estimates the cost of operating the RCRA Subtitle C program nationally in FY2022 was about $194 million.
- FY2022 STAG funding (grants and 25% match) is around $63 million short of the total extrapolated costs to run the program in FY2022. This $63 million difference was covered by the States in what is commonly referred to as States' "over-match" of STAG. This overmatch results in States actually matching 48% of the grant funding.

I. Project Background

A. Previous Data Collection and Reporting

In 2007, ASTSWMO's Hazardous Waste Subcommittee developed a report titled "State RCRA Subtitle C Core Hazardous Waste Management Program Implementation Costs."[3] The purpose was to document the States' actual costs of implementing a RCRA Subtitle C Program and to enable better understanding and communication of resource and funding requirements necessary to maintain an effective hazardous waste program. Additional State program cost data was obtained in FY2015 through FY2018 (referred to in this report as FY2018 data). While a report was not generated from the FY2018 data, the information was utilized internally by ASTSWMO and by EPA as they prepared the updated STAG allocation methodology[4].

B. Purpose of this Report

In July 2021, the ASTSWMO Board of Directors established a temporary Hazardous Waste Funding Workgroup to identify the updated cost of operating the hazardous waste program. In 2022, the Workgroup developed a survey sent to all authorized programs. This report details the results of that survey. The survey questions developed are available in Appendix A.

II. Program Areas

The survey requested the total cost associated with implementing each of the five (5) core program areas identified in the 2007 Core Report: Corrective Action, Permitting, Inspections, Enforcement, and Program Development. These are the same five (5) program areas EPA historically has used in the STAG allocation. Only 21 of the authorized programs were able to provide a breakdown of costs by program area. The remaining programs were only able to provide a total cost across all program areas. Based on the survey results, it was identified that most States do not separate Inspection and Enforcement costs in their accounting systems, and thus, several States were only able to report a total combined Inspection and Enforcement cost.

[3] https://astswmo.org/state-rcra-subtitle-c-core-hazardous-waste-management-program-implementation-costs/

[4] Memo: Updated Hazardous Waste State Grant Distribution Methodology and FY2021 Allocation; Kathleen Salyer; April 1, 2020.

Therefore, the Workgroup determined that it is more accurate to evaluate four (4) core program areas, combining Inspections and Enforcement into one program area.

A. Corrective Action

In completing the survey, States were asked to consider the following corrective action elements:

1. RCRA Facility Assessment: Review of facility files/records, visual site inspection, sampling/analysis including development/coordination of sampling plans, report preparation, internal and external coordination, meetings, phone calls, and emails.

2. Corrective Action Instruments: The time required to put in place a governing instrument for the corrective action process. The costs associated with orders or other agreements as the corrective action instrument would include tasks such as file review, preparing and negotiating draft and final orders/agreements, establishing information repositories, internal and external coordination, meetings, phone calls, emails, and site visits. [Note: Permits that are used as the regulatory instrument for corrective action are considered under the Permitting program area.]

3. RCRA Facility Investigations: Work plan and report review and approval, corrective action oversight and sampling inspections, internal and external coordination and response to inquiries, file review, review of routine facility reports (e.g., corrective action progress and monitoring reports), meetings, phone calls, emails, and site visits.

4. Interim Measures: Work plan and report review and approval, corrective action oversight and sampling inspections, internal and external coordination and response to inquiries, file review, public participation activities (for significant interim measures), meetings, phone calls, emails, and site visits.

5. Corrective Measures Study: Work plan and report review and approval, corrective action oversight and sampling inspections, internal and external coordination and response to inquiries, file review, review of routine facility reports (e.g., corrective action progress and monitoring reports), statement of basis, preparation, public participation activities including response to comments on the statement of basis, meetings, phone calls, emails, and site visits.

6. Corrective Measures Implementation: Work plan and report review and approval, corrective action oversight and sampling inspections, internal and external coordination and response to inquiries, file review, review of routine facility reports (e.g., progress and monitoring reports), meetings, phone calls, emails, and site visits.

7. Long-Term Stewardship (LTS): Review/approval of facility reports (e.g., corrective action progress, groundwater monitoring and remedy effectiveness reports), corrective action oversight and sampling inspections including monitoring of institutional and engineering

controls, financial assurance reviews, internal and external coordination and response to inquiries, file review, meetings, phone calls, emails, and site visits.

8. Corrective Action Completion: Administrative record review, internal and external coordination and response to inquiries, public participation activities including response to comments on no further action/corrective action complete determination, meetings, phone calls, emails, and site visits.

9. Technical Support: Technical/regulatory review and coordination of activities to ensure that substantive corrective action requirements are met at facilities that are subject to corrective action, but that have been deferred to another cleanup program.

B. Permitting

In completing the survey, States were asked to consider the following permitting elements for operating and post-closure facilities:

1. Closure: Work plan and report review and approval, oversight inspections, and administrative tasks such as phone calls/emails/meetings to discuss closure issues, internal coordination, development of closure timelines/schedules, and release of closure financial assurance.

2. Pre-application Activities: Pre-application meetings, information research and providing information to applicants, public outreach, internal coordination, and development of permit timelines and schedules.

3. Application Review Activities: Application completeness check, technical review and preparation of comments including trial burn plans and risk assessments, public participation, internal coordination, and coordination of review with other agencies, compliance status review, meetings, site visits, phone calls and emails.

4. Permit Issuance Activities: Preparing draft permits and related correspondence, public participation activities (public notices, availability sessions, hearings, establishing information repositories) for the draft permit, responding to comments on the draft permit, preparing the final permit and related correspondence, permit appeal activities, meetings, phone calls, emails, and site visits.

5. Permit Maintenance Activities: Responding to internal and citizen/media inquiries, compliance inquiries, facility management planning, data management, file review requests, permit billing (cost-recovery) activities, review of routine facility reports (e.g., non-corrective action progress/monitoring reports), meetings, phone calls, emails, and site visits.

6. Permit Modification Activities: Technical reviews, drafting of modifications, public participation, response to public comments, finalization of modifications, addressing permit modification appeals, modification tracking, and other procedural items.

C. Inspections and Enforcement

In completing the survey, States were asked to consider the following compliance monitoring activities associated with hazardous waste handlers, including: conditionally exempt small quantity generators (CESQGs) / very small quantity generators (VSQGs); small quantity generators (SQGs); large quantity generators (LQGs); treatment, storage, and disposal facilities (TSDFs); transporters; sites subject to citizen complaints; and any other hazardous waste handlers.

Specifically, the following activities were to be considered:

1. Pre-inspection Activities: Preliminary review of the facility file, review of RCRAInfo[5] and e-Manifest data, development of a site safety and/or sampling plan, coordination with other programs.

2. Inspection Activities: Travel time, opening and closing conferences, a complete process-based facility inspection, review of facility records, and sampling.

3. Post-inspection Activities: Communication with the site representative to obtain additional information as necessary, review of records obtained during the inspection, drafting the inspection report, and making compliance determinations, and drafting enforcement referrals, as necessary.

In completing the survey, States were asked to consider the following enforcement activities:

1. Case Evaluation/Determination: Review of information collected during inspection and determination of violations, determination of whether an enforcement action will proceed, and determination of whether formal or informal enforcement is warranted.

2. Case Referral: Transmittal of the violations to the State enforcement program, Attorney General's Office, or other State-specific entity.

3. Case Development: Review of referral and supporting evidence; gathering of additional evidence to support violations; if necessary, selection, drafting, and implementation of enforcement tool (Consent Order, Unilateral Order, etc.); management review of enforcement documentation; and written transmittal of enforcement documentation to the facility.

[5] RCRAInfo is the national database that houses all hazardous waste program data. (https://www.epa.gov/enviro/rcrainfo-overview)

4. Case Monitoring: Overall monitoring of the process from start to finish.

5. Case Negotiation: Meetings with facilities, consideration of settlement offers, counterproposals, and possibly presentation before a court or hearing officer.

6. Case Resolution: Finalization of enforcement document, review of facility's compliance with enforcement document, and collection of penalties.

7. Case Support: Support from outside parties such as the Attorney General's office, EPA Criminal Investigation Division, etc.

D. Program Development

In completing the survey, States were asked to consider the following program development activities:

1. Grant/Annual Work Plan Activities: Includes grant/work plan development; negotiations with EPA; periodic meetings with EPA; quarterly, semi-annual, and annual report development; and program reviews.

2. Regulatory Analysis of Federal Hazardous Waste Rules: Analysis of proposed federal rules, development of State comments on proposals and consideration of proposals for State rules.

3. State Legislative Activities: Presentation of statutory initiatives, analysis of impacts to State hazardous waste program, and identification of needed State rule changes, where applicable.

4. State Rulemaking: Includes development of State rules (e.g., incorporation by reference or drafting standalone rules) and Attorney General (AG) review or other legal certification (where applicable).

5. State Outreach, Guidance, and Policy Development Activities: Includes public notices, public meetings/hearings, presentations to State environmental boards, development of guidance, development of policies, development of outreach and training materials, compliance assistance activities, training sessions, and ongoing rule interpretation.

6. State Authorization Application Activities: Includes completion of checklists, drafting/modifying the program description, negotiations with EPA, development of a revised memorandum of understanding, development of AG Statement, and review/approval by the AG.

7. Data Management Activities: Includes RCRAInfo, review of Biennial Report changes and updates, outreach to public, processing of Biennial Report data for EPA, State annual hazardous waste reports, approval of industry user accounts in RCRAInfo, and e-Manifest activities.

8. Innovative Projects: Includes development and implementation of new State hazardous waste initiatives (e.g., contaminants of emerging concern, solar panel waste, lithium-ion battery waste, and electronic waste, etc.).

9. Freedom of Information: Includes activities relating to public records requests.

III. State and Tribal Assistance Grants (STAG)

EPA provides funding through STAG to State hazardous waste programs that are authorized to operate the RCRA Subtitle C program in lieu of EPA. The funding is designed to offset costs incurred by States to implement the hazardous waste program. EPA's share of the State program costs cannot exceed 75%. As such, States are required to provide a 25% match. Congress allocates STAG funding to EPA each federal fiscal year under the categorical grant titled, "Resource Recovery and Hazardous Waste Grants." It should be noted that this line item includes funding for not only the hazardous waste program, but also the Coal Combustion Residuals (CCR) program and the Solid Waste Infrastructure for Recycling (SWIFR) program. The hazardous waste portion of the funding is then distributed to State programs using a funding allocation formula developed by EPA. EPA utilizes the data obtained by ASTSWMO's Hazardous Waste Subcommittee in its funding surveys in the development of the formula.

STAG funding allocated to States has remained level for approximately 30 years. The STAG allocation in FY1995 was $97,049,700, while in FY2022 it was $98,200,000. Had the FY1995 allocation been adjusted for inflation, in FY2022, the STAG funding allocation would have been $186,385,648[6]. This data is shown in Figure 2:

[6] Inflation data calculated using tool at https://www.inflationtool.com/us-dollar/1995-to-present-value?amount=97049700&year2=2023&frequency=yearly

