Partner for Change - 2016: Waste

Introduction

Practice Greenhealth recommends **comprehensive waste tracking** as a starting point for any healthcare institution looking to improve its environmental footprint. Understanding the breakdown of both cost and weight for different waste categories can be one of the easiest strategies to identify areas of opportunity and low-hanging fruit. Beyond waste data, understanding how waste can be prevented, or shifted from a more environmentally-intensive (and expensive) waste stream to a less environmentally intensive waste stream (e.g., from **regulated medical waste** into **recycling**) is key to truly reducing the facility's waste footprint.

Baseline Year:The facility's baseline year is generally the **first year the facility started tracking waste data**. Some facilities use the first year they apply for an Award. If 2015 is your first year of waste tracking, please enter it in both the **Baseline Year** and the **Current Year** column, and it will become your baseline for next year's award data.

1. **Baseline Year**:

The waste data in this section requires **12 consecutive months of waste data**. While energy data must be tracked in a calendar year, waste data can utilize a fiscal year if preferable. We ask that you please use the **same 12 months consistently** each year you apply, so we can compare year-to-year totals effectively.

Solid Waste

Please indicate the facility's **Solid Waste** totals in Table A below (enter a numerical response). You are required to complete the **Current Year** column at a minimum.

If you are using a vendor that uses a **flat fee for integrated waste removal** (e.g., RMW and **solid waste** go out at the same price per lb.), please enter your tonnage but do not include your cost data in Table A below, as it will skew the data set.

NEW in 2016 Non-RCRA Pharmaceutical Waste data will be captured in the category in which it is being treated/disposed. If the facility is segregating and collecting Non-RCRA Pharmaceutical Waste and disposing of it as **SOLID WASTE** (e.g. sent to a municipal waste incinerator), please enter Non-RCRA Pharm Waste data in **Table A. Solid Waste**. If Non-RCRA Pharm Waste is disposed of as **REGULATED MEDICAL WASTE** (e.g. sent to a RMW incinerator), please enter Non-RCRA Pharm Waste data in **Table C. Regulated Medical Waste**

Table A. **Solid Waste**

(Please do not use commas or $ signs.)

Solid Waste	TONS per Year Baseline	TONS per Year Previous	TONS per Year Current	Annual Costs Baseline	Annual Costs Previous	Annual Costs Current
Solid Waste	2.	3.	4.	5.	6.	7.
Non-RCRA Pharmaceutical Waste (MSW)	8.	9.	10.	11.	12.	13.
Total Solid Waste	14. 0	15. 0	16. 0	17. 0	18. 0	19. 0

20. How does your facility dispose of its regular (non-pharmaceutical) **solid waste**?

○ Landfill
○ Municipal Waste Incinerator
○ Waste-to-Energy Incinerator
● Other

> **20.a** Please describe other method to dispose of **solid waste**:

Recycling

21. How did the **recycling** program fare financially? (Please select one)

Select an option... ▼

22. Please explain:

23. Does the facility recycle clinical/**medical plastics** in the **operating room**?

● Yes
○ No

> **23.a** Does the facility recycle clinical plastics in departments beyond the OR?
>
> ○ Yes
> ○ No

> **23.b** Which clinical plastics are being recycled by the facility (select all that apply):
>
> ☐ Irrigation bottles
> ☐ Skin prep solution bottles
> ☐ Trays

☐ Overwraps
☐ Rigid inserts
☐ Blue wrap
☐ Tyvek
☐ Basins
☐ Urinals/Bedpans
☑ Other

23.b.a   Please describe any other plastic items being recycled:

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Please indicate tonnage and cost for the selected items above in **Appendix A**.

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24.   Does the facility recycle **precious metals** from clinical devices?

◉ Yes
○ No

24.a   Please indicate which metals from which devices:

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24.b   Please indicate vendor:

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Please indicate tonnage and cost for these materials in **Appendix A**.

Recycling Profile

Please enter the facility's individual **Recycling** Totals in **Appendix A**. The data will self-populate in the **Current Year** column in Table B.

