

# FOOD WASTE IN THE UNITED STATES

Jayden Davis

## FOOTNOTES

1. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 4, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
2. “Food Waste FAQs,” *US Department of Agriculture*, Accessed October 21, 2021, <https://www.usda.gov/foodwaste/faqs>.
3. Shelia Hu, “Composting 101,” *NRDC*, July 20, 2020, <https://www.nrdc.org/stories/composting-101#whatis>.
4. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 8, <https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf>.
5. “Hunger and Food Insecurity,” *Feeding America*, Accessed October 3, 2021, <https://www.feedingamerica.org/hunger-in-america/food-insecurity>.
6. “Food Miles,” *Google Arts and Culture*, Accessed March 30, 2022, [https://artsandculture.google.com/entity/food-miles/m07\\_nr5?hl=en](https://artsandculture.google.com/entity/food-miles/m07_nr5?hl=en).
7. “Lesson 4: What is the Food Supply Chain?” *Harvard*, Accessed January 28, 2022, [https://hwpi.harvard.edu/files/chge/files/lesson\\_4\\_1.pdf](https://hwpi.harvard.edu/files/chge/files/lesson_4_1.pdf).
8. *Ibid.*
9. Julian Parfitt, Mark Barthel, and Sarah Macnaughton, “Food Waste Within Food Supply Chains: Quantification and Potential for Change to 2050,” *Philosophical Transactions of the Royal Society* 365, no. 1554 (September 27, 2010), <https://doi.org/10.1098/rstb.2010.0126>.
10. “Understand Food Insecurity,” *Feeding America*, Accessed October 3, 2021, <https://hungerandhealth.feedingamerica.org/understand-food-insecurity/>.
11. Zhao Youcai, *Pollution Control Technology for Leachate from Municipal Solid Waste* (Butterworth-Heinemann, 2019), <https://doi.org/10.1016/C2017-0-03224-X>.
12. “Food Waste FAQs,” *US Department of Agriculture*, Accessed October 21, 2021, <https://www.usda.gov/foodwaste/faqs>.
13. Marc F. Bellemare et al., “On the Measurement of Food Waste,” *American Journal of Agricultural Economics* 99, no. 5 (October 2017): 1148–1158, <https://doi.org/10.1093/ajae/aax034>.
14. Rosalinda Nicastro and Petronia Carillo, “Food Loss and Waste Prevention Strategies from Farm to Fork,” *Sustainability* 13, no. 10 (May 13, 2021): 6, <https://doi.org/10.3390/su13105443>.
15. “Sustainable Development Goals,” *Food and Agriculture Organization of the United Nations*, Accessed January 28, 2022, <https://www.fao.org/sustainable-development-goals/indicators/1231/en/>.
16. *Ibid.*
17. Erica van Herpen et al., “A Validated Survey to Measure Household Food Waste,” *MethodsX* 6, (2019): 2767–2775, <https://doi.org/10.1016/j.mex.2019.10.029>.
18. *Ibid.*
19. *Ibid.*
20. *Ibid.*
21. Leo Sakaguchi, Nina Pak, and Matthew D. Potts, “Tackling the Issue of Food Waste in Restaurants: Options for Measurement Method, Reduction and Behavioral Change,”

*Journal of Cleaner Production* 180, (April 10, 2018): 430–436,  
<https://doi.org/10.1016/j.jclepro.2017.12.136>.