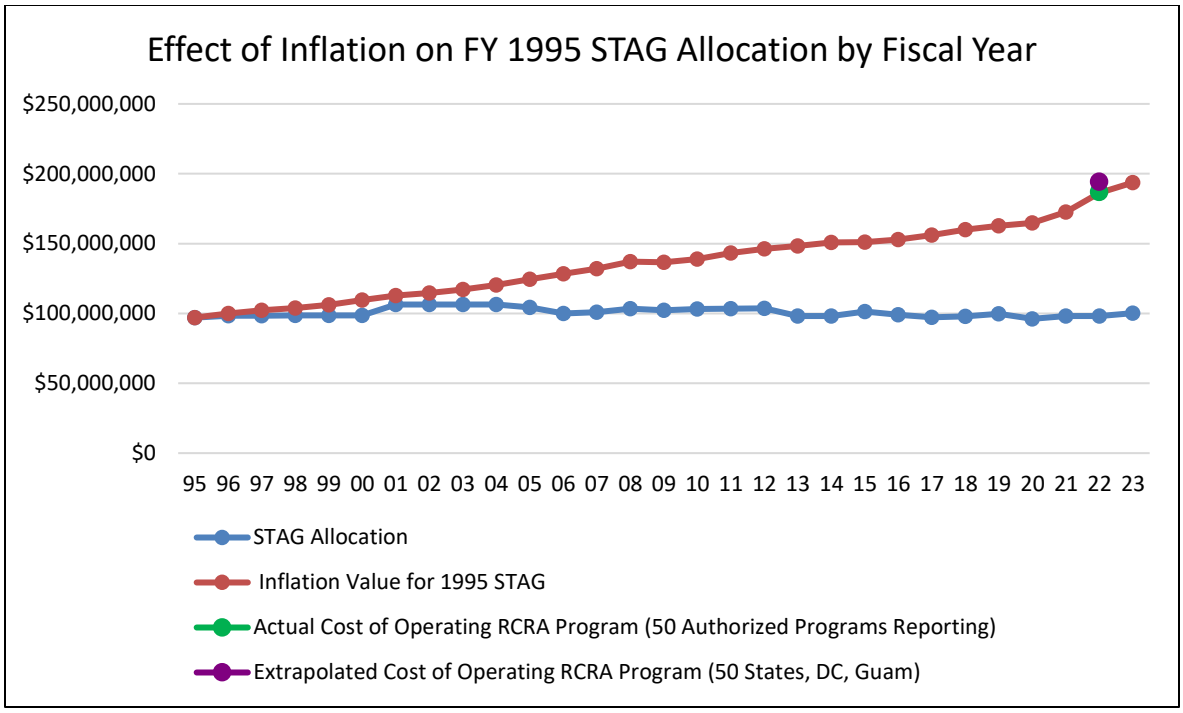

Figure 2: STAG allocation from FY1995 through FY2022 compared to effect on inflation on FY1995 STAG allocation

It is important to note that in Figure 2, the actual cost of operating the hazardous waste program is reflected for FY2022 to correspond with the date survey data that was obtained from States. There was a slight increase of $2 million in STAG funding allocated by Congress in FY2023. It is not clear if that increase in funding was passed to the States or if it was retained by EPA's Regional offices.

IV. Survey Data – Total Hazardous Waste Program Costs

Based on survey responses from the 50 authorized hazardous waste programs, not including Alaska or Iowa, the total cost of operating the RCRA Subtitle C program in FY2022 was $186,807,140. The cost breakdown by Region is shown in Figure 3:

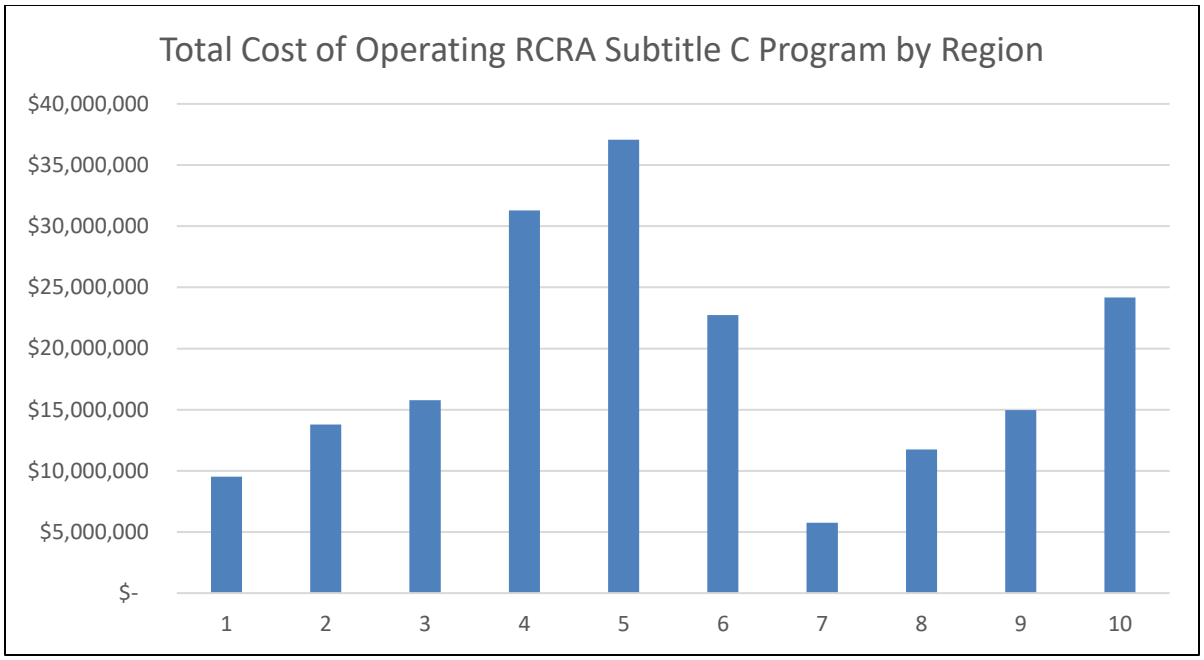

Figure 3: Total Cost of Operating the RCRA Subtitle C Program by Region

Assuming the program costs for these 50 authorized hazardous waste programs are representative of costs in the two States that are not authorized, the extrapolated overall program cost of operating the RCRA Subtitle C program in all 50 States, Washington, DC, and Guam is approximately $194 million. Figure 4 shows the actual costs of operating the RCRA Subtitle C program in FY2018 and FY2022 compared to STAG funding. As can be seen in Figure 4, while national STAG funding has been flat, the national program costs have increased by 32% for authorized hazardous waste programs reporting.

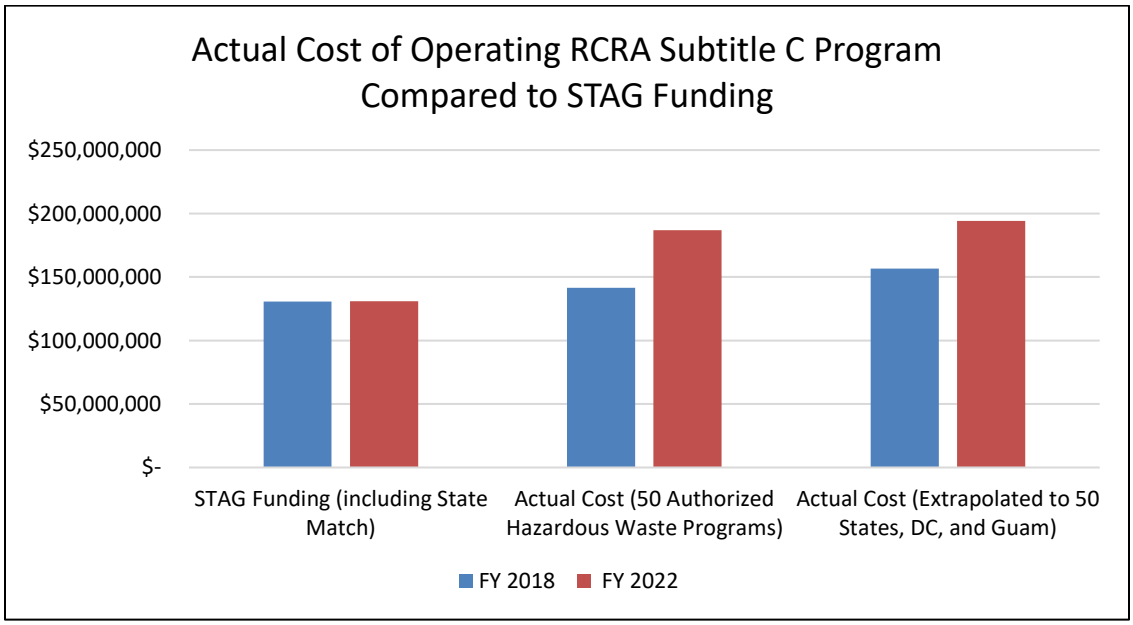

Figure 4: Actual Cost of Operating the RCRA Subtitle C Program Compared to STAG Funding

In addition to total program cost, the Workgroup sought to identify the cost associated with each of the four (4) core RCRA program areas: Corrective Action, Permitting, Inspections and Enforcement, and Program Development. While all authorized programs responded to the survey, only 21 were able to provide a breakdown of costs associated with operating each of the four (4) core RCRA program areas. The breakdown of overall program implementation costs for the 21 States is below in Figure 5:

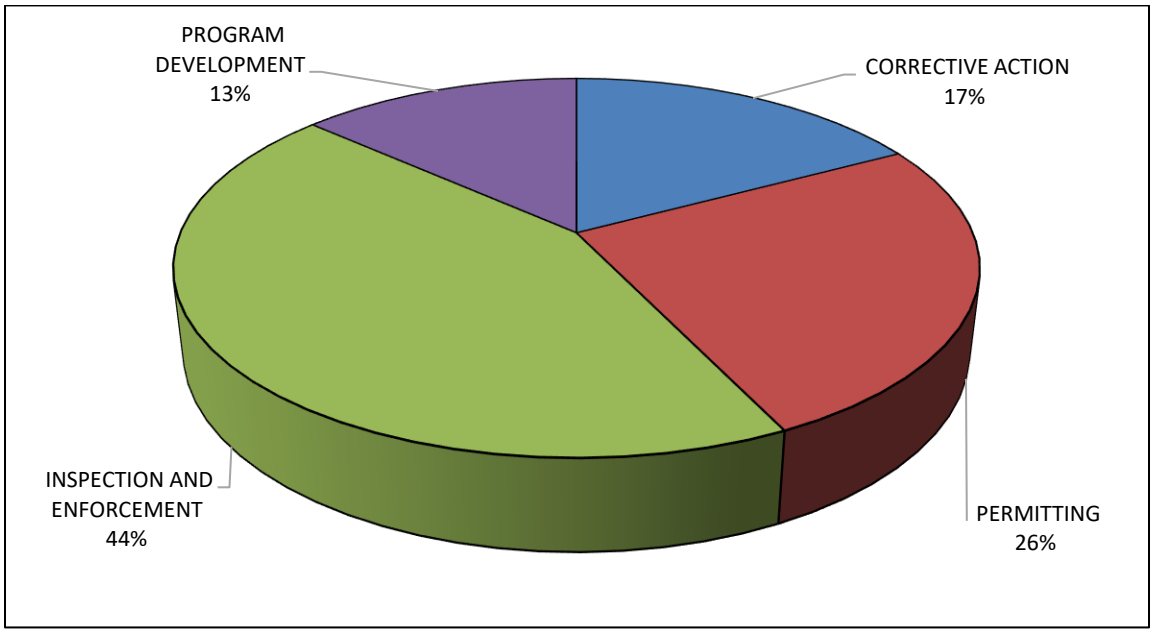

Figure 5: State Breakdown of Costs by Program Area (FY2022)

Figure 6 shows the breakdown of costs by program area over time using the data obtained in FY2007, 2018, and 2022:

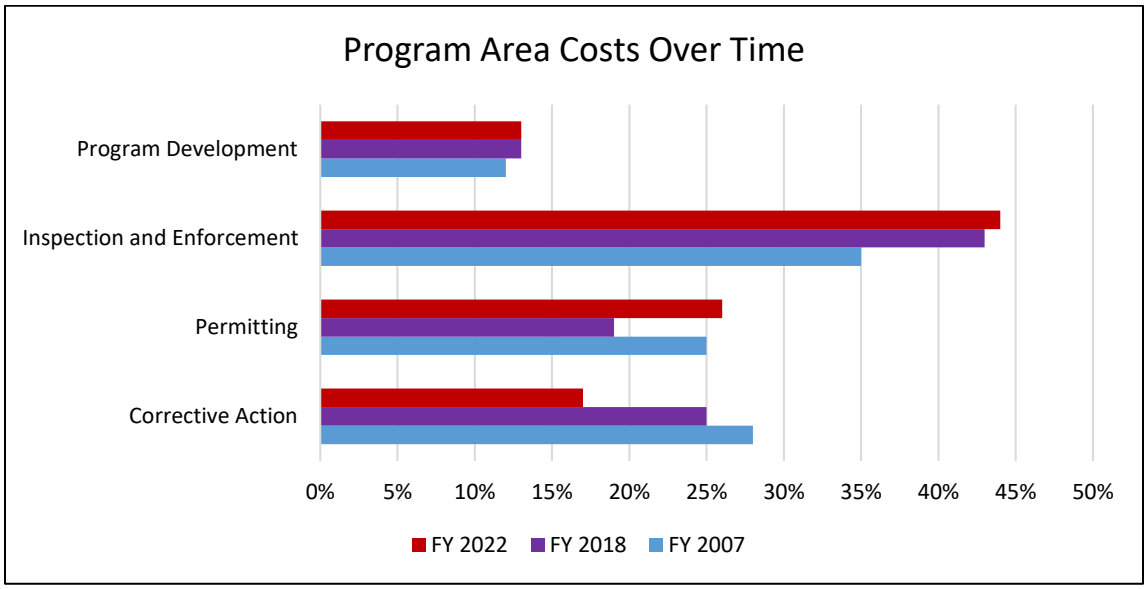

Figure 6: Program Area Costs Over Time

V. Survey Data and Trends/Impacts on Program Areas

A. Corrective Action

In any given year, Corrective Action costs for State hazardous waste programs can fluctuate depending upon the complexity and number of activities at facilities. Based on data from recent surveys, since 2007, Corrective Action costs have steadily decreased in proportion to other program areas. The Corrective Action costs were 28% of the total program costs in FY2007, 25% in FY2018, and 17% in FY2022.

Performance standards for the Corrective Action program have been driven chiefly by the Government Performance and Results Act (GPRA) of 1993 that mandated a demonstration of progress in protecting human health and the environment at RCRA Subtitle C facilities. EPA established a 2020 GPRA Baseline of sites and goals for environmental indicators, remedy decisions, and sites that are ready for anticipated use that have been incorporated into State programs.