Please enter baseline and previous year **recycling** tonnage and annual costs in Table B below. If this year is your first year of tracking **recycling** data, go ahead and enter the same number as **Current Year** in the **Baseline Year** column. Do not enter zeros. A negative number in cost field denotes a revenue (or rebates from **recycling**). Reuse and diversion are not included in this table but are credited elsewhere in the application. Construction & Demolition (C&D) waste **recycling** is tracked in the **Green Building**, Table C.

PLEASE NOTE: The tonnage and costs for Current Year will be autopopulated from Appendix A.

Table B. Recycling

Recycling Streams	TONS per Year Baseline	TONS per Year Previous	TONS per Year Current	Annual Costs Baseline	Annual Costs Previous	Annual Costs Current

	25.	26.	27.	28.	29.	30.
Recycling (Current Year data will be entered from Appendix A)			0			0
Universal Waste (Current Year data will be entered from Appendix A)	31.	32.	33. 0	34.	35.	36. 0
Recycling Total	37. 0	38. 0	39. 0	40. 0	41. 0	42. 0

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43. Is your facility participating in the **Recycling Goal** of the **Less Waste Challenge** of the Healthier Hospitals program?

⦿ Yes
○ No

43.a   Please describe any progress toward this goal:

Waste Reduction Activities

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44. Has the facility developed an **internal reuse** program or strategy for office supplies, clinical products and equipment, and furniture before making these materials available for external donation?

⦿ Yes
○ No

44.a   Please describe reuse program:

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45. Does your facility participate in or require through contracting a **Product Take Back Program** for any products after use?

⦿ Yes
○ No

45.a   Please describe:

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46. Has the facility developed an equipment and supplies **donation** program (domestic or abroad) for materials, equipment and furniture that can no longer be used internally? The Catholic Health Association provides an excellent discussion and resources on **Medical Surplus Recovery**.

⦿ Yes

○ No

46.a   Please indicate which items are routinely donated:

☐ Unexpired/unopened consumable clinical supplies
☐ Expired/opened consumable clinical supplies
☐ Capital medical equipment
☐ Electronics
☐ Furniture
☐ Linens
☐ Other supplies

46.b   Does organization ensure all donated medical supplies, equipment and electronics are **actually needed**, such as working with an organization that ensures the **needs of developing countries are met** with the donated items?

◉ Yes
○ No

46.b.a   Please outline your quality assurance process:

46.b.b   Please attach policy (if applicable):

46.b.c   Please indicate donation vendor:

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47.   Does the facility **require its distributor(s) to use reusable totes** for supply delivery?

◉ Yes
○ No

47.a   Please describe:

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48.   Does the facility **require the use of reusable totes** for other product areas beyond med/surg, such as food, office supplies, etc.?

◉ Yes
○ No

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49.   Has the facility implemented a **paper reduction** program?

○ Yes
○ No

49.a   Please indicate which activities the institution has pursued to gain those reductions. Please select all that apply.

☐ Reduced network printers
☐ Made double-sided printing the default on printers/copiers
☐ Reduced number of automatically printed reports
☐ Implemented EMR/EHR system
☑ Other

49.a.a   Please describe other paper reduction efforts:

50.   How many **cases** **of white copy paper** did the facility purchase in 2015?

Updated for 2016 In an effort to simplify this question for applicants, Practice Greenhealth is only looking to identify cases of <u>white copy paper</u>--which we hope will be easier to track by sku through your purchasing systems, suppliers or GPOs.

Regulated Medical Waste (RMW)

Please indicate the facility's **Regulated Medical Waste** totals in **Table C** below (enter a numerical response). If you cannot break out one of the waste types, please leave it blank; do not enter zero. If you are using a vendor that uses a **flat fee for integrated waste removal** (e.g., RMW and **solid waste** go out at the same price per lb), please enter your tonnage, but **DO NOT** include your <u>cost data</u> in **Table C** below, as it will skew the data set. All applicants must fill out **Current Year** tonnage and costs. If this year is your baseline year (e.g. first year of collecting accurate RMW data), please enter your **Current Year** totals in the **Baseline Year** column as well.

RMW Treated Onsite or Offsite:

Please include **all general RMW** in this number, including any RMW that is <u>treated onsite and landfilled</u>. If the facility normally combines treated RMW with its **solid waste**, please estimate weight or contact Awards Technical Assistance for guidance at **awards@practicegreenhealth** or 888-378-2259.

Incinerated RMW

Please include any RMW that is incinerated, such as pathology waste, trace chemotherapeutic waste, or any waste that is segregated and removed by a licensed hauler for **medical waste incineration**. This category may be very small.

Sharps

Sharps waste is typically tracked as a separate waste stream by **regulated medical waste** haulers and should be entered in the Sharps category. If sharps are incinerated, they can be included in the **Incinerated RMW** category. If the facility uses a reusable sharps container service, make sure the sharps disposal data does not include the **weight of the containers**.

Non-RCRA Pharmaceutical Waste

Non-RCRA pharmaceutical waste does not meet the EPA or state agencies' definition of hazardous waste but is still dangerous to human health and the environment. Many health care institutions choose to use a vendor to manage this waste stream as incinerate-only to protect health. This waste

stream is typically managed in a blue or white pharm waste container. This waste stream can be incinerated as municipal **solid waste** (if so please track in Table A.) or as RMW (please track in Table C.). Please <u>do not</u> enter non-RCRA pharmaceutical waste in both tables **or it will be double-counted**.

All Non-RCRA pharmaceutical waste data entered in either Table A or Table C will be autopopulated in Table E. Pharmaceutical Waste below.

Table C. <u>Regulated Medical Waste</u>

Regulated Medical Waste Stream	TONS per Year Baseline	TONS per Year Previous	TONS per Year Current	Annual Costs Baseline	Annual Costs Previous	Annual Costs Current
RMW (treated onsite or offsite)	**51.**	**52.**	**53.**	**54.**	**55.**	**56.**
Sharps	**57.**	**58.**	**59.**	**60.**	**61.**	**62.**
Non-RCRA Pharmaceutical Waste	**63.**	**64.**	**65.**	**66.**	**67.**	**68.**
Incinerated RMW	**69.**	**70.**	**71.**	**72.**	**73.**	**74.**
RMW total waste	**75.** 0	**76.** 0	**77.** 0	**78.** 0	**79.** 0	**80.** 0

RMW Waste Metrics Table

81. Staffed Beds: 0	**82.** **Operating Rooms**: 0	**83.** Patient Days: 0
84. Pounds of RMW per Staffed Bed per Day (The 2015 median value was 1.85, data ranged from 0.19 to 8.9) 0	**85.** Tons of RMW per OR (The 2015 median value was 4.51. Values ranged from 0.4 to 44). 0	**86.** Pounds of RMW per Patient Day (The 2015 median value was 2.83. Values ranged from 0.55 to 27.1) 0

For comparison purposes, based on data submitted from last year's Award winners, median values were: **1.85 pounds of RMW per staffed bed per day** (with values ranging from 0.19 to 8.9 lbs of RMW/ staffed bed/ day); **4.51 tons of RMW per OR** (with values ranging from 0.4 to 44 tons of RMW per OR; and 2.82 pounds of RMW per patient day (with values ranging from 0.06 to 27.1 pounds of RMW per patient day).

87. Does the facility incinerate any portion of its **regulated medical waste** (RMW)?

⦿ Yes
○ No

87.a Please indicate which medical waste streams are incinerated:(Please select all that apply)

☐ General RMW
☐ Path/Chemo
☐ Sharps
☐ Non-RCRA Pharm

☐ Other

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88. Does the facility disinfect/treat any portion of its RMW using **onsite technology**?

◉ Yes
○ No

Please <u>do not include</u> fluid management systems that empty to the sanitary sewer in this question.

88.a Which of the following **technologies** does the facility use to treat RMW onsite? (Select one).

☐ Autoclave
☐ Rotoclave
☐ Microwave
☐ Chemical disinfection
☐ Incineration
☐ Other

88.b If the facility treats its RMW onsite, this treated waste is disposed as:

○ Solid waste
○ Treated medical waste
◉ Other

88.b.a Please describe how treated waste is disposed of:

88.c How does the facility **track its RMW volume or weight** if it treats RMW onsite?

○ The waste is weighed manually.
○ The equipment weighs the material and the facility tracks this weight.
○ It is estimated and tracked.
○ The treated RMW is considered part of solid waste volume.
○ The facility does not track this weight.
◉ Other

88.c.a Please describe other method to track waste:

88.d Does the facility track the cost of treating RMW in-house?

◉ Yes
○ No

88.d.a The facility includes these costs

☐ Power/utilities

☐ Water/sewer
☐ Staff time
☑ Other

88.d.a.a Please describe:

[ ]

RMW Reduction/Minimization Strategies

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89. Has the facility eliminated the standard use of red bag waste (RMW) containers **in regular patient rooms**?

◉ Yes
○ No

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90. Has the facility implemented a **Reusable Sharps Container** program?

[Yes ▼]

90.a How many **tons of plastic** were diverted from the landfill or other disposal as a result of the reusable sharps container program?

[ ]

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91. Has your facility implemented a single-use device (SUD) reprocessing program with an FDA-approved third party reprocessor?

◉ Yes
○ No

Updated in 2016 A successful reprocessing program includes many patient care areas as well as the **operating room**. To simplify the application process, Practice Greenhealth is collecting all data pertaining to SUD reprocessing on the **Greening the OR section** of the Partner for Change application. Please enter all data pertaining to your facility's reprocessing collection and purchasing program - inside and outside the **operating room** - on that page.

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92. Is your facility participating in the **Regulated Medical Waste** Reduction Goal of the **Less Waste Challenge** of the Healthier Hospitals program?

◉ Yes
○ No

92.a Please describe any progress toward this goal:

[ ]

Pharmaceutical Waste

Non-RCRA Pharmaceutical Waste

Segregating non-RCRA regulated pharmaceutical waste for incineration is currently considered a best management approach. For facilities using a pharmaceutical waste vendor (not Reverse Distribution), this is typically the blue or white container. Non-RCRA Pharmaceutical Waste data is entered in **Table A** (if disposed of through municipal waste incineration) or **Table C** (if disposed of through RMW incineration). Data from Tables A or C will autopopulate **Table E. Pharmaceutical Waste** below. Pharmacy, Environmental Services, EH&S or your pharmaceutical waste vendor are good resources to identify the waste pharmaceutical tonnage.

RCRA-Regulated Hazardous Pharmaceutical Waste

RCRA hazardous pharmaceutical waste is comprised of waste that is either listed as hazardous or meets the characteristics of hazardous waste in **EPA's Resource Conservation and Recovery Act (RCRA)** or via state agency. This waste stream should not be confused with red bag or "biohazardous" waste. For facilities using a pharmaceutical waste vendor (not Reverse Distribution), this is typically the black container.

Please enter the facility's RCRA Hazardous Pharmaceutical Waste totals **in tons** in Table E below. Entering RCRA Hazardous Pharm Waste data in this table will auto-populate **Table G. Hazardous Waste** below.

All applicants must enter **Current Year** tonnage and costs. If this is the first year for which you have accurate pharmaceutical waste data, please enter your **Current Year** totals in the **Baseline Year** column as well. If the facility does not break out a waste type, leave that space blank, **do not enter zeros**.

Enter data in tons. Pounds can be easily converted to tons by dividing poundage by 2000.

Table E. Pharmaceutical Waste

Pharmaceutical Waste Stream	TONS per Year Baseline	TONS per Year Previous	TONS per Year Current	Annual Costs Baseline	Annual Costs Previous	Annual Costs Current
RCRA-Hazardous Pharmaceutical Waste	**93.**	**94.**	**95.**	**96.**	**97.**	**98.**
Non-RCRA Pharmaceutical Waste (MSW)	**99.** 0	**100.** 0	**101.** 0	**102.** 0	**103.** 0	**104.** 0
Non-RCRA Pharmaceutical Waste (RMW)	**111.** 0	**112.** 0	**113.** 0	**114.** 0	**115.** 0	**116.** 0
Total Pharmaceutical Waste	**105.** 0	**106.** 0	**107.** 0	**108.** 0	**109.** 0	**110.** 0

