

Fiscal Impacts of Proposed Rules

Rule Topic: Federal Definition of Solid Waste Rule Adoption

Rule Citation: 15A NCAC 13A .0102
15A NCAC 13A .0103
15A NCAC 13A .0106

Name of Commission: Environmental Management Commission

DEQ Division: Waste Management

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Impact Summary:

State Government:	Yes
Local Government:	No
Federal Government:	No
Private Property Owners:	No
Substantial Impact:	No

Authority: G.S. 130A-294 and G.S. 130A-295

Necessity: The EPA is requiring states to adopt certain provisions of the new Definition of Solid Waste Rule that was promulgated on January 13, 2015, 80 Fed. Reg. 1694 (January 13, 2015) (“2015 DSW Rule”) and became effective July 13, 2015. The 2015 DSW Rule retains certain changes originally made in an October 30, 2008 DSW Final Rule, 73 Fed. Reg. 64668 (October 30, 2008), which “revises several recycling-related provisions associated with the definition of solid waste used to determine hazardous waste regulation under Subtitle C of [RCRA].” Its purpose “is to ensure that the hazardous secondary materials recycling regulations, as implemented, encourage reclamation in a way that does not result in increased risk to human health and the environment from discarded hazardous secondary material.”

The EPA revised the 2008 DSW rule because of significant regulatory gaps that resulted in harm to human health and the environment and had a disproportionate impact on minority and low-income populations.

The proposed changes to 15A NCAC 13A .0102, 15A NCAC 13A .0103 and 15A NCAC 13A .0106 would make the State Hazardous Waste Program equivalent to, consistent with, and no less

stringent than the federal RCRA program, by incorporating federal changes to 40 CFR 260.10 and 40 CFR 261.

Frequently Used Acronyms:

HWS = Hazardous Waste Section

HSM = Hazardous Secondary Material

Summary

The purpose of this document is to conduct an evaluation of the costs and benefits associated with amendments of three rules pertaining to the definition of hazardous waste; 15A NCAC 13A .0102, 15A NCAC 13A .0103, and 15A NCAC 13A .0106. These changes are necessary to maintain federally delegated program authority due to recent changes in the applicable federal regulations.

The United States Environmental Protection Agency (“EPA”) has authorized North Carolina to operate the State Hazardous Waste Program in lieu of the federal program under the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. §§ 6901 to 6992k. Because the State Hazardous Waste Program is federally delegated, EPA continues to exercise oversight including the ability to revoke program authorization to ensure consistency with RCRA. Specifically, the State Hazardous Waste Program must remain equivalent to, consistent with, and no less stringent than the Federal program.

Introduction and Purpose of Rule Changes

The North Carolina Department of Environmental Quality (formerly the Department of Environment and Natural Resources), Division of Waste Management, Hazardous Waste Section has determined that rulemaking to amend 15A NCAC 13A .0102, 15A NCAC 13A .0103 and 15A NCAC 13A .0106 are necessary due to recent changes to applicable federal regulations, per N.C.G.S. § 150B-21.1(a)(4).

The “State Hazardous Waste Program” consists of the North Carolina Solid Waste Management Act (“the Act”), contained in Chapter 130A, Article 9 of the North Carolina General Statutes, and the rules promulgated thereunder and codified in Subchapter 13A of Title 15A of the North Carolina Administrative Code (“the Rules”).

The United States Environmental Protection Agency (“EPA”) has authorized North Carolina to operate the State Hazardous Waste Program in lieu of the federal program under the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. §§ 6901 to 6992k. Because the State Hazardous Waste Program is federally delegated, EPA continues to exercise oversight including the ability to revoke program authorization to ensure consistency with RCRA. Specifically, the State Hazardous Waste Program must remain equivalent to, consistent with, and no less stringent than the Federal program. RCRA § 3006(b), 42 U.S.C. § 6926(b); 40 C.F.R. § 271.4.

The Act instructs the Department to “cooperate . . . with . . . the federal government . . . in the formulation and carrying out of a solid waste management program,” including a program for the management of hazardous waste “designed to protect the public health, safety, and welfare; [and to] preserve the environment.” N.C.G.S. § 130A-294(a)(2), (b). The Act mandates the adoption of rules to implement that program. N.C.G.S. § 130A-294(b). The Rules largely adopt and incorporate the applicable federal regulations by reference.

Another statute prohibits the adoption of rules for the protection of the environment or natural resources that are more restrictive “than those imposed by federal law or rule, if a federal law or

rule pertaining to the same subject matter has been adopted,” unless one of the enumerated exceptions applies. N.C.G.S. § 150B-19.3.

On 30 October 2008, EPA promulgated a final rule concerning the Definition of Solid Waste, 73 Fed. Reg. 64668 (Oct. 30, 2008) (“2008 DSW Rule”), which various entities subsequently challenged through litigation, including claims that the rule contained significant regulatory gaps that could result in harm to human health and the environment and could have a disproportionate impact on minority and low-income populations.

On 13 January 2015, EPA promulgated a revised final rule concerning the Definition of Solid Waste, 80 Fed. Reg. 1694 (Jan. 13, 2015) (“2015 DSW Rule”) that became effective on 13 July 2015. The 2015 DSW Rule retains certain changes originally made in the 2008 DSW Rule but “revises several recycling-related provisions associated with the definition of solid waste used to determine hazardous waste regulation under Subtitle C of [RCRA].” Its purpose “is to ensure that the hazardous secondary materials recycling regulations, as implemented, encourage reclamation in a way that does not result in increased risk to human health and the environment from discarded hazardous secondary material.” *Id.* at 1694.