22. Ibid.
23. Ibid.
24. Ibid.
25. Ibid.
26. Ryan Cooper, “Food Waste in America: Facts and Statistics,” *Rubicon*, August 25, 2020, <https://www.rubicon.com/blog/food-waste-facts/>.
27. “What Food is Wasted?” *Too Good to Go*, Accessed October 21, 2022, <https://toogoodtogo.org/en/movement/knowledge/what-food-is-wasted>.
28. “Food Waste FAQs,” *US Department of Agriculture*, Accessed October 21, 2021, <https://www.usda.gov/foodwaste/faqs>.
29. Ryan Cooper, “Food Waste in America: Facts and Statistics,” *Rubicon*, August 25, 2020, <https://www.rubicon.com/blog/food-waste-facts/>.
30. Darby Hoover, “Report: What, Where, and How Much Food Is Wasted in Cities,” *Natural Resources Defense Council*, October 25, 2017, <https://www.nrdc.org/experts/darby-hoover/report-what-where-and-how-much-food-wasted-cities>.
31. “Food Waste in America in 2022,” RTS, 2022, <https://www.rts.com/resources/guides/food-waste-america/>.
32. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 10, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
33. Ibid., 10.
34. Leo Sakaguchi, Nina Pak, Matthew D. Potts, “Tackling the Issue of Food Waste in Restaurants: Options for Measurement Method, Reduction and Behavioral Change,” *Journal of Cleaner Production* 180, (April 10, 2018): 430–436, <https://doi.org/10.1016/j.jclepro.2017.12.136>.
35. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 10, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
36. Claudia Hitaj, “Food Loss at the Farm Level,” *US Department of Agriculture*, July 29, 2021, <https://www.usda.gov/media/blog/2019/04/16/food-loss-farm-level>.
37. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 10, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
38. Katrine Hazimihalis, “These Grocery Store Waste Statistics Are a Wake Up Call,” *Dumpsters.com*, Accessed October 21, 2021, <https://www.dumpsters.com/blog/grocery-store-food-waste-statistics>.
39. Ibid.
40. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 10, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
41. Monika van den Bos Verm et al., “Consumers Discard a Lot More Food Than Widely Believed: Estimates of Global Food Waste Using an Energy Gap Approach and Affluence Elasticity of Food Waste,” *Plos One* (February 12, 2020), <https://doi.org/10.1371/journal.pone.0228369>.
42. Gustavo Porpino, Juracy Parente, and Brian Wansink, “Food Waste Paradox: Antecedents of Food Disposal in Low Income Households,” *International Journal of Consumer Studies* 39, no. 6 (May 4, 2015), <https://doi.org/10.1111/ijcs.12207>.

43. Danyi Qi, "Household Food Waste: Multivariate Regression and Principal Components Analyses of Awareness and Attitudes Among US Consumers," *Plos One* (July 21, 2016), <https://doi.org/10.1371/journal.pone.0159250>.
44. Monika van den Bos Verm et al., "Consumers Discard a Lot More Food Than Widely Believed: Estimates of Global Food Waste Using an Energy Gap Approach and Affluence Elasticity of Food Waste," *Plos One* (February 12, 2020), <https://doi.org/10.1371/journal.pone.0228369>.
45. Ibid.
46. Lana Bandoim, "The Shocking Amount Of Food US Households Waste Every Year," *Forbes*, January 26, 2020, <https://www.forbes.com/sites/lanabandoim/2020/01/26/the-shocking-amount-of-food-us-households-waste-every-year/?sh=413b54497dc8>.
47. Ibid.
48. Krista L. Thyberg, David J. Tonjes, and Jessica Gurevitch, "Quantification of Food Waste Disposal in the United States: A Meta-Analysis," *Environmental Science & Technology* 49, no. 24 (November 9, 2015): 13946, <https://doi.org/10.1021/acs.est.5b03880>.
49. Ibid., 13949.
50. Mark Nord, Margaret Andrews, and Steven Carlson, "Household Food Security in the United States," *USDA*, 2015, [https://www.ers.usda.gov/webdocs/publications/45655/29206\\_err29\\_002.pdf?v=41334%20\[PDF%20â€™%20880%20KB](https://www.ers.usda.gov/webdocs/publications/45655/29206_err29_002.pdf?v=41334%20[PDF%20â€™%20880%20KB).
51. Hunger in America, *Feeding America*, Accessed March 30, 2022, <https://www.feedingamerica.org/hunger-in-america>.
52. Amelia R. DeFosset et al., "Implementing a Healthy Food Distribution Program: A Supply Chain Strategy to Increase Fruit and Vegetable Access in Underserved Areas," *Preventing Chronic Disease* 15, (May 24, 2018), <http://dx.doi.org/10.5888/pcd15.170291>.
53. Craig Gundersen et al., "Food Insecurity During COVID-19," *Applied Economic Perspectives and Policy* 43, no. 1 (March 2021): 154, <https://doi.org/10.1002/aepp.13100>.
54. Ibid.
55. Alan R. Carroll, "Out of Sight, Out of Mind: Geologic Waste Disposal," *Geofuels: Energy and Earth*, (March 5, 2015): 287–313, <https://doi.org/10.1017/CBO9781139047685.014>.
56. Ryan Cooper, "Food Waste in America: Facts and Statistics," *Rubicon*, August 25, 2020, <https://www.rubicon.com/blog/food-waste-facts/>.
57. Kevin D Hall et al., "The Progressive Increase of Food Waste in America and Its Environmental Impact," *Plus One*, (November 25, 2009), <https://doi.org/10.1371/journal.pone.0007940>.
58. Brian E. Roe, Kathryn Bender, and Danyi Qi, "The Impact of COVID-19 on Consumer Food Waste," *Applied Economic Perspectives and Policy* 43, no. 1 (March 2021): 401–411, <https://doi.org/10.1002/aepp.13079>.
59. "COVID-19 Economic Implications for Agriculture, Food, and Rural America," *USDA*, February 25, 2022, Table (Total food expenditures continued to rise through December 2021), <https://www.ers.usda.gov/covid-19/food-and-consumers/>.
60. Wilson Chapman, "US Tops Rankings in Food Waste," *US News and World Report*, <https://www.usnews.com/news/best-countries/articles/2019-07-29/the-us-wastes-more-food-per-person-than-other-developed-countries-report-says>.

61. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 4, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
62. Norbert Raak et al., "Processing- and Product-Related Causes for Food Waste and Implications for the Food Supply Chain," *Waste Management* 61, (March 2017): 464–465, <https://doi.org/10.1016/j.wasman.2016.12.027>.
63. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 6, <https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf>.
64. Norbert Raak et al., "Processing- and Product-Related Causes for Food Waste and Implications for the Food Supply Chain," *Waste Management* 61, (March 2017): 464, <https://doi.org/10.1016/j.wasman.2016.12.027>.
65. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 7, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
66. Norbert Raak et al., "Processing- and Product-Related Causes for Food Waste and Implications for the Food Supply Chain," *Waste Management* 61, (March 2017): 463, <https://doi.org/10.1016/j.wasman.2016.12.027>.
67. "Why Do Farmers End Up With Surplus Produce?," *Imperfect Foods*, August, 19, 2019, <https://imperfect-foods.medium.com/why-do-farmers-end-up-with-surplus-produce-2e29295f49f1>.
68. Ibid.
69. Norbert Raak et al., "Processing- and Product-Related Causes for Food Waste and Implications for the Food Supply Chain," *Waste Management* 61, (March 2017): 463–464, <https://doi.org/10.1016/j.wasman.2016.12.027>.
70. Ibid.
71. Jay Singh and Paul Singh, "Damage Reduction to Food Products During Transportation and Handling," in *Handbook of Farm, Dairy and Food Machinery Engineering*, ed Myer Kutz (Delmar: Academic Press, 2019), 744, <https://doi.org/10.1016/B978-0-12-814803-7.00028-2>.
72. IFCO Systems, "Stopping Food Waste and Food Loss," *International Food Container Organization*, <https://www.ifco.com/stopping-food-waste-and-food-loss/>.
73. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 6, <https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf>.
74. Kenneth Marsh and Betty Bugusu, "Food Packaging—Roles, Materials, and Environmental Issues," *Journal of Food Science* 72, no. 3 (April 2007): 39–55, <https://doi.org/10.1111/j.1750-3841.2007.00301.x>.
75. Lars Esbjerg et al., "Retailers and Technology-Driven Innovation in the Food Sector: Caretakers of Consumer Interests or Barriers to Innovation?" *British Food Journal* 118, 6 (June 6, 2016): <http://doi.org/10.1108/BFJ-10-2015-0367>.
76. Aaron L. Brody et al., "Innovative Food Packaging Solutions," *Journal of Food Science* 73, no. 8 (October 2008): R109, <https://doi.org/10.1111/j.1750-3841.2008.00933.x>.
77. Holly Hill, *Food Miles: Background and Marketing* (ATTRA, 2008), 1, <https://attra.ncat.org/wp-content/uploads/2019/05/foodmiles.pdf?>
78. "FDA Strategy for the Safety of Imported Food," *US Food and Drug Administration*, Accessed March 20, 2022, <https://www.fda.gov/food/importing-food-products-united-states/fda-strategy-safety-imported-food>.

79. Holly Hill, *Food Miles: Background and Marketing* (ATTRA, 2008), 1, <https://attra.ncat.org/wp-content/uploads/2019/05/foodmiles.pdf?>
80. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 9, <https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf>.
81. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 18, <https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf>.
82. Holly Hill, *Food Miles: Background and Marketing* (ATTRA, 2008), 1, <https://attra.ncat.org/wp-content/uploads/2019/05/foodmiles.pdf?>
83. Jay Singh and Paul Singh, "Damage Reduction to Food Products During Transportation and Handling," *Handbook of Farm, Dairy and Food Machinery Engineering* 3, (2019): 741–770, <https://doi.org/10.1016/B978-0-12-814803-7.00028-2>.
84. Fatemeh Malekian, *Transportation of Fresh Produce*, (LSU AgCenter, 2015), 1, [https://www.lsu.edu/agriculture/plant/extension/hcpl-publications/2\\_Pub.3442-TransportationofFreshProduce-BestPracticestoEnsureOn-FarmFoodSafety.pdf](https://www.lsu.edu/agriculture/plant/extension/hcpl-publications/2_Pub.3442-TransportationofFreshProduce-BestPracticestoEnsureOn-FarmFoodSafety.pdf).
85. *Sustainable Cold Chain and Food Loss Reduction* (United Nations, November 2019), 2, [https://ozone.unep.org/system/files/documents/MOP31-Sustainable-HL\\_Briefing\\_Note.pdf](https://ozone.unep.org/system/files/documents/MOP31-Sustainable-HL_Briefing_Note.pdf).
86. Ibid.
87. Ibid., 4.
88. Fatemeh Malekian, *Transportation of Fresh Produce*, (LSU AgCenter, 2015), 1, [https://www.lsu.edu/agriculture/plant/extension/hcpl-publications/2\\_Pub.3442-TransportationofFreshProduce-BestPracticestoEnsureOn-FarmFoodSafety.pdf](https://www.lsu.edu/agriculture/plant/extension/hcpl-publications/2_Pub.3442-TransportationofFreshProduce-BestPracticestoEnsureOn-FarmFoodSafety.pdf).
89. Ryan Cooper, "Food Waste in America: Facts and Statistics," *Rubicon*, August 25, 2020, <https://www.rubicon.com/blog/food-waste-facts/>.
90. Natascha Loebnitz, Geertje Schuitema, and Klaus G. Grunert, "Who Buys Oddly Shaped Food and Why? Impacts of Food Shape Abnormality and Organic Labeling on Purchase Intentions," *Psychology and Marketing* 32, no. 4 (March 10, 2015), <https://doi.org/10.1002/mar.20788>.
91. Ryan Cooper, "Food Waste in America: Facts and Statistics," *Rubicon*, August 25, 2020, <https://www.rubicon.com/blog/food-waste-facts/>.
92. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 8, <https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf>.
93. Ibid.
94. Ibid., 17.
95. "Sustainable Management of Food Basics," *United States Environmental Protection Agency*, Accessed October 3, 2021, <https://www.epa.gov/sustainable-management-food/sustainable-management-food-basics>.
96. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 9, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
97. Katherine Fung, "Almost 90% of Americans Say They Want Grocery Stores to Place Buying Limits on Items," *Newsweek*, May 5, 2020, <https://www.newsweek.com/almost-90-percent-americans-say-they-want-grocery-store-s-place-buying-limits-items-1502050>.
98. Miranda Marquit, "8 Things to Avoid Buying in Bulk," *Moneying*, 2010, <https://moneying.com/frugality/8-things-to-avoid-buying-in-bulk/>.



99. Ibid.
100. "The Problem of Food Waste," *FoodPrint*, June 11, 2021, <https://foodprint.org/issues/the-problem-of-food-waste/>.
101. Brian E. Roe, Kathryn Bender, and Danyi Qi, "The Impact of COVID-19 on Consumer Food Waste," *Applied Economic Perspectives and Policy* 43, no. 1 (March 2021): 401–411, <https://doi.org/10.1002/aep.13079>.
102. Ibid.
103. Ibid.
104. Rick LeBlanc. "Why the US Wastes More Food than Almost Any Other Country," *The Balance Small Business*, Accessed October 3, 2021, <https://www.thebalancesmb.com/food-waste-greater-in-us-than-almost-all-countries-4164313>.
105. Helén Williams et al., "Reasons for Household Food Waste with Special Attention to Packaging," *Journal of Cleaner Production* 24, (March 2012): 141–148, <https://doi.org/10.1016/j.jclepro.2011.11.044>.
106. Rachel Carr, "Food is Still Ok to Eat Even After the Expiration Date — Here's For How Long," *Insider*, April 20, 2017, <https://www.businessinsider.com/how-long-can-i-eat-food-expired-food-2017-4>.
107. Helén Williams et al., "Reasons for Household Food Waste with Special Attention to Packaging," *Journal of Cleaner Production* 24, (March 2012): 141–148, <https://doi.org/10.1016/j.jclepro.2011.11.044>.
108. "The Problem of Food Waste," *FoodPrint*, June 11, 2021, <https://foodprint.org/issues/the-problem-of-food-waste/>.
109. *A Roadmap to Reduce US Food Waste by 20 Percent* (Rethink Food Waste through Economics and Data: 2016), 33, [https://refed.org/downloads/ReFED\\_Report\\_2016.pdf](https://refed.org/downloads/ReFED_Report_2016.pdf).
110. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 4, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
111. Ibid., 27.
112. Ibid.
113. Ibid.
114. Ibid.
115. Ibid.
116. Ibid.
117. Maurizio Lanfranchi, Grazia Calabrò, and Angelina De Pascale, "Household Food Waste and Eating Behavior: Empirical Survey," *British Food Journal* 118, no. 12 (2016), <https://doi.org/10.1108/BFJ-01-2016-0001>.
118. Ibid.
119. "Energy and Food Production," *Daphne Norton for the Sustainable Food Committee at Emory University*, April 2010, <https://sustainability.emory.edu/wp-content/uploads/2018/02/InfoSheet-Energy26FoodProduction.pdf>.
120. Alan R. Carroll, "Out of Sight, Out of Mind: Geologic Waste Disposal," *Geofuels: Energy and Earth*, (March 5, 2015): 287-313, <https://doi.org/10.1017/CBO9781139047685.014>.
121. "Diesel Fuel Explained," *US Energy Information Administration*, December 2, 2021, <https://www.eia.gov/energyexplained/diesel-fuel/diesel-and-the-environment.php>.
122. "Fight Climate Change by Preventing Food Waste," *World Wildlife Fund*, Accessed October 25, 2021, <https://www.worldwildlife.org/stories/fight-climate-change-by-preventing-food-waste>.

123. Jean Buzby, "Food Waste and its Links to Greenhouse Gases and Climate Change," *USDA*, January 24, 2022, <https://www.usda.gov/media/blog/2022/01/24/food-waste-and-its-links-greenhouse-gases-and-climate-change>.
124. Alan R. Carroll, "Out of Sight, Out of Mind: Geologic Waste Disposal," *Geofuels: Energy and Earth*, (March 5, 2015): 287–313, <https://doi.org/10.1017/CBO9781139047685.014>.
125. "Food Scraps Have Value," *USDA*, 2018, <https://www.usda.gov/sites/default/files/documents/usda-food-waste-infographic.pdf>.
126. Ryan Cooper, "Food Waste in America: Facts and Statistics," *Rubicon*, August 25, 2020, <https://www.rubicon.com/blog/food-waste-facts/>.
127. "Methane Emissions are Driving Climate Change. Here's How to Reduce Them.," *UN Environment and Program*, August 20, 2021, <https://www.unep.org/news-and-stories/story/methane-emissions-are-driving-climate-change-heres-how-reduce-them>.
128. Ibid.
129. Ian Tiseo, "Number of deaths attributable to air pollution in the United States from 1990 to 2019," *Statista*, March 21, 2022, <https://www.statista.com/statistics/1137375/air-pollution-deaths-united-states>.
130. "Methane," *Climate and Clean Air Coalition*, Accessed October 21, 2021, <https://www.ccacoalition.org/en/slcp/methane>.
131. "Methane Emissions are Driving Climate Change. Here's How to Reduce Them.," *UN Environment and Program*, August 20, 2021, <https://www.unep.org/news-and-stories/story/methane-emissions-are-driving-climate-change-heres-how-reduce-them>.
132. Kirsten James, "Why Food Waste Means Water Waste," *Ceres*, April 7, 2016, <https://www.ceres.org/news-center/blog/why-food-waste-means-water-waste>.
133. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 12, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.  
The table indicates that 43 shower minutes are required to produce one lb of apples, and one shower minute is equal to 5 gallons. I multiplied 43 minutes by 5 gallons for a total of 215 gallons of water. I found that there are 3 apples per lb. I divided 215 gallons of water by 3 apples for 71.67 or ~72 gallons of water required per apple.
134. "How We Fight Food Waste in the US," *Feeding America*, Accessed April 2022, <https://www.feedingamerica.org/our-work/our-approach/reduce-food-waste>.
135. *A Roadmap To Reduce US Food Waste By 20 Percent* (ReFED, 2016), 10, [https://www.nrcm.org/wp-content/uploads/2015/12/ReFED\\_Report\\_2016.pdf](https://www.nrcm.org/wp-content/uploads/2015/12/ReFED_Report_2016.pdf).
136. Sam Miller, "Leachate: The Ugly Truth About Food Waste In Landfills," *FoodCycler*, September 11, 2020, <https://www.foodcyclers.com/post/leachate-the-ugly-truth-about-food-waste-in-landfills>.
137. Michal Bodzek, Ewa Lobos-Moysa, and Marlena Zamorowska, "Removal of Organic Compounds From Municipal Landfill Leachate in a Membrane Bioreactor," *Desalination* 198, no. 1–3 (September 2005): 16-23, <https://doi.org/10.1016/j.desal.2006.09.004>.
138. K.R. Kim and G. Owens, "Potential for Enhanced Phytoremediation of Landfills Using Biosolids – A Review," *Comprehensive Biotechnology* 3, no. 6 (2011): 278, <https://doi.org/10.1016/B978-0-444-64046-8.00354-2>.
139. "Municipal Solid Waste Landfills," *US Environmental Protection Agency*, Accessed March 31, 2022, <https://www.epa.gov/landfills/municipal-solid-waste-landfills>.
140. Ibid.

141. Johnsie R. Lang et al., "National Estimate of Per- and Polyfluoroalkyl Substance (PFAS) Release to US Municipal Landfill Leachate," *Environmental Science and Technology* 51, no. 4 (2017): 2197, <https://doi.org/10.1021/acs.est.6b05005>.
142. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 4, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
143. Hanna Obarska-Pempkowiak, Magdalena Gajewska, and Ewa Wojciechowska, "Landfill Leachate Treatment in Treatment Wetlands," *Treatment Wetlands for Environmental Pollution Control*, (January 4, 2015): 143-156, [https://doi.org/10.1007/978-3-319-13794-0\\_8](https://doi.org/10.1007/978-3-319-13794-0_8).
144. "How We Fight Food Waste in the US," *Feeding America*, Accessed April 2022, <https://www.feedingamerica.org/our-work/our-approach/reduce-food-waste>.
145. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 4, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
146. Ibid.
147. Katie Ziraldo, "What Is The Average Mortgage Payment?," *Rocket Mortgage*, November 19, 2021, <https://www.rocketmortgage.com/learn/average-mortgage-payment>.
148. "Food Wastage Footprint," *Food and Agriculture Organization of the United Nations*, Accessed March 31, 2022, <https://www.fao.org/nr/sustainability/food-loss-and-waste/en/>.
149. Wendy Gabriel, "Reuse in the Garden with EcoScraps," *Recycle Nation*, August 25, 2014, <https://recyclenation.com/2014/08/reuse-garden-EcoScraps/>.
150. *A Roadmap to Reduce US Food Waste by 20 Percent, (Rethink Food Waste Through Economics and Data, 2016)* 2, <https://refed.org/downloads/Executive-Summary.pdf>.
151. Ibid., 5.
152. Ibid.
153. Ibid.
154. Ibid.
155. Hunger in America, *Feeding America*, Accessed March 30, 2022, <https://www.feedingamerica.org/hunger-in-america>.
156. "How We Fight Food Waste in the US," *Feeding America*, Accessed April 2022, <https://www.feedingamerica.org/our-work/our-approach/reduce-food-waste>.
157. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2012), 4, <https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf>.
158. T.Y. Mousa and JH Freeland-Graves, "Organizations of Food Redistribution and Rescue," *Public Health* 152, (November 2017): 117, <https://doi.org/10.1016/j.puhe.2017.07.031>.
159. "Regina Anderson Talks Food Recovery Network, COVID-19," *Food Tank*, March 29, 2020, <https://foodtank.com/news/2020/03/regina-anderson-talks-food-recovery-network-covid-19/>.
160. Help Feed Hawaii, *Aloha Harvest*, Accessed March 30, 2022, <https://alohaharvest.org>.
161. "Our Story," *City Harvest*, Accessed March 30, 2022, <https://www.cityharvest.org/our-story/>.
162. "Our Work," *City Harvest*, Accessed March 30, 2022, <https://www.cityharvest.org/programs/food-rescue/>.
163. "Annual Report 2020," *Food Forward*, 2021, <https://foodforward.org/about-us/annual-report-2020/>.