Table F. Pharmaceutical Waste Metrics

Total Pounds of Pharmaceutical Waste per Patient Day	Total Pounds of Pharmaceutical Waste per Adjusted Patient Day	Total Pounds of Pharmaceutical Waste per Staffed Bed/Day
117. (2015 median value was 0.21; values ranged from 0.001 to 3.45) 0	**118.** (2015 median value was 0.10; values ranged from 0.002 to 2.48) 0	**119.** (2015 median value was 0.15; values ranged from 0.003 to 2.46) 0

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120. If the facility has not provided data for Non-RCRA Pharmaceutical Waste, how is the facility is currently handling waste pharmaceuticals that are not regulated as Hazardous Waste (such as antidepressants, statins, antibiotics, etc.): (Please select all that apply).

- ☐ We treat all pharm waste as RCRA-hazardous to better protect human health and the environment
- ☐ Pharm waste is being disposed of in red bags or sharps containers
- ☐ Pharm waste is going down the drain
- ☐ Pharm waste is going into clear trash bags
- ☑ Other
- ☐ I don't know

120.a Please explain other methods for disposing of non-RCRA pharmaceuticals:

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121. Has the facility taken any measures to **reduce the generation** of pharmaceutical waste?

- ⦿ Yes
- ○ No

121.a Please describe:

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122. Is the facility aware of the **DEA's updated rule** on the disposal of controlled substances?

- ⦿ Yes
- ○ No

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123. What mechanism(s) is the facility currently using for the disposal of controlled substances? Select all that apply.

- ☐ Wasting to drain
- ☐ Containment with reverse distribution
- ☑ Other

123.a Please describe other method of rendering controlled substances irretrievable:

Hazardous Waste

Please enter the facility's Hazardous Waste total in tons in **Table G. Hazardous Waste** below. All applicants must enter **Current Year** tonnage and costs. If this is the facility's first year of tracking comprehensive waste data, please enter the hazardous waste tonnage from **Current Year** in the **Baseline Year** column.**Do not enter zeros. All health care facilities generate some amount of hazardous waste.**.

If your hazardous waste is in gallons or a mix of gallons and pounds, please convert to tons. It is most accurate to convert gallons to tons using the specific gravity of the waste liquid. However, if this is unavailable, convert gallons to tons using a general conversion factor of 8.35 lbs=1 gallon (e.g., there are approximately 8.35 pounds in a gallon of liquid). Pounds can be easily converted to tons by dividing poundage by 2000.

RCRA-Regulated Hazardous Waste

Please note that your facility's hazardous waste tonnage **should not be zero**. Hazardous waste includes waste solvents, lab fixatives and stains, spill clean-up residue, lab packs, refrigerants, or any "listed" or "characteristic waste" per RCRA regulations. Check with your Laboratory Manager, Pharmacy Director, Safety Director, Hazardous Materials Coordinator, hazardous waste hauler, Accounts Payable, or review waste removal manifests to identify hazardous waste removal documentation that will provide you with the data needed for this section.

Table G. Hazardous Waste Table

Hazardous Waste Stream	TONS per Year Baseline	TONS per Year Previous	TONS per Year Current	Annual Costs Baseline	Annual Costs Previous	Annual Costs Current
RCRA-Regulated Hazardous Waste	**124.**	**125.**	**126.**	**127.**	**128.**	**129.**
RCRA-Regulated Hazardous Pharmaceutical Waste	**130.** 0	**131.** 0	**132.** 0	**133.** 0	**134.** 0	**135.** 0
Total Hazardous Waste	**136.** 0	**137.** 0	**138.** 0	**139.** 0	**140.** 0	**141.** 0

Hazardous Waste Minimization Activities

142. Has the facility established a contract with a **certified electronics waste/recycling vendor** that is **certified to e-Stewards** (or subcontractors that use e-Stewards certified vendors) for legal and environmentally responsible electronics (or e-waste) management and **recycling**?

Yes ▾

142.a Please provide name of vendor:

Please enter tonnage and cost for **electronics recycling** in **Appendix A**.

143. Does the facility use **digital x-rays**--which reduce the use and disposal costs of fixer solutions?

◉ Yes
○ No

144. How does the facility handle its fluorescent lamps?

Other ▾

144.a Please describe:

Important Note: The act of crushing fluorescent lamps releases mercury vapor into the atmosphere and is not recommended by the EPA or Practice Greenhealth. Crushed lamps must be removed as hazardous waste by a licensed hazardous waste hauler and cannot be counted toward **recycling** or **Universal Waste** totals. Learn more at **EPA's Mercury Lamp Drum Top Crusher Study (2006).**

145. Does the facility recycle batteries?

⦿ Yes
◯ No

145.a Please indicate which of the following types of batteries you recycle:

☐ Ni-Cd
☐ Lead-acid
☐ Lithium ion
☐ Alkaline
☐ Mercuric oxide
☐ Ni-MH
☐ Other

Please indicate tonnage and cost for battery **recycling** in **Appendix A**.

146. Does your facility have an **onsite laboratory**?

⦿ Yes
◯ No

146.a Has your facility done any work to green its laboratory?

⦿ Yes
◯ No

146.a.a Please describe:

146.b Does the facility **recycle, reprocess or distill solvents, alcohols or other chemicals** from the lab (such as xylene, alcohols or formalin)?

⦿ Yes
◯ No

Please enter distillation data in Table H. In this table, please enter savings as a positive number. If you do not have one of the numbers, leave it blank, do not enter zero.

Table H. Solvent Distillation

Solvent	Gallons distilled annually	Annual savings from avoided virgin solvent purchase	Annual savings from reduced disposal costs
Xylene			
Alcohols			
Formalin			

Other			
Total gallons and costs	0	0	0

Waste Summary

The following items have been **automatically calculated** based on the information that was provided in Tables A, B,C, and G. If the numbers do not look accurate, check the tonnage and costs entered in those Tables.

Table I. Total Waste Tonnage and Cost (comprised of **Solid Waste**, **Recycling**, RMW and Hazardous Waste)

	Total Tonnage (Baseline)	Total Tonnage (Previous)	Total Tonnage (Current)	Total Cost (Baseline)	Total Cost (Previous)	Total Cost (Current)
Total Waste	**147.** 0	**148.** 0	**149.** 0	**150.** 0	**151.** 0	**152.** 0

Table J. Total Waste Metrics

Based on the information above, the facility's **total pounds of waste per patient day** is:	Based on the information above, the facility's **total pounds of waste per Adjusted Patient Day** is:	Based on the information above, the facility's **total tons of waste per OR** is:
153. 0	**154.** 0	**155.** 0

Table K. Total Waste Percentages

	% Waste (Baseline)	% Waste (Previous)	% Waste (Current)	% Cost (Baseline)	% Cost (Previous)	% Cost (Current)
Solid Waste [from Table A]	**156.** 0	**157.** 0	**158.** 0	**159.** 0	**160.** 0	**161.** 0
Recycling [from Table B]	**162.** 0	**163.** 0	**164.** 0	**165.** 0	**166.** 0	**167.** 0
RMW [from Table C]	**168.** 0	**169.** 0	**170.** 0	**171.** 0	**172.** 0	**173.** 0
Hazardous Waste [from Table F]	**174.** 0	**175.** 0	**176.** 0	**177.** 0	**178.** 0	**179.** 0

Waste Successes

Updated for 2016 Practice Greenhealth has condensed the waste success stories into one section.

Please use the space below to describe your **most successful and/or innovative waste minimization, reduction, recycling, medical waste or**

hazardous waste management program(s) in 2015. Practice Greenhealth not only scores these questions but also uses them to **identify great case studies** to share with the sector. Environmental benefit and cost-savings data appreciated. Please use complete sentences.

180. Success 1:

181. Please attach any additional documentation (optional):

182. Success 2:

183. Please attach any additional documentation (optional):

184. Success 3:

185. Please attach any additional documentation (optional):

186. Success 4:

187. Please attach any additional documentation (optional):

188. Success 5:

189. Please attach any additional documentation (optional):

190. Additional documentation (optional):