The proposed changes to **15A NCAC 13A .0102** will make the State Hazardous Waste Program equivalent to, consistent with, and no less stringent than the federal RCRA program, by incorporating federal changes to 40 C.F.R. § 260.10, with one State wording modification to make explicit a prohibition on releases of hazardous constituents in the definition of “contained,” which is implicit in the federal regulation.

The proposed changes to **15A NCAC 13A .0103** will make the State Hazardous Waste Program equivalent to, consistent with, and no less stringent than the federal RCRA program, by incorporating federal changes to 40 C.F.R. Part 260, Subpart C.

The proposed changes also include a corresponding clerical revision to input the correct updated citation into .0103(a) and (b) instead of the current reference to a rule that no longer exists.

The proposed changes to **15A NCAC 13A .0106** will make the State Hazardous Waste Program equivalent to, consistent with, and no less stringent than the federal RCRA program, by incorporating federal changes to 40 C.F.R. Part 261.

The proposed changes to 15A NCAC 13A .0102, 15A NCAC 13A .0103 and 15A NCAC 13A .0106 do not conflict with N.C.G.S. § 150B-19.3.

Cost/Benefit Analysis for the 2015 DSW Rule

The costs associated with the implementation of the 2015 DSW Rule will primarily be felt by the Hazardous Waste Section (HWS) of the Division of Waste Management. Other State and local government agencies do not regulate hazardous wastes and therefore will have no economic impact. The economic benefits of the new rule will be realized primarily by the facilities that are regulated by the HWS. These include private industry, public and private schools and universities which generate hazardous wastes, and the five federal facilities (4 military bases plus Coast Guard) located in North Carolina. State agencies that generate hazardous waste affected by the new rule are included with the analysis of the effect to hazardous waste generators. The rule does not affect waste that is generated by homeowners (household hazardous waste), therefore there is expected to be no economic impact on private individuals.

Note: The HWS concluded there could be an increase in releases of hazardous constituents if land based units are allowed under this rule (which are not allowed under the current regulations). This potential cost is shown in the Costs of the 2105 DSW Rule section of this document and associated tables. The actual cost to private property or individuals has not been estimated.

Benefits of the 2015 DSW Rule

The benefits of the rule will be realized by the entities that are regulated under the hazardous waste regulations. These are facilities that handle; generate; treat, store, and dispose (TSD); or recycle hazardous wastes that will be redefined as hazardous secondary materials (HSM) under this rule. The majority of the benefit to the regulated entities will be the reduction in annual fees and tonnage fees associated with the management of hazardous waste. Other costs associated with the change of having to manage HSM instead of hazardous waste will take time to recognize. Materials that were previously managed and recycled as hazardous waste will become HSM which will require shipping documents, but not be required to be shipped on the uniform hazardous waste manifest. It is anticipated that the recycling and shipping companies of the HSM will pass cost savings to the generators of the HSM.

The industry sectors that could be most affected include: chemical manufacturing, coating and engraving, semiconductor and electronics manufacturing, pharmaceutical manufacturing and industrial waste management industries. The impacts of the rule are dependent on how many states adopt the rule. Because the 2015 DSW Rule addresses many of the concerns states raised about the 2008 DSW Rule, state adoption rates – and thus cost savings – for the 2015 DSW rule may be much higher than the 2008 DSW final rule. A summary of the current state adoption plans can be found in Appendix K.

EPA estimated that nationwide, 5000 facilities will be affected by this rule and may result in an average annual cost savings nationally of \$107 million for the affected industry sectors, with \$85 million consisting of reduced regulatory costs.

Facilities in North Carolina affected by this rule make up 3% of the national affected facilities. Based on EPA's analysis, the cost savings to these facilities is estimated to result in average annual cost savings of \$3.2 million for the affected industry sectors, with \$2.55 million consisting of reduced annual regulatory costs.

The largest generator of hazardous waste in North Carolina, Nucor Steel Hertford County, estimates that if they have a 5% cost savings due to managing what is now a hazardous waste as a HSM, they will save more than \$200,000 annually. If they were able to recognize a 25% reduction the savings could be in excess of \$1 million annually.

Hazardous Waste Generators

There are three categories of hazardous waste generators: Large Quantity Generators (LQG), Small Quantity Generators (SQG) and Conditionally Exempt Small Quantity Generators (CESQG). Generators of hazardous waste who meet the criteria in the 2015 DSW Rule will be able to redefine their hazardous waste as HSM instead. This will result in a reduction in the volume of hazardous waste that they must report and they can, in many cases, change to a different (lower) category. This will result in a lower annual fee that they must pay. The annual fee for LQGs is \$1,400 and SQGs must pay \$175. There are no annual fees for CESQGs. It is estimated that 50 LQGs (out of 786) will become SQGs and 90 SQGs (out of 1782) will become CESQGs. The potential total savings in annual fees for generators is \$77,000.

Additionally, generators of hazardous waste currently pay a fee of \$0.70 per ton of hazardous waste generated each year. Generators who meet the criteria in the revised definition will have a reduced tonnage fee based on the amount of material no longer defined as waste. The potential total savings in tonnage fees is \$31,640 per year.

Commercial Facilities

There are currently nine commercial facilities in North Carolina permitted to accept hazardous waste from off-site generators. Four of these facilities primarily manage waste that can be defined as HSM under the new rule and they currently pay a monthly fee based on the tons of hazardous waste received during the previous month. With the new rule in place, the total savings in tonnage fees for these facilities is expected to be approximately \$5,473 per year. These four facilities may continue to maintain a RCRA permit or may elect to become verified recyclers rather than maintaining a RCRA permit. If these four facilities maintain their RCRA permit status, they will each continue to be a category 1 “Special Purpose Commercial Hazardous Waste Facility” and pay the monthly fee of \$1332. If these facilities decide not to maintain their RCRA permit, this fee will be eliminated for a total savings of \$63,936 per year or \$15,984 per year per facility. Additionally, closing the RCRA permit status will result in a permit application fee savings of \$14,000 every 5 years per facility.

The other five commercial hazardous waste facilities will continue to maintain their RCRA permit status because they accept hazardous waste that will not be affected by the revised definition. These facilities may experience a decrease in the volume of hazardous waste they accept due to some waste being re-defined as HSM. If so, this will result in a slight decrease in their monthly tonnage fees. These facilities will continue to manage the same volumes of waste, the waste will just be classified as HSM instead of hazardous waste. The cost savings of the change in management from hazardous waste to HSM will take some time to be recognized by the commercial facilities.

Recycling Facilities

Currently, recycling facilities that do not have a RCRA permit cannot accept hazardous waste for recycling. Under the 2015 DSW Rule, a recycling facility has the opportunity to expand their business by becoming a verified recycler who can accept and recycle HSM. Becoming a verified recycler is a business decision and not a regulatory requirement so the impact of becoming a verified recycler was not calculated.

An analysis of facilities who applied for recycling tax credits in the last 10 years revealed no instances where this new rule would have prevented the facility from being able to claim the tax exemption for recycling equipment, so there are no impacts anticipated in this area.

Summary of Annual Benefits to the NC Regulated Community due to the 2015 DSW Rule			
Type of Facility		Benefit	Explanation
Generators		\$108,640	Change in status and reduced tonnage fee
Commercial Facilities		\$69,409	Closing permit ¹ and reduced tonnage fee
	Total Annual Benefits:	\$178,049	

¹ Permit application fee of \$14,000 every five years is not included.

Costs of the 2015 DSW Rule

The tables below outline the estimated costs calculated for the implementation of this rule. As previously mentioned, the costs associated with this rule are primarily to the HWS. These costs are due to increased time for program implementation and a reduction in operating fees from a reduced volume of hazardous wastes being generated. A discussion of how these numbers were calculated can be found in the Appendix.

The costs of the revised 2015 DSW Rule are divided into three categories: costs, additional costs, and loss of fees. Costs include activities associated with HSM that can be determined on an annual basis. Additional costs are activities associated with HSM determined on a per event basis due to the uncertainty in being able to predict how many of these activities will occur in a year. Loss of fees is a summary of the reduction in the revenue to the HWS associated with the loss of fees collected when the facilities transitioned from being hazardous waste handlers to handling a HSM.

Summary of Cost Increases to the HWS due to the 2015 DSW Rule		
Activity	Estimated Annual Total Time (Hours)	Estimated Annual Total Cost (Dollars)
Complaints	120	\$4,775
Inspections	700	\$27,375
Enforcement	246	\$8,610

Education and Outreach	81	\$2,835
Notification	25	\$532
Financial Assurance	26	\$892
Variance Review	576	\$20,160
Verified Recycler Review	640	\$22,400
Total Ongoing Cost Increases	2414	\$ 87,579

Summary of Additional Costs to the HWS due to the 2015 DSW Rule		
Activity	Estimated Time (Hours)	Estimated Cost (Dollars)
Environmental Impacts and Corrective Action	280 hours - 1,680 hours (refer to Appendix H)	\$9,800 – \$58,800 per spill
Tax Certification	15 per application	\$0 change

Summary of Loss of Fees to the HWS due to the 2015 DSW Rule		
Activity	Estimated Annual Total Time (Hours)	Estimated Annual Total Cost (Dollars)
Changes to Commercial Facilities and Permits	-1135	-\$63,936
Loss of Tonnage Fees from Commercial Facilities		-\$5,473
50 LQGS become SQGs		-\$61,250
90 SQGs become CESQGs		-\$15,750
Loss of Tonnage Fees from Generator Facilities		-\$31,640
Total Loss of Fees Costs	-1135	- \$178,049

Personnel Time Changes

Due to the implementation of this rule, there will be an increase of at least 2414 hours/year (1.2 FTE) at a cost of \$87,579 per year for new notifications, additional inspections and complaints, education and outreach, financial assurance, enforcement, verified recycler reviews, and variance reviews.

Potential environmental impacts and resulting state oversight from storage on the land could add additional staff time and costs from \$9,800 in one-time costs up to \$58,800 over 20 years per incident. See Appendix H for details.

Due to the implementation of this rule, there will be a decrease of 1,135 hours/year (~0.5 FTE or \$36,491) and a decrease of \$178,049 in revenue due to fewer inspections at Commercial Facilities and from loss of annual and tonnage fees from Commercial Facilities, LQGs and SQGs.

Fiscal Impact Summary

The aggregate financial impact of this proposed permanent rule on all persons affected is expected to not be substantial.

Certificate of Federal Requirement

In accordance with requirements outlined in G.S. § 150B-19.1. (g), the DWM is proposing changes to the Rules 15A NCAC 13A .0102, 15A NCAC 13A .0103 and 15A NCAC 13A .0106. These changes would make the State Hazardous Waste Program equivalent to, consistent with, and no less stringent than the federal RCRA program, by incorporating federal changes to 40 CFR 260, 40 CFR 260.10, and 40 CFR 261. The United States Environmental Protection Agency (“EPA”) has authorized North Carolina to operate the State Hazardous Waste Program in lieu of the federal program under the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. §§ 6901 to 6992k. Because the State Hazardous Waste Program is federally delegated, EPA continues to exercise oversight—including the ability to revoke program authorization—to ensure consistency with RCRA. Specifically, the State Hazardous Waste Program must remain equivalent to, consistent with, and no less stringent than the Federal program. RCRA § 3006(b), 42 U.S.C. § 6926(b); 40 C.F.R. § 271.4. The Act instructs the Department to “cooperate . . . with . . . the federal government . . . in the formulation and carrying out of a solid waste management program,” including a program for the management of hazardous waste “designed to protect the public health, safety, and welfare; [and to] preserve the environment.” N.C.G.S. § 130A-294(a)(2), (b). The Act mandates the adoption of rules to implement that program. N.C.G.S. § 130A-294(b).