Since 2020, EPA has established new performance goals for 2030 and transitioned from using the 2020 GPRA Baseline to the Corrective Action Progress Track[7]. The Progress Track allows the addition and deletion of Corrective Action facilities from a State's baseline.

B. Permitting

Based on data from recent surveys, permitting costs have fluctuated in comparison to other program areas since 2007. The permitting costs were 25% of the total program costs in FY2007, 19% in FY2018, and 26% in FY2022.

State costs to modify and maintain hazardous waste permits comprise a significant portion of State hazardous waste program budgets. It should be noted that some States are expending significant effort to develop more streamlined permitting processes, including, but not limited to, updated electronic application checklists and tools, document templates, and standardized practices to reduce the time it takes to issue a new or renewal permit or a permit modification. Permit modifications are not always initiated by the State agency; therefore, States do not have control over the class, complexity, timing, frequency, or number of permit modifications that are submitted by permittees for State processing and approval.

C. Inspections and Enforcement

Based on data from recent surveys, inspection and enforcement costs have increased in comparison to other program areas since 2007. The inspection and enforcement costs were 35% of the total program costs in FY2007, 43% in FY2018, and 44% in FY2022.

[7] https://www.epa.gov/sites/default/files/2020-09/documents/rcra_corrective_action_program_vision.pdf

While the RCRA statute requires inspections at LQGs and TSDFs, a significant portion of State inspection and enforcement budgets are expended conducting inspections and enforcement at SQGs and VSQGs, which greatly outnumber LQGs and TSDFs. Typically, SQGs and VSQGs do not have dedicated environmental staff and may not be familiar with the hazardous waste regulations; as such, some States expend considerable resources conducting inspections and enforcement activities at these sites. It should be noted that the number of inspections conducted cannot be used independently to determine the cost of operating a State's inspection and enforcement program. Some States conduct fewer inspections, but have much larger sites requiring much longer inspections, while other States conduct more inspections, but have smaller sites. Ultimately, the same amount of resources may be used in each State even though inspection numbers may vary drastically.

It is also important to note that 14 authorized hazardous waste programs reported decreasing the frequency at which inspections are conducted at facilities due to decreasing funding and resource limitations. Those programs reported only conducting the required inspections at LQGs and TSDs and reducing or eliminating inspections at other hazardous waste handlers. Several States not reporting decreased inspection frequencies reported that those activities were being supplemented with State funding, as federal funding was insufficient.

D. Program Development

Based on data from recent surveys, since 2007, program development costs have remained steady in comparison to other program areas. The program development costs were 12% of the total program costs in FY2007, 13% in FY2018, and 13% in FY2022.

The 2007 Core Report identified that 55% of costs associated with program development activities are related to hazardous waste data management. While the Workgroup was unable to obtain a detailed breakdown of costs associated with each program element in the recent surveys, the Workgroup believes that estimate remains accurate. Since 2007, EPA has been actively working to encourage States to verify the accuracy of data in RCRAInfo. This data is crucial for assessing the overall effectiveness of the hazardous waste program and making informed funding decisions. In addition to data entry activities related to Permitting, Corrective Action, Inspections, and Enforcement, States are also responsible for maintaining the handler module within RCRAInfo and issuing EPA ID numbers for hazardous waste handlers. While EPA has developed the new myRCRAid and Biennial Report modules in RCRAInfo that reduce data entry requirements imposed on many States, States remain responsible for registering and approving users in those systems and reviewing electronic submissions. Additionally, in 2018, EPA launched its electronic manifest (e-Manifest) program, which allows States an additional avenue to track and evaluate hazardous waste data for compliance oversight. However, with the launch of the e-Manifest system, States were also given the responsibility of approving industry users of the e-Manifest system within RCRAInfo. Additionally, there is significant workload related to e-

Manifest data quality issues, which were detailed by the ASTSWMO Hazardous Waste Subcommittee in written comments to the e-Manifest Advisory Board in 2021.[8]

Since 2007, when ASTSWMO first analyzed the cost of the hazardous waste program, there have been several rulemakings that have required increased costs for States associated with data management activities. These rulemakings require submission of notification forms for episodic generation, closure of central accumulation areas, transfer of hazardous waste from a VSQG to a LQG, SQG renewal notifications every four (4) years[9], and healthcare facilities opting into Subpart P[10].

The changes related to RCRAInfo and notification form submissions represent a significant additional workload for State personnel that are required to review and process these notifications with no additional funding provided.

In addition to increased costs related to data management activities related to recent rulemakings, States have incurred increased costs related to regulatory adoption and authorization. Figure 7 shows that while the number of rulemakings issued by EPA has decreased over time, the number of pages associated with the Authorization Checklist for each rulemaking has not decreased. Although the Workgroup acknowledges EPA's effort to improve the detail in the checklists, it is also indicative of EPA undertaking fewer, but more complex, rulemakings that take considerable resources for States to review and conduct their own rulemaking activities.

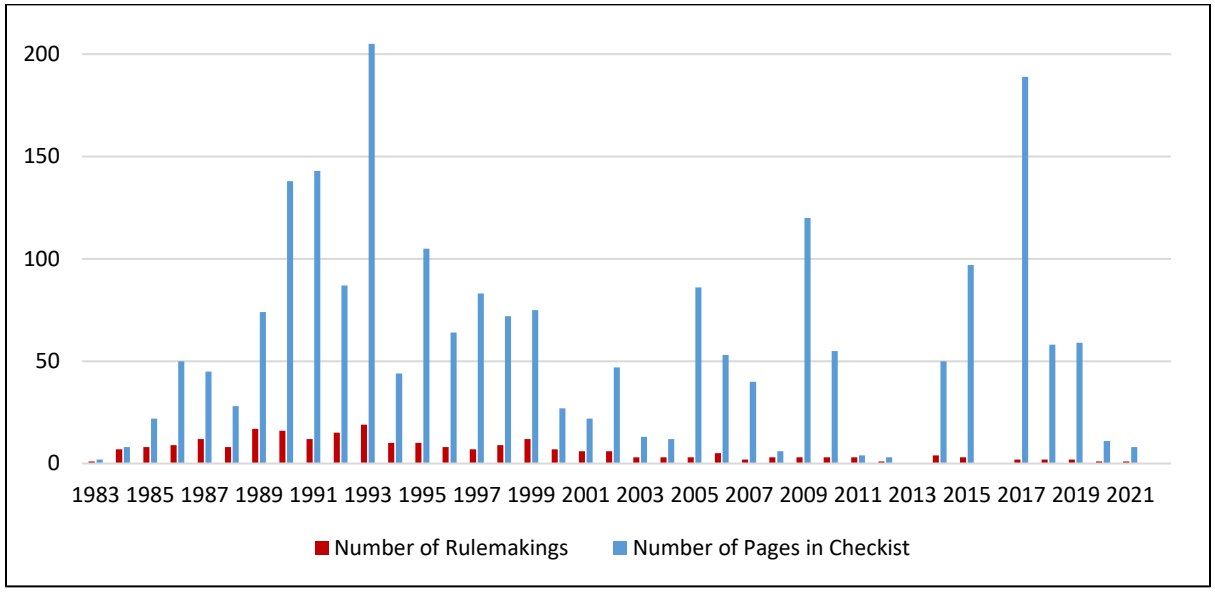

Figure 7: Number of Rulemakings and Number of Pages in Checklist by Year

[8] https://www.regulations.gov/comment/EPA-HQ-OLEM-2020-0571-0011, February 23, 2021
[9] Hazardous Waste Generator Improvements Rule - https://www.epa.gov/hwgenerators/final-rule-hazardous-waste-generator-improvements
[10] Management Standards for Hazardous Waste Pharmaceuticals and Amendment to P075 Listing for Nicotine - https://www.epa.gov/hwgenerators/final-rule-management-standards-hazardous-waste-pharmaceuticals-and-amendment-p075

With the increased complexity of resources needed for rulemaking comes the need for increased outreach and education as part of the rulemaking process, both during and post-adoption. The vast majority of this outreach falls to the States to implement. Despite the substantial impact of these rules, there has been no additional funding provided by EPA to conduct these necessary activities.

E. Non-Core Program Areas

Twelve authorized hazardous waste programs reported that a portion of their hazardous waste STAG funding was tied to a non-core program activity as part of the State's grant workplan. Specifically, these States reported that EPA required up to 10% of their grant funding be dedicated to waste minimization or sustainable materials management activities, which are often tied to activities related to the RCRA Subtitle D solid waste management program, thus taking additional funding away from the RCRA Subtitle C hazardous waste program.

VI. Comparison to 2007 Core Report Data

When compared to the 2007 Core Report, it may appear that total hazardous waste program costs have gone down; however, the total cost of operating the core RCRA programs has not decreased since 2007. In the 2007 Core Report, it was estimated that the total cost of operating the Core RCRA Program in the 50 States (not including Washington, DC or the Territories) was $255 million, while this report concludes the total cost in FY2022 (including Washington, DC and Guam) was approximately $194 million. This would appear to be a decrease in operating costs of $61 million. However, in the 2007 Core Report, ASTSWMO obtained data from only 10 Pilot States and utilized that data to extrapolate the national cost of the RCRA program. At the time, the assumption was the 10 States identified were representative of all 50 States. In obtaining data from all 50 authorized hazardous waste programs, it was determined that the assumption was not accurate. Given the 10 States that were used for the extrapolation in the 2007 Core Report also provided both FY2018 and FY2022 data, the Workgroup was able to apply the same extrapolation method, but then also compare it to actual data obtained from all 50 authorized hazardous waste programs. This data is shown in Figure 7. Applying the identical extrapolation method employed in the 2007 Core Report to the data collected in FY2022 would suggest the cost of the operating hazardous waste program nationwide is $216,326,906. However, given all 48 authorized States, Washington, DC, and Guam were able to report FY2022 data, the Workgroup was able to more accurately extrapolate the cost to all 50 States, Washington, DC, and Guam, yielding a total program cost of approximately $194 million. As such, the data in this report is more accurate, due to the larger number of States participating in the survey, but does not reflect a decrease in total program costs over time.

The blue columns in Figure 8 show that there was a decrease in total program costs in the original 10 Pilot States. However, the survey conducted in 2007 asked States to estimate costs based on a variety of factors, while the FY2022 survey asked States to provide actual costs. We believe this is the cause of the decrease.

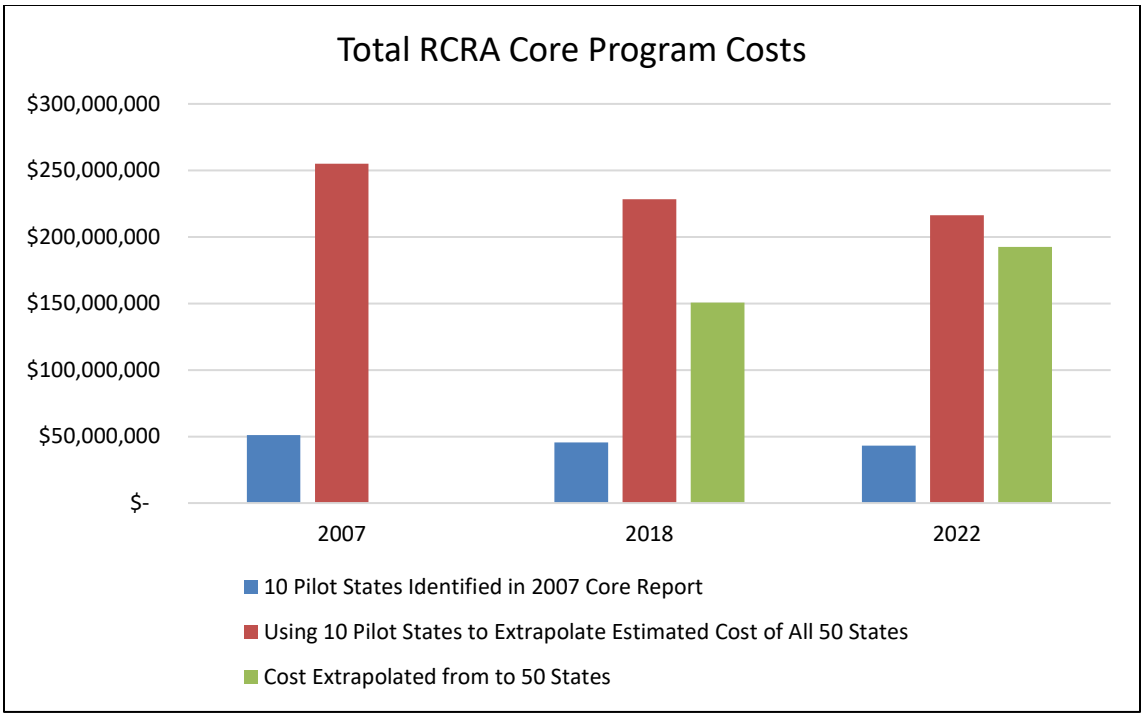

Figure 8: Total RCRA Core Program Costs in FY2007, FY2018, and FY2022

VII. Conclusions and Recommendations

The data demonstrates STAG funding and the States' required match are not enough to successfully implement the hazardous waste program. At a time when budgets are being reduced, States are spending beyond their required match, all while dealing with a stream of new regulations, escalating salary and fringe costs, and fewer resources. FY2022 data shows that while States are required to match 25% of STAG funding provided by EPA, they are actually matching 48%. Based on the data obtained, in order to implement the hazardous waste program to the level required, additional federal funds are needed. If STAG allocations had been adjusted for inflation over the years, there would be nearly adequate federal funding to cover the cost of operating the program nationwide.

Given that adjustments were not made for inflation, States are in essence receiving less money each year even though STAG funding is remaining stable. In addition to the decreased spending value of STAG allocations due to inflation, employee salaries and fringe costs are increasing. With the funding remaining stagnant and costs increasing, this ultimately leads to less staff and resources available in State programs unless those staff and resources are funded directly by other State funds.

Even with a reduced number of staff funded through STAG, in many Regions EPA has required the same or increased workload and commitments in State grant workplans directly tied to STAG funding. Examples of these activities include requiring shorter permitting timeframes, conducting inspections at facilities other than the statutorily required LQGs or TSDs, and managing industry users in RCRAInfo for activities including e-Manifest. This is not sustainable. Ultimately, if EPA

funds fewer staff through STAG funding, the activities required in the corresponding grant workplans should also decrease. Without additional federal funding, States cannot provide competitive salaries, maintain qualified staff, continue to meet the current level of grant commitments, or take on new EPA priorities.

Often, lack of funding leads to reduction of ancillary program activities such as training, thus impacting required program activities. For example, reduced training for employees is reflected in lower numbers of program outputs, lower quality of reviews, or longer review times related to program outputs and grant commitments. Reduced training can also lead to poor retention of employees, resulting in higher programmatic costs.

In addition to increased grant commitments, EPA is increasing its focus on overburdened communities, which will result in additional costs associated with increased public participation efforts to be conducted by State agencies and additional grant commitments tied to STAG funding. These additional costs or grant commitments may impact all areas of the hazardous waste program. At a minimum, States will incur increased costs related to translation services to ensure documents are available to the public in their primary language. Additional funding has not been provided to States to address the expectations in EPA's environmental justice initiative.

Emerging waste streams also present new resource challenges for States, including the management of electronic waste, hemp/marijuana processing waste, solar panels that have reached their end of life, and fuel cell wastes. Additional funding or technical assistance is required from EPA to effectively evaluate and resolve challenges associated with these emerging waste streams.

The hazardous waste program activities described above are part of a preventative program designed to prevent contamination and avoid sites being managed under the Superfund program. The Corrective Action component of the program is designed to conduct cleanups of contaminated properties similar to those activities conducted under Superfund authority. Despite this goal, Congress has not provided additional funding to the hazardous waste program in nearly 30 years, and it appears that the President's budget for FY2024 did not request additional funding from Congress.

The Workgroup has also identified upcoming events that have the ability to increase costs to State regulatory programs. These events are discussed by individual program area below.

A. Corrective Action

While it may seem reasonable to conclude that Corrective Action costs will continue to decline as cleanups are completed, it is important to note that while some facilities complete Corrective Action obligations, there will be numerous facilities that will continue to implement remedies for the foreseeable future. Even those facilities that are currently categorized as complete can undergo reevaluation to assess whether additional Corrective Action activities are necessary.

Reassessment takes into account the adoption of new rules addressing emerging contaminants or new health data to determine if further actions are warranted. Specifically, EPA's new or expected rulemakings and guidance related to perfluoroalkyl and polyfluoroalkyl substances (PFAS) and lead have the potential to require additional Corrective Action activities at sites that have already been closed. This must be considered in the context of future funding for State hazardous waste programs. Continued funding is necessary to ensure that remedies are optimized, institutional and engineering controls are maintained, and remedial goals are met.

The Workgroup is also concerned that hazardous waste program staff assigned to the Corrective Action program in EPA Regional offices are being transferred to the Superfund program due to the significant influx of Superfund money allocated in the Bipartisan Infrastructure Law. It is the Workgroup's understanding that the Corrective Action positions themselves are being transferred, meaning the Corrective Action program is not left with a vacant position to fill. Rather, the Corrective Action sites that were being overseen by EPA Regional offices are being transferred to the States for oversight with no additional funding provided for the increased workload.

B. Permitting

While it appears permitting costs have remained flat with a relatively stable universe of permitted facilities, with the increase in the use of electric vehicles, there will likely be new hazardous waste facilities developed to handle large lithium-ion electric vehicle batteries that have reached their end of life. There may also be the creation of facilities to handle the management of smaller lithium-ion batteries, such cell phone and laptop batteries. This may result in additional permitting activities conducted by authorized hazardous waste programs.

While much permitting activity is associated with existing facilities, some work is associated with new facilities, and future permitting activities may be tied to either. Flat funding has led to flat or reduced permitting capabilities and longer permitting timeframes. Environmental justice initiatives also can impact these timeframes. The permitting of new facilities can impact economic development in an area or State, and delays or extended timeframes may negatively impact that development.

C. Inspections and Enforcement

While the RCRA statute requires States and EPA to inspect LQGs and TSDFs, States allocate significant resources related to inspection and enforcement activities at other hazardous waste handlers, including SQGs, VSQGs, used oil handlers, universal waste handlers, and transporters. The actual cost of inspection and enforcement activities for the entire hazardous waste handler universe, including these other facilities, should be kept in mind as future State resource and funding needs are evaluated.

Also, while the promulgation of the Hazardous Waste Pharmaceuticals Rule was necessary to provide regulatory relief to healthcare facilities, several State programs are losing revenue due

to those facilities no longer being considered hazardous waste generators. That decrease in funding has the potential to impact States' ability to provide the matching funding for the STAG appropriations.

D. Program Development

As of the time of this report, EPA's regulatory agenda indicates that it expects to release six (6) significant rulemakings in the near future that will require significant resources for States to adopt.

As EPA develops new rules and, in some cases, regulatory programs (e.g., pharmaceuticals, drum reconditioners, etc.), States need to add these program areas to their activities with staffing, training, rulemaking, and implementation. If funding is not provided, these activities will end up being prioritized along with the existing workloads with existing funding. Priorities may vary from Region to Region and from State to State.