164. "Where We Work," *Food Forward*, Accessed March 30, 2022, <https://foodforward.org/who-we-are/where-we-work/>.
165. T.Y. Mousa and JH Freeland-Graves, "Organizations of Food Redistribution and Rescue," *Public Health* 152, (November 2017): 120, <https://doi.org/10.1016/j.puhe.2017.07.031>.
166. Ibid.
167. Marion Weymes and Anna R. Davies, "[Re]Valuing Surplus: Transitions, Technologies and Tensions in Redistributing Prepared Food in San Francisco," *Geoforum* 99, (February 2019): 161, <https://doi.org/10.1016/j.geoforum.2018.11.005>.
168. Jane L. Midgley, "The Logics of Surplus Food Redistribution," *Journal of Environmental Planning and Management* 57, no. 12 (October 18, 2013): 1874, <https://doi.org/10.1080/09640568.2013.848192>.
169. Shelia Hu, "Composting 101," *NRDC*, July 20, 2020, <https://www.nrdc.org/stories/composting-101>.
170. "Reducing the Impact of Wasted Food by Feeding the Soil and Composting," *EPA*, Accessed March 30, 2022, <https://www.epa.gov/sustainable-management-food/reducing-impact-wasted-food-feeding-soil-and-composting>.
171. Shelia Hu, "Composting 101," *NRDC*, July 20, 2020, <https://www.nrdc.org/stories/composting-101>.
172. Ibid.
173. Ibid.
174. Ibid.
175. Ibid.
176. Ibid.
177. Ibid.
178. Ibid.
179. Ibid.
180. Ibid.
181. Ibid.
182. Yerina Mugica and Andrea Spacht, *San Francisco Composting* (NRDC, 2017), 1, <https://www.nrdc.org/sites/default/files/food-matters-san-francisco-composting-cs.pdf>.
183. Shelia Hu, "Composting 101," *NRDC*, July 20, 2020, <https://www.nrdc.org/stories/composting-101>.
184. Ibid.
185. Ibid.
186. Ibid.
187. Dana Gunders and Jonathan Bloom, *Wasted: How America is Losing Up to 40% of Its Food From Farm to Fork to Landfill* (NRDC, August 2017), 30, <https://www.nrdc.org/sites/default/files/wasted-2017-report.pdf>.
188. Alexander Kunst, "Why don't you compost?," *Statista*, December 20, 2019, <https://www.statista.com/statistics/699788/americans-reasons-not-to-compost-united-states/>.
189. "United States Needs 4.6 Million New Apartments By 2030 or It Will Face A Serious Shortage," *National Apartment Association*, August 4, 2021, <https://www.naahq.org/news-publications/united-states-needs-46-million-new-apartments-2030-or-it-will-face-serious-shortage>.
190. Larissa Swayze, "How to Compost in an Apartment With or Without a Balcony!," *Pela*, March 15, 2022, <https://pela.earth/blogs/news/how-to-compost-in-an-apartment>.

191. [Elizabeth Daigneau](#), "As Composting Gains Popularity, Cities Struggle to Meet Demand," *Governing*, October 12, 2016, <https://www.governing.com/archive/gov-composting-demand.html>.
192. "How We Fight Food Waste in the US," *Feeding America*, Accessed April 2022, <https://www.feedingamerica.org/our-work/our-approach/reduce-food-waste>.