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Appendix A

Development of Cost Estimates for Complaints and Inspections

A portion of the facilities that are affected by this rule will be required to be inspected to assure that they are in compliance with the applicable regulations. If a facility is not in compliance, there can be negative impacts to human health and the environment as the materials still have the same physical (hazardous) properties.

The HWS receives complaints concerning facilities operating out of compliance with the rules from facility employees, other government agencies, neighbors of the facility and the media. Based on historical data on the types and numbers of facilities involved in complaints, it is estimated that there will be 10 complaints per year of facilities affected by this rule.

The HWS conducts an average of 1,000 inspections of hazardous waste generator facilities per year. It is estimated that 5% of these facilities will involve HSM resulting in 50 additional inspections per year.

Inspections and complaint investigation involve several different employees with different job descriptions, positions and salaries including: Inspectors, Chemists, Branch Head, Section Chief and Administrative staff. The breakdown of how the time for each position type involved and the associated cost is outlined on the next three pages.

Appendix A

Time Analysis for Complaints involving HSM

Receipt of complaint and follow up for more information:	30 minutes
<ul style="list-style-type: none"> - Gathering facts from call/email - Routing complaint to proper person - Returning call/email for more information 	
Researching Complaint and Preparing for Site Visit	1 hour
<ul style="list-style-type: none"> - Review of tax/property maps, internet search, Secretary of State, Website, CARA, RCRAInfo - Directions - Prepare equipment, paperwork, camera 	
Travel:	2 hours
<ul style="list-style-type: none"> - To and from facility (average) 	
On-site Review:	2 hours
Report Write up and Administrative	2 hours
<ul style="list-style-type: none"> - Report Write up (with pictures) and coversheets - Entering data into databases 	
Notice of Violation (NOV) Preparation	2 hours
<ul style="list-style-type: none"> - NOV preparation and review from Supervisor, Branch Head - Signature from Section Chief - Entering data into databases, mailing letters 	
Sample Review from Chemist	1 hour
Site Visit Follow up:	6 hours
<ul style="list-style-type: none"> - Travel - On-Site Review - Follow up report - Entering data into databases 	
Totals:	
Best Case: No merit to the complaint (resulting in a report and no NOV):	7.5 hours
Worst Case: NOV with sampling requirements and required follow up:	16.5 hours
Average time per complaint (this was used on the table):	12 hours

Cost/Time breakdown:

- Cost per hour is \$35.00 (see page 12 for explanation)
- Average time (12 hours) at \$35.00/hour = \$420 per complaint
- It is estimated that there will be 10 complaints involving HSM a year.
 - 10 complaints is derived from a percentage of the total complaints we currently investigate. Currently we investigate approximately 120 total complaints in a year. It is estimated that less than 10% of the complaints we typically investigate will be HSM complaints.
- 10 Complaints x 12 hours/complaint = 120 hours total for Complaints (on table)
- Mileage for each complaint is calculated at an average of 100 miles per complaint. Travel reimbursement per mile is \$.575. 100 miles at \$.575/mile = \$57.50 for mileage/complaint
 - 100 miles was used for the distance since this is an approximate average distance an inspector drives to a complaint.

Final total cost for complaints involving HSM:	10 complaints at \$420/complaint = \$4,200
Plus cost to reimburse mileage:	10 complaints at \$57.50/complaint = \$575

TOTAL cost: \$4,775.00

Appendix A

Time Analysis for Inspections involving HSM

Researching Complaint and Preparing for Site Visit	1 hour
– Review of tax/property maps, internet search, Secretary of State Website, CARA, RCRAInfo	
– Directions	
– Prepare equipment, paperwork, camera	
Travel:	2 hours
– To and from facility (average)	
On-site Review:	4 hours
Report Write up and Administrative	2 hours
– Report Write up (with pictures) and coversheets	
– Entering data into databases	
Notice of Violation (NOV) Preparation	2 hours
– NOV preparation and review from Supervisor, Branch Head	
– Signature from Section Chief	
– Entering data into databases, mailing letters	
Site Visit follow up:	8 hours
– Travel	
– On-Site Review	
– Follow up report	
– Entering data into databases	
Totals:	
Best Case: Compliant Inspection:	9 hours
Worst Case: NOV issued for non-compliance inspection and required follow up:	19 hours
Average time (this was the number used for the table):	14 hours

Cost/Time breakdown for Inspections:

- Cost per hour is \$35.00 (see page 12 for explanation)
- Average time (14 hours) at \$35.00/hour = \$490 per inspection
- It is estimated that there will be 50 inspections at facilities involving HSM per year.
 - 50 inspections is derived from a percentage of the total facilities that are currently inspected. It is estimated that 5% of the facilities will involve HSM.
- 50 Inspections x 14 hours/inspections = 700 hours total time spent (on table)
- Mileage for each inspection is calculated at an average of 100 miles per inspection. Travel reimbursement per mile is \$.575. 100 miles at \$.575/mile = \$57.50 for mileage/inspection
 - 100 miles was used for the distance since this is an approximate average distance an inspector drives to an inspection.

Final total cost for inspections involving HSM:	50 inspections at \$490/inspection = \$24,500
Plus cost to reimburse mileage:	50 inspections at \$57.50/inspection = \$2,875

TOTAL cost: \$27,375

Appendix A

Explanation of the \$35.00/hour Cost Estimate

Salary Estimates (with benefits included)

For Position

Inspector Salary (\$53,000 with 22 years of service):	\$32.25/hour
Chemist (\$53,000 with 28 years of service):	\$32.57/hour
Supervisor (\$55,000 with 22 years of service):	\$33.39/hour
Branch Head (\$76,000 with 31 years of service):	\$45.84/hour
Section Chief (\$86,000 with 20 years of service):	\$51.09/hour
Admin (\$45,000 with 20 years of service):	\$27.69/hour

The average amount of average time (12 hours) spent on Complaints was weighted from time each position spent on the Complaint from page 11:

<u>Position</u>	<u>Portion of Time (in hours) Spent on Complaint that is 12 hours time total for all positions</u>	<u>Salary/hour x Portion of Time Spent = Cost per hour</u>
Inspector:	(6.5 hrs/12hrs)= 0.54	\$17.42
Chemist:	(2hrs/12hrs) = 0.167	\$ 5.46
Supervisor:	(1hr/12hrs) = 0.083	\$ 2.77
Branch Head:	(1hr/12hrs) = 0.083	\$ 3.80
Section Chief:	(1hr/12hrs) = 0.083	\$4.24
Admin:	(.5hr/12hrs) = 0.04	\$1.11

Total Cost per hour for Complaints = \$ 34.80 (rounded up to \$35)

The average amount of average time (14 hours) spent for an Inspection was weighted from time each position spent on the Inspection from page 12:

<u>Position</u>	<u>Portion of Time (in hours) Spent on Inspections that is 14 hours time total for all positions</u>	<u>Salary/hour x Portion of Time Spent = Cost per hour</u>
Inspector:	(8.5 hrs/14hrs)= 0.61	\$19.67
Supervisor:	(3hr/14hrs) = 0.21	\$ 7.01
Branch Head:	(1hr/14hrs) = 0.071	\$ 3.25
Section Chief:	(1hr/14hrs) = 0.071	\$3.62
Admin:	(.5hr/14hrs) = 0.04	\$1.11

Total Cost per hour = \$ 34.66 (rounded up to \$35)

Appendix B

Development of Cost Estimates for Enforcement

Informal enforcement actions (Notice of Violation) are already accounted for in the Development of Cost Estimates for Inspections and Complaints section so this section focuses on enforcement actions that result in a penalty.

The average of the Inspection and Investigation (I&I) costs from FY14 enforcements is \$1,184. When divided by the average cost per hour of time spent on enforcements (\$35.00/hour), the result shows the average number of hours spent on enforcements by staff other than the compliance order writer (i.e. Inspector, Chemist, Branch Head, Section Chief, Administrative staff).

$$\$1184 \div \$35.00/\text{hour} = 34 \text{ hours}$$

Based on an average of the past four compliance orders, the compliance order writer spends an average of 89.25 hours on a compliance order. This was rounded down to 89 hours.

Total time spent on a compliance order: 34 hours + 89 hours: 123 hours

Over the past five years the average number of enforcement cases per year is 6. Since the requirements for the management of secondary hazardous materials will be new, it is estimated that there will be 2 enforcement cases a year.

The total time spent on enforcements per year is estimated to be 246 hours at a cost of \$35/hour.

Total cost for enforcements per year is: \$8,610.00

Appendix C

Development of Cost Estimates for Education and Outreach

To effectively implement the new rule and to adequately inform the entities that would benefit from the rule, the HWS would have to offer educational and informational materials that would require the time of staff. These costs were estimated for the following items and actions:

	HOURS	TOTAL
Development of Educational Materials:		
– Guidance Documents/ Fact sheets	8	
○ Summarizing Rule	16	
○ Writing and proofing	16	
– Power Point for Presentation	16	40
Web Page		
– Summarize and collect documents	16	
– Format and add to existing web page	16	32
Education Presentation:		
– Practice	4	
– Presentations (5/ year)	5	9
○ (other associated presentation costs are not considered as it is added to the existing annual training given by the HWS-Compliance Branch)		
<hr/>		
Total:		81

The 81 hours of staff time for education and outreach at the average of \$35/hour results in a cost to the Section of \$2,835.00.

Appendix D

Development of Cost Estimates for Notification

There will be an estimated 100 facilities that will be required to notify the Hazardous Waste Section with this rule. Each notification must be reviewed and administratively processed (entered into the Hazardous Waste Section database, filed, etc) by a Processing Assistant. This process is estimated to take a total of 25 hours at \$21.28 per hour resulting in a cost to the Section of \$532.00.

Appendix E

Development of Cost Estimates for Financial Assurance

There will be an estimated two facilities that will require a financial assurance review by the Hazardous Waste Section with this rule. Each financial assurance submittal must be reviewed by the Financial Analyst. This process is estimated to take 13 hours per application at \$34.30 per hour resulting in a cost to the Section of \$891.80. This cost is rounded up to \$892.00.

Appendix F

Development of Cost Estimates for Variance Review

A generator may apply for a variance from classification as a solid waste or apply for a non-waste determination. Based on five recent projects that are either exclusion requests or variance requests submitted for the 2014 year, the average review time is 144 hours. At a staff rate of \$35 per hour the estimated review cost will be \$5,040 per request. Under the revised rule, variances and non-waste determinations are effective for 10 years. Previously approved requests will need to be reviewed every 10 years. The estimated cost does not include financial assurance review time. It is estimated that there will be an increase of 4 variance requests and non-waste determinations per year for an annual cost to the section of \$20,160.