E. Non-Core Program Areas

Given there has been no increase in federal funding in approximately 30 years, ASTSWMO believes grant workplan activities should focus only on required hazardous waste management activities. Grant commitments tied to RCRA Subtitle D solid waste management program activities take resources away from the hazardous waste program and do not meet the intent of the STAG funding allocated to the hazardous waste program.

Appendix A: Survey Questions

ASTSWMO RCRA SUBTITLE C FUNDING SURVEY

1. For the most recently completed State or Federal Fiscal Year, are you able to break down your State's RCRA Subtitle C program costs by the 5 main program areas (Corrective Action, Permitting, Inspection, Enforcement, and Program Development)? Y/N [If yes, answer Questions 2 through 6; if no, skip to Question 7)

2. What was your State's total Corrective Action cost in the most recently completed State or Federal Fiscal Year?

3. What was your State's total Permitting cost in the most recently completed State or Federal Fiscal Year?
    a. What percentage of your State's permitting costs was related to post-closure facilities in the most recently completed State or Federal Fiscal Year?
    b. What percentage of your State's permitting costs was related to operating facilities in the most recently completed State or Federal Fiscal Year?

4. What was your State's total Inspection cost in the most recently completed State or Federal Fiscal Year?

5. What was your State's total Enforcement cost in the most recently completed State or Federal Fiscal Year?

6. What was your State's total Program Development cost in the most recently completed State or Federal Fiscal Year?

7. What was the total cost of operating your State's RCRA Subtitle C program in the most recently completed State or Federal Fiscal Year (including Corrective Action, Permitting, Inspections, Enforcement, and Program Development)?

8. How many full-time equivalents (FTEs) did your State have in your RCRA Subtitle C core program in the most recently completed State or Federal Fiscal Year (including Corrective Action, Permitting, Inspections, Enforcement, and Program Development staff)?

9. Has your State adopted the Generator Improvements Rule? Y/N/Don't Know/Other (comment)
    a. Has your State implemented the SQG renotification requirements (i.e., does RCRAInfo have up to date information on your State's SQGs)? Y/N/Don't Know
    b. If no, will your State have implemented the SQG renotification requirements and that data be available in RCRAInfo by September 2024? Y/N/Don't Know

10. Has your State submitted additional sites to EPA to be added to the Corrective Action Progress Track pilot project? Y/N/Don't Know
    a. How many sites did your State submit?
    b. How many of those sites have been approved/accepted by EPA to be added to the pilot project?

11. What was your State's fringe rate percentage in the most recently completed State or Federal Fiscal Year?

12. What was your State's indirect rate percentage in the most recently completed State or Federal Fiscal Year?

13. Is a percentage of your State's STAG funding tied to a non-core activity (core activities are Corrective Action, Permitting, Inspections, Enforcement, and Program Development)? Examples of non-core activities may include waste minimization, sustainable materials management/solid waste recycling, and/or international border issues. Y/N/Don't Know

    If yes:

    a. Activity 1: _____ Percentage: _____
    b. Activity 2: _____ Percentage: _____
    c. Activity 3: _____ Percentage: _____

14. Has your State reduced core program activities due to limited funds? Y/N/Don't Know

    If yes:

    a. What activities have been reduced/impacted (e.g., decreased inspection frequency, increased permit review timeframes)?
    b. How much additional funding would you need to fully implement impacted activities?

15. If you are able, please identify your State's projected costs associated with environmental justice activities directly related to the RCRA Subtitle C program for FY23. Note: since this is a new initiative addressed in FY23 workplans, ASTSWMO is interested in projected costs for FY23, rather than costs for the most recent State or Federal Fiscal Year as requested in the other questions.]

16. Additional comments – please include any other relevant information or funding concerns your State thinks the Workgroup should consider.

Definitions:

Corrective Action activities include: RCRA facility assessments; corrective action instruments; RCRA facility investigations; interim measures; corrective measures studies; corrective measures implementation; long-term stewardship; Corrective Action completion; technical support; planning, evaluation and reporting; and financial assurance review. Corrective Action permits should be included in Permitting activities.

Permitting activities include: pre-application activities, application reviews, permit issuance, permit maintenance, permit modifications, permit hearings, public participation, financial assurance review, and permit appeals. This category should include operating permits, post-closure permits, Corrective Action permits, and orders.

Inspection activities include: compliance assistance; file review; on-site safety/sampling plans; securing field equipment; coordinating with other agencies; travel time to and from inspection site; conducting facility entrance/exit interviews; conducting on-site inspections; reviewing company records; conducting sampling; reviewing applicable regulations; inspection report preparation; finalizing and distributing

inspection reports; and enforcement referrals. Inspection activities include those related to on-site and off-site compliance monitoring.

Enforcement activities include: case evaluation/determination; case referral; case development; case negotiation; case resolution; case support and follow-up; legal fees.

Program Development activities include: grant/workplan activities, regulatory analysis of F
Federal hazardous waste regulations, State legislative activities, rulemaking, outreach/ guidance/policy development, development of revised authorization applications, RCRA hazardous waste data management, staff development and associated travel, information technology, cybersecurity, development of additional public participation/environmental justice programs beyond the base RCRA program, development of emerging contaminant programs, incorporation of climate adaptation, and innovative projects.

Generator Improvements Rule: https://www.epa.gov/hwgenerators/final-rule-hazardous-waste-generator-improvements

Small Quantity Generator (SQG) renotification: https://www.epa.gov/hwgenerators/re-notification-requirement-small-quantity-generators

Corrective Action Progress Track pilot program: The U.S. Environmental Protection Agency (EPA) tracks those RCRA TSDFs that are undergoing Subtitle C Corrective Action via a list known as the *Corrective Action Progress Track*. The *Corrective Action Progress Track* can be thought of as the RCRA Corrective Action workload that is being actively worked on (including either investigation or cleanup, or both). EPA uses the *Corrective Action Progress Track* list for evaluating program accomplishments for the GPRA.

Fringe rate: the rate applied to each employee's salary to address the cost of fringe benefits. Fringe benefits are allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages. Fringe benefits include, but are not limited to, the costs of leave (vacation, family-related, sick or military), employee insurance, pensions, and unemployment benefit plans.

Indirect rate: a percentage used to distribute indirect costs to all programs benefiting from those costs. Indirect costs typically include salary and related expenses of staff working in accounting, personnel, purchasing functions, rent, depreciation, and utilities.