

Appendix 1.1

(Referred to in paragraphs 1.1.2, 1.1.4 and 1.5)

Details of total units of Punjab Agricultural University

(A) Colleges and Departments

| Sr. No. | Name of the College | Sr. No. | Name of the Department |
|---------|--|---------|--|
| I. | College of Basic Sciences and Humanities | 1. | Agricultural Journalism, Languages & Culture |
| | | 2. | Biochemistry |
| | | 3. | Botany |
| | | 4. | Chemistry |
| | | 5. | Economics and Sociology |
| | | 6. | Maths, Stats & Physics |
| | | 7. | Microbiology |
| | | 8. | School of Business Studies |
| | | 9. | Zoology |
| II. | College of Community Science (Home Science) | 10. | Apparel and Textiles Science |
| | | 11. | Family Resource Management |
| | | 12. | Food & Nutrition |
| | | 13. | Extension Education & Communication Management |
| III. | College of Agricultural Engineering and Technology | 14. | Human Development & Family Studies |
| | | 15. | Civil Engineering |
| | | 16. | Electrical Engineering & Information Technology |
| | | 17. | Director School of Energy Studies (Renewable Energy) |
| | | 18. | Farm Machinery & Power Engineering |
| | | 19. | Mechanical Engineering |
| | | 20. | Processing & Food Engineering |
| | | 21. | Soil & Water Engineering |
| IV. | College of Agriculture | 22. | Agronomy |
| | | 23. | Entomology |
| | | 24. | Extension Education Department |
| | | 25. | Food Science & Technology |
| | | 26. | Plant Breeding & Genetics (Wheat, Rice, Maize, Cotton, Forage & Millet, Pulses, Oilseed, Quality Main) |
| | | 27. | Plant Pathology |
| | | 28. | School of Agril. Biotechnology |
| | | 29. | School of Climate Change & Agril. Meteorology |
| | | 30. | Soil Science |
| | | 31. | Director School of Organic Farming |
| V. | College of Horticulture and Forestry | 32. | Vegetable Science |
| | | 33. | Fruit Science |
| | | 34. | Floriculture & Landscaping |
| | | 35. | Forestry & Natural Resources |
| VI. | College of Agriculture at Ballawal Saunkhri ¹ , SBS Nagar | -- | -- |

¹ Started functioning from the academic year 2021-22 and works under administrative control of Research Station, Ballawal Saunkhri, SBS Nagar.

(B) Regional Research Stations

| Sr. No. | Name of Research Station |
|---------|---|
| 1. | Regional Research Station, Abohar |
| 2. | Research Station, Dyal Bharang, Amritsar |
| 3. | Research Station, Ballawal Saunkhri, SBS Nagar |
| 4. | Research Station, Bathinda |
| 5. | Research Station, Faridkot |
| 6. | Research Station, Gurdaspur |
| 7. | Fruit Research Station, Bahadurgarh, Patiala |
| 8. | M.S. Randhawa Fruit Research Station, Gangian, Hoshiarpur |
| 9. | Fruit Research Station, Jallowal/Lesriwal (Jalandhar) |

(C) Seed Farms

| Sr. No. | Name of Seed Farms |
|---------|---|
| 1. | University Seed Farm, Kapurthala |
| 2. | University Seed Farm, Ladhowal, Ludhiana |
| 3. | University Seed Farm, Nabha, Patiala |
| 4. | University Seed Farm, Naraingarh, Fatehgarh Sahib |
| 5. | Seed Farm, Faridkot (RHSSF) |
| 6. | Seed Farm, Usman, Tarn Taran |