Appendix G

Development of Cost Estimates for Verified Recycler Review

Under the revised rule, generators who want to recycle their HSM without having them become hazardous waste must send their materials to either a RCRA permitted reclamation facility or to a verified recycler of HSM who has obtained a solid waste variance from EPA or the authorized state. In order to obtain a verified recycler exclusion a reclamation facility will need to provide the following information for review and approval: documentation of legitimate recycling, a closure plan, financial assurance, substantial compliance information, a contingency plan, documentation of training, documentation of proper management of residuals, steps taken to protect communities and reduce risk of releases, and information on proper HSM containment. The information needed is similar to some of the information required for a RCRA permit. Based on permit review experience, it is estimated that the review and approval process for a verified recycler will be approximately 320 hours, excluding review of financial assurance documentation. At a rate of \$35 per hour, the cost to the section is \$11,200 per review. The four Safety-Kleen commercial facilities may elect to become verified recyclers and we estimate that two non RCRA permitted recycling facilities may elect to become verified recyclers. Variances granted for verified recyclers are effective for 10 years. Based on this we estimate that the section could receive two verified recycler applications per year for a cost to the section of \$22,400 per year.

Appendix H

Development of Additional Cost Estimates for Environmental Impacts and Corrective Action

Because this rule only affects the definition of wastes, the same materials with the same hazards are still being managed at facilities. Because there is still potential for accidents or mismanagement of these hazardous materials, environmental contamination may occur. When environmental damages occur, they must be remediated or monitored if remediation is not possible. These costs are hard to quantify because of the huge variability in the potential extent of contamination, the hazard of the material being released, the type of environmental media contaminated (soil, groundwater, water, etc.). The responsiveness of the facility responsible is also a factor. If the facility is un-cooperative, enforcement, attorney fees etc. increase the cost. In developing the range of time and cost we assumed that the facility was self-notifying (eliminated inspection costs) and cooperative (eliminating enforcement/ attorney costs). Two scenarios were presented which represent the two major types of remediation/corrective actions scenarios the Section manages: sites with soil contamination only and sites with soil and groundwater contamination. The chart below shows how these costs were developed.

Soil contamination only

Note: If the Hazardous Waste Section had to be involved in organizing sampling, contamination removal, cleanup and soil remediation the costs to the Section would be much higher.

Remediation plan review and comments	10 days
Revised plan review/ approval	10 days
Site visits during work	5 days
Report review and comments	5 days
Additional excavation/ final report review	<u>5 days</u>
Total	35 days (280 hours) = \$9,800

Release with soil and groundwater contamination

In addition to the above hours:

Plan review to identify extent of plume	10 days
Report review, additional wells needed	5 days
2 nd review additional wells needed	5 days
Site visits	5 days
Remediation plan review and comment	
Up to 4 weeks	20 days
System installation site visits	5 days
Review and comment initial report	<u>5 days</u>
Total	55 days (440 hours) = \$15,400

Quarterly monitoring report review and in-depth 5 year and final rpt review, Year 5	30 days (240 hours) = \$8,400
Total over 10 years	60 days (480 hours) = \$16,800
Total over 20 years	120 days (960 hours) = \$33,600

Totals:

Site with potential soil contamination only = 280 hours = **\$9,800**

Site with soil and groundwater contamination; soil remediation and a groundwater remediation installation over 2-5 years = 280+440+240= 720 hours = **\$25,200**

Site with soil and groundwater contamination and monitoring up to 20 years = 280+440+960 = 1,680 hours = **\$58,800.**

Calculations based on \$35/hr. personnel cost from Appendix A and assuming no raises in personnel costs over time.

Appendix I

Development of Additional Cost Estimates for Tax Certification

There is not expected to be a change in the type, number, or time involved in any tax certification request from the implementation of this rule. If there were any new applications, it takes an average of 15 hours to review and either approve or disapprove an application.

Appendix J

Development of Loss of Fees Estimates

Under RCRA, businesses are categorized and regulated by the quantity of hazardous wastes they generate. This rule would allow materials previously classified as hazardous waste to now be classified as HSM instead. This will allow a business to recalculate the quantity of waste they generate and thus change (reduce) their generator category. There are three generator categories: Large Quantity Generator (LQG), Small Quantity Generator (SQG) and Conditionally Exempt Small Quantity Generator (CESQG). The Hazardous Waste Section charges a fee based on a business's generator category. LQGs pay \$1,400 per year and SQGs must pay \$175 per year and there is no fee for CESQGs. The annual reports were reviewed for the number of facilities and the quantities of wastes generated in NC that could be affected by this rule. We estimate that 90 SQGs could change status to CESQG and 50 LQG could change to SQG status. The potential loss to the Section is \$77,000.

Loss of Tonnage Fees

The HWS reviewed the latest Biennial Hazardous Waste Report (2013) to determine the quantities of wastes that could be affected by this rule. Wastes that were reported under the codes for metal recovery (H010), solvent recovery (H020) and "other recovery or reclamation for reuse" (H039) were reviewed and totaled. This resulted in 45,200 tons of material generated annually that could potentially be removed from the definition of hazardous waste. The HWS charges a fee of \$0.70 per ton of waste generated up to a maximum of 25,000 tons. The potential loss to the Section is \$31,640.

Some examples of hazardous amounts and tonnage fees from the 2013 Biennial Hazardous Waste Report for the largest hazardous waste generators in the state include the following: Nucor Steel Hertford County was the largest generator of these wastes generating in excess of 32,603 tons and were billed for 25,000 tons; Ameristeel generated 4,670 tons; and DSM Pharmaceuticals and Sherwin Williams combined generated 4,504 tons of solvent waste.

Loss of Fees from Commercial Facilities

Four of the nine commercial facilities in North Carolina primarily manage waste that may be defined as HSM under the new rule. With the new rule in place, the loss in tonnage fees to the Section from these facilities is expected to be (approximately) \$5,473 per year. If these facilities do not maintain their RCRA permit, the monthly fee will be eliminated for a loss to the Section of \$63,936 per year.

Appendix K

Current State Adoption Plans

Below is the status of the adoption of the 2015 DSW Rule from Association of State and Territorial Solid Waste Management Officials. This information is subject to change but was current as of September 24, 2015.

- EPA administers the program – 2015 DSW Rule already in place: Alaska, Iowa
- 2015 DSW Rule already adopted: New Jersey, Pennsylvania
- Plan to adopt 2015 DSW Rule in full:
 - By December 2015: Tennessee, North Dakota
 - By July 2016: Georgia, Illinois, Oklahoma, Texas, Wisconsin, West Virginia
 - By December 2016: Kentucky, Indiana, New Mexico, Nevada, Montana, South Dakota
 - By September 2017: Arkansas, Idaho, Louisiana
 - By December 2018: Ohio
 - No time frame yet: Alabama, Florida, Hawaii, Nebraska
- Plan to adopt in full (with modifications):
 - By July 2016: North Carolina
 - No time frame yet: Virginia, Minnesota
- Plan to adopt only more stringent parts:
 - By December 2017: Vermont
 - No time frame yet: California, Connecticut, District of Columbia, Massachusetts, Maine, New Hampshire, Rhode Island
- Still deciding what parts of the rule to adopt: Arizona, Colorado, Delaware, Kansas, Guam, Maryland, Michigan, Missouri, Mississippi, New York, Oregon, South Carolina, Utah, Wyoming

Appendix L
Proposed Amendments

1 15A NCAC 13A .0102 is proposed for amendment as follows:
2

3 **15A NCAC 13A .0102 DEFINITIONS**

4 (a) The definitions contained in G.S. 130A-290 apply to this Subchapter.

5 (b) 40 CFR 260.10 (Subpart B), Definitions, is incorporated by reference, including subsequent amendments and
6 editions except that the Definitions for "Disposal", "Landfill", "Management or hazardous waste management",
7 "Person", "Sludge", "Storage", and "Treatment" are defined by G.S. 130A-290 and are not incorporated by ~~reference,~~
8 reference and the ~~definitions~~ definition in 260.10 for "Contained" ~~"Facility", "Transfer Facility", "Hazardous~~
9 ~~secondary material", "Hazardous secondary material generated and reclaimed under the control of the generator",~~
10 ~~"Hazardous secondary material generator", "Intermediate facility", and "Land based unit" are not incorporated by~~
11 ~~reference~~ is not incorporated by reference.

12 (c) ~~The following definitions shall be substituted for "Facility" and "Transfer Facility":~~ The following definition shall
13 be substituted for "Contained":

14 (1) ~~"Facility" means:~~

15 (A) ~~All contiguous land, structures, other appurtenances, and improvements on the land, used~~
16 ~~for treating, storing, or disposing of hazardous waste. A facility may consist of several~~
17 ~~treatment, storage, or disposal operational units (e.g., one or more landfills, surface~~
18 ~~impoundments, or combinations of them).~~

19 (B) ~~For the purpose of implementing corrective action under 40 CFR 264.101, all contiguous~~
20 ~~property under the control of the owner or operator seeking a permit under Subtitle C of~~
21 ~~RCRA. This definition also applies to facilities implementing corrective action under~~
22 ~~RCRA Section 3008(h).~~

23 (C) ~~Notwithstanding Part (B) of this definition, a remediation waste management site is not a~~
24 ~~facility that is subject to 40 CFR 264.101, but is subject to corrective action requirements~~
25 ~~if the site is located within such a facility.~~

26 (2) ~~"Transfer facility" means any transportation related facility including loading docks, parking areas,~~
27 ~~storage areas and other similar areas where shipments of hazardous waste are held during the normal~~
28 ~~course of transportation.~~

29 (1) "Contained" means held in a unit (including a land-based unit as defined in this subpart) that meets
30 the following criteria:

31 (A) The unit is in good condition, with no leaks or other continuing or intermittent unpermitted
32 releases of the hazardous secondary materials or hazardous constituents originating from
33 the hazardous secondary materials to the environment, and is designed, as appropriate for
34 the hazardous secondary materials, to prevent releases of hazardous secondary materials to
35 the environment. Unpermitted releases are releases that are not covered by a permit (such
36 as a permit to discharge to water or air) and may include, but are not limited to, releases
37 through surface transport by precipitation

1 runoff, releases to soil and groundwater, windblown dust, fugitive air emissions, and
 2 catastrophic unit failures;

3 (B) The unit is properly labeled or otherwise has a system (such as a log) to immediately
 4 identify the hazardous secondary materials in the unit; and

5 (C) The unit holds hazardous secondary materials that are compatible with other hazardous
 6 secondary materials placed in the unit and is compatible with the materials used to
 7 construct the unit and addresses any potential risks of fires or explosions.

8 (D) Hazardous secondary materials in units that meet the applicable requirements of 40 CFR
 9 parts 264 or 265 are presumptively contained.

10 (d) The following additional definitions shall apply throughout this Subchapter:

- 11 (1) "Section" means the Hazardous Waste Section, in the Division of Waste Management, Department
 12 of ~~Environment and Natural Resources~~ Environmental Quality.
- 13 (2) The "Department" means the Department of Environment ~~and Natural Resources (DENR)~~
 14 Environmental Quality (DEQ).
- 15 (3) "Division" means the Division of Waste Management (DWM).
- 16 (4) "Long Term Storage" means the containment of hazardous waste for an indefinite period of time in
 17 a facility designed to be closed with the hazardous waste in place.
- 18 (5) "Off-site Recycling Facility" means any facility that receives shipments of hazardous waste from
 19 off-site to be recycled or processed for recycling through any process conducted at the facility, but
 20 does not include any facility owned or operated by a generator of hazardous waste solely to
 21 recycle their own waste.

22

23 *History Note: Authority G.S. 130A 294(c); 150B-21.6;*
 24 *Eff. September 1, 1979;*
 25 *Amended Eff. June 1, 1989; June 1, 1988; February 1, 1987; October 1, 1986;*
 26 *Transferred and Recodified from 10 NCAC 10F .0002 Eff. April 4, 1990;*
 27 *Amended Eff. April 1, 1993; October 1, 1990; August 1, 1990;*
 28 *Recodified from 15A NCAC 13A .0002 Eff. December 20, 1996;*
 29 *Amended Eff. August 1, 2000;*
 30 *Temporary Amendment Eff. January 1, 2009;*
 31 *Amended Eff. July 1, 2010.*

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1 15A NCAC 13A .0103 is proposed for amendment as follows:
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3 **15A NCAC 13A .0103 PETITIONS PART 260**

4 (a) All rulemaking petitions for changes in this Subchapter shall be made in accordance with ~~15A NCAC 24B~~
5 ~~.0101~~, 15A NCAC 02I .0501.

6 (b) In applying the federal requirements incorporated by reference in this Rule, "~~15A NCAC 24B .0101~~" 15A NCAC
7 02I .0501 shall be substituted for references to 40 CFR 260.20.

8 (c) 40 CFR 260.21 through 260.43 (Subpart C), "Rulemaking Petitions," are incorporated by reference including
9 subsequent amendments and editions, editions. ~~except that 40 CFR 260.30(d), 260.30(e), 260.33(e), 260.34, 260.42~~
10 ~~and 260.43 are not incorporated by reference.~~

11

12 *History Note: Authority G.S. 130A-294(c); 150B-21.6;*

13 *Eff. November 19, 1980;*

14 *Amended Eff. June 1, 1988; May 1, 1987; January 1, 1986; October 1, 1985;*

15 *Transferred and Recodified from 10 NCAC 10F .0028 Eff. April 4, 1990;*

16 *Amended Eff. April 1, 1993; November 1, 1991; October 1, 1990;*

17 *Recodified from 15A NCAC 13A .0003 Eff. December 20, 1996;*

18 *Amended Eff. August 1, 2000;*

19 *Temporary Amendment Eff. January 1, 2009;*

20 *Amended Eff. July 1, 2010.*

21

1 15A NCAC 13A .0106 is proposed for amendment as follows:

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3 **15A NCAC 13A .0106 IDENTIFICATION AND LISTING OF HAZARDOUS WASTES - PART 261**

4 (a) 40 CFR 261.1 through 261.9 (Subpart A), "General", are incorporated by reference including subsequent
5 amendments and ~~editions, editions. except that 40 CFR 261.2(a)(2)(ii) and 40 CFR 261.4(a)(23), 261.4(a)(24), and~~
6 ~~261.4(a)(25) are not incorporated by reference.~~

7 (b) 40 CFR 261.10 through 261.11 (Subpart B), "Criteria for Identifying the Characteristics of Hazardous Waste and
8 for Listing Hazardous Waste", are incorporated by reference including subsequent amendments and editions.

9 (c) 40 CFR 261.20 through 261.24 (Subpart C), "Characteristics of Hazardous Waste" are incorporated by reference
10 including subsequent amendments and editions.

11 (d) 40 CFR 261.30 through 261.37 (Subpart D), "Lists of Hazardous Wastes" are incorporated by reference including
12 subsequent amendments and editions.

13 (e) 40 CFR 261.38 through 261.41 (Subpart E), "Exclusions/Exemptions" are incorporated by reference including
14 subsequent amendments and editions.

15 (f) 40 CFR 261.140 through 261.151 (Subpart H), "Financial Requirements for Management of Excluded Hazardous
16 Secondary Materials" are incorporated by reference including subsequent amendments and editions.

17 (g) 40 CFR 261.170 through 261.179 (Subpart I), "Use and Management of Containers" are incorporated by reference
18 including subsequent amendments and editions.

19 (h) 40 CFR 261.190 through 261.200 (Subpart J) "Tank Systems" are incorporated by reference including subsequent
20 amendments and editions.

21 (i) 40 CFR 261.400 through 261.420 (Subpart M), "Emergency Preparedness and Response for Management of
22 Excluded Hazardous Secondary Materials" are incorporated by reference including subsequent amendments and
23 editions.

24 (j) 40 CFR 261.1030 through 261.1049 (Subpart AA) "Air Emission Standards for Process Vents", are incorporated
25 by reference including subsequent amendments and editions.

26 (k) 40 CFR 261.1050 through 261.1079 (Subpart BB) "Air Emission Standards for Equipment Leaks" are incorporated
27 by reference including subsequent amendments and editions.

28 (l) 40 CFR 261.1080 through 261.1090 (Subpart CC) "Air Emission Standards for Tanks and Containers" are
29 incorporated by reference including subsequent amendments and editions.

30 ~~(m)~~ (m) The Appendices to 40 CFR Part 261 are incorporated by reference including subsequent amendments and
31 editions.

32
33 *History Note: Authority G.S. 130A-294(c); 150B-21.6;*

34 *Eff. November 19, 1980;*

35 *Amended Eff. June 1, 1988; February 1, 1988; December 1, 1987;*

36 *August 1, 1987;*

37 *Transferred and Recodified from 10 NCAC 10F .0029 Eff. April 4, 1990;*

1 *Recodified from 15A NCAC 13A .0007 Eff. August 30, 1990;*
2 *Amended Eff. January 1, 1996; April 1, 1993; February 1, 1992;*
3 *December 1, 1990;*
4 *Recodified from 15A NCAC 13A .0006 Eff. December 20, 1996;*
5 *Amended Eff. April 1, 2007; August 1, 2000;*
6 *Temporary Amendment Eff. January 1, 2009;*
7 *Amended Eff. July 1, 2010*

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