(D) Krishi Vigyan Kendras (KVK)

| Sr. No. | Name of Krishi Vigyan Kendra |
|---------|------------------------------|
| 1. | KVK Amritsar |
| 2. | KVK Bathinda |
| 3. | KVK Faridkot |
| 4. | KVK Ferozepur |
| 5. | KVK Fatehgarh Sahib |
| 6. | KVK Gurdaspur |
| 7. | KVK Bahawal, Hoshiarpur |
| 8. | KVK Kapurthala |
| 9. | KVK Samrala, Ludhiana |
| 10. | KVK Sri Muktsar Sahib |
| 11. | KVK Budhsinghwala, Moga |
| 12. | KVK Langroya, SBS Nagar |
| 13. | KVK Patiala |
| 14. | KVK Pathankot |
| 15. | KVK Ropar |
| 16. | KVK Kheri, Sangrur |
| 17. | KVK Nurmahal, Jalandhar |
| 18. | KVK Khokhar Khurd, Mansa |

Source: Information provided by PAU

Note: Highlighted Units viz. 12 Departments of five Colleges, three Research Stations, two Seed Farms and six KVKs were selected for the performance audit.

Appendix 1.2

(Referred to in paragraph 1.2.1.5(ii)(4))

Details of Bank Accounts kept out of books of accounts

(Amount in ₹)

| Name of the College | Sr. No. | Name of Bank | Bank Account Number | Closing Balance as on 31.03.2020 ² |
|--|---------|---------------------|---------------------|---|
| College of Agricultural Engineering & Technology | 1. | State Bank of India | XXXXXXXX7067 | 20,47,088 |
| | 2. | Bank of Baroda | XXXXXXXXXX4350 | 15,90,478 |
| | 3. | Bank of Baroda | XXXXXXXXXX4352 | 40,60,899 |
| | 4. | Bank of Baroda | XXXXXXXXXX0103 | 5,13,619 |
| | 5. | State Bank of India | XXXXXXXX5649 | 3,13,094 |
| | 6. | Bank of Baroda | XXXXXXXX5605 | 7,83,196 |
| College of Agriculture | 7. | State Bank of India | XXXXXXXX7726 | 7,46,057 |
| | 8. | State Bank of India | XXXXXXXX8389 | 5,50,409 |
| | 9. | State Bank of India | XXXXXXXX8378 | 5,41,982 |
| | 10. | State Bank of India | XXXXXXXX7034 | 7,03,983 |
| | 11. | State Bank of India | XXXXXXXX5593 | 6,38,198 |
| | 12. | State Bank of India | XXXXXXXX5616 | 31,51,466 |
| | 13. | State Bank of India | XXXXXXXX5627 | 3,17,671 |
| | 14. | HDFC Bank | XXXXXXXXXX9501 | 1,20,760 |
| College of Horticulture and Forestry | 15. | State Bank of India | XXXXXXXX5537 | 6,65,750 |
| | 16. | State Bank of India | XXXXXXXX7608 | 3,33,500 |
| | 17. | State Bank of India | XXXXXXXX5715 | 1,47,000 |
| | 18. | State Bank of India | XXXXXXXX8961 | 92,400 |
| | 19. | State Bank of India | XXXXXXXX2623 | 61,600 |
| | 20. | State Bank of India | XXXXXXXX0494 | 522 |
| | 21. | HDFC Bank | XXXXXXXXXX4351 | 28,64,236 |
| College of Community Science | 22. | State Bank of India | XXXXXXXX8673 | 25,22,690 |
| | 23. | State Bank of India | XXXXXXXX7862 | 52,69,382 |
| | 24. | State Bank of India | XXXXXXXX7078 | 58,84,380 |
| | 25. | State Bank of India | XXXXXXXX7089 | 1,89,113 |
| | 26. | Bank of Baroda | XXXXXXXXXX0948 | 8,73,561 |
| College of Basic Science & Humanities | 27. | Bank of Baroda | XXXXXXXXXX0794 | 4,18,481 |
| | 28. | Bank of Baroda | XXXXXXXXXX4792 | 9,22,251 |
| | 29. | Bank of Baroda | XXXXXXXXXX0793 | 9,27,946 |
| | 30. | State Bank of India | XXXXXXXX5661 | 14,82,897 |
| | 31. | Bank of Baroda | XXXXXXXXXX8211 | 13,57,596 |
| | 32. | HDFC Bank | XXXXXXXXXX9480 | 23,101 |
| | 33. | State Bank of India | XXXXXXXX8800 | 9,972 |
| Total | | | | 4,01,25,278 |

Source: PAU records

² Balance Sheets for the period 2020-21 and 2021-22 were not finalised (March 2023).

Appendix 1.3

(Referred to in paragraph 1.2.1.6)

Statement showing position of outstanding temporary advances during the year 2017-18 to 2021-22

(₹ in lakh)

| Year | Opening Balance as on first day of April of the financial year | Amount of Temporary Advance given during the financial year | Total amount of Temporary Advances | Temporary Advances adjusted during the financial year | Outstanding Temporary Advances at the end of financial year |
|---------|--|---|------------------------------------|---|---|
| 2017-18 | 8,455.55 | 1,986.88 | 10,442.43 | 2,893.12 | 7,549.31 |
| 2018-19 | 7,549.31 | 1,673.14 | 9,222.45 | 2,598.32 | 6,624.13 |
| 2019-20 | 6,624.13 | 1,811.01 | 8,435.14 | 2,826.26 | 5,608.88 |
| 2020-21 | 5,608.88 | 3,053.32 | 8,662.20 | 3,358.53 | 5,303.67 |
| 2021-22 | 5,303.67 | 1,691.00 | 6,994.67 | 533.24 | 6,461.43 |

Source: PAU records

Appendix 1.4

(Referred to in paragraph 1.3.2)

Course-wise shortage in enrolment of students during the period 2017-22

| S. No. | Name of the Courses (Duration) | 2017-18 | | | 2018-19 | | | 2019-20 | | | 2020-21 | | | 2021-22 | | |
|------------------------------|---|---------|----------|--------------------------|---------|----------|--------------------------|---------|----------|--------------------------|---------|----------|--------------------------|---------|----------|--------------------------|
| | | Intake | Admitted | Shortfall in per cent |
| Undergraduate courses | | | | | | | | | | | | | | | | |
| 1. | CET B.Sc. (Hons.) Agri. 4 year | 98 | 98 | 0.00 | 111 | 107 | 3.60 | 116 | 116 | 0.00 | 96 | 94 | 2.08 | 94 | 91 | 3.19 |
| 2. | CET B.Sc. (Hons) Hort. 4 year | NA | NA | NA | NA | NA | NA | 60 | 56 | 6.67 | 61 | 61 | 0.00 | 61 | 61 | 0.00 |
| 3. | CET B.Sc. (Hons.) Community Science 4 yr | 62 | 41 | 33.87 | 59 | 53 | 10.17 | 59 | 51 | 13.56 | 60 | 33 | 45.00 | 59 | 23 | 61.02 |
| 4. | BSET B.Sc. (Hons.) Agri. 4-year at Ballowal Saunkhri | NA | NA | NA | 60 | 58 | 3.33 |
| 5. | AAT B.Sc. (Hons.) Agri. 6year (2+4) at Bathinda, Gurdaspur | 127 | 127 | 0.00 | 126 | 126 | 0.00 | 124 | 124 | 0.00 | 132 | 132 | 0.00 | 124 | 124 | 0.00 |
| 6. | B.Tech. (Agri. Engg.) 4-year JEE Main | 86 | 86 | 0.00 | 82 | 79 | 3.66 | 83 | 80 | 3.61 | 84 | 79 | 5.95 | 82 | 35 | 57.32 |
| 7. | Diploma in Agriculture 2 year at Ludhiana, Ballowal Saunkhri | 60 | 30 | 50.00 | 120 | 79 | 34.17 | 90 | 81 | 10.00 | 90 | 33 | 63.33 | 90 | 8 | 91.11 |
| 8. | Diploma course in Hybrid Seed Production Technology one year | 40 | 10 | 75.00 | NA | NA | NA |
| 9. | CET B.Tech. Food Tech. 4 year | 63 | 63 | 0.00 | 64 | 64 | 0.00 | 60 | 60 | 0.00 | 60 | 60 | 0.00 | 60 | 60 | 0.00 |
| 10. | CET B.Tech. (Biotech.) 4 year | 62 | 62 | 0.00 | 62 | 62 | 0.00 | 60 | 56 | 6.67 | 60 | 56 | 6.67 | 60 | 51 | 15.00 |
| 11. | CET B.Sc. (Hons.) Nutrition & Dietetics 4 year | 63 | 63 | 0.00 | 62 | 62 | 0.00 | 60 | 60 | 0.00 | 60 | 60 | 0.00 | 60 | 59 | 1.67 |
| 12. | CET Design B.Sc. (Hons.) Fashion Designing 4 year | 63 | 35 | 44.44 | NA | NA | NA |
| 13. | CET B.Sc. (Hons.) Agribusiness Management 4 year | NA | NA | NA | 40 | 30 | 25.00 |

| S. No. | Name of the Courses (Duration) | 2017-18 | | | 2018-19 | | | 2019-20 | | | 2020-21 | | | 2021-22 | | |
|-----------------------------|--|---------|----------|--------------------------|---------|----------|--------------------------|---------|----------|--------------------------|---------|----------|--------------------------|---------|----------|--------------------------|
| | | Intake | Admitted | Shortfall in per cent |
| Postgraduate courses | | | | | | | | | | | | | | | | |
| 14. | M.Sc. Agriculture (Minimum 4 semester and maximum 6 semester) | 203 | 188 | 7.39 | 182 | 178 | 2.20 | 172 | 172 | 0.00 | 178 | 175 | 1.69 | 175 | 161 | 8.00 |
| 15. | MSc. Horticulture & Forestry (Minimum 4 semester and maximum 6 semester) | NA | NA | NA | NA | NA | NA | 57 | 57 | 0.00 | 58 | 58 | 0.00 | 62 | 62 | 0.00 |
| 16. | M. Tech. (Minimum 4 semester and maximum 6 semester) | 73 | 24 | 67.12 | 62 | 34 | 45.16 | 58 | 21 | 63.79 | 51 | 28 | 45.10 | 66 | 24 | 63.64 |
| 17. | M. Sc. Basic Sciences & Humanities (Minimum 4 semester and maximum 6 semester) | 165 | 124 | 24.85 | 140 | 103 | 26.43 | 139 | 99 | 28.78 | 136 | 84 | 38.24 | 143 | 57 | 60.14 |
| 18. | Business Administration (Agribusiness) (Minimum 4 semester and maximum 6 semester) | 40 | 20 | 50.00 | 40 | 36 | 10.00 | 40 | 21 | 47.50 | 40 | 35 | 12.50 | 40 | 23 | 42.50 |
| 19. | Business Administration (Minimum 4 semester and maximum 6 semester) | 50 | 38 | 24.00 | 50 | 39 | 22.00 | 50 | 32 | 36.00 | 50 | 29 | 42.00 | 50 | 13 | 74.00 |
| 20. | M.Sc. Home Science/Community Science (Minimum 4 semester and maximum 6 semester) | 69 | 23 | 66.67 | 55 | 25 | 54.55 | 61 | 39 | 36.07 | 63 | 25 | 60.32 | 61 | 23 | 62.30 |
| 21. | CET 5 year integrated M.Sc. (Hons) | 80 | 76 | 5.00 | 80 | 76 | 5.00 | 80 | 74 | 7.50 | 80 | 43 | 46.25 | 90 | 39 | 56.67 |
| 22. | MCA 3 year and MCA (Lateral entry) 2 year | 60 | 28 | 53.33 | 40 | 8 | 80.00 | 40 | 13 | 67.50 | NA | NA | NA | NA | NA | NA |
| Doctoral Programmes | | | | | | | | | | | | | | | | |
| 23. | Ph.D. (Minimum 5 semesters and maximum 10 semesters) | 125 | 111 | 11.20 | 131 | 128 | 2.29 | 225 | 166 | 26.22 | 231 | 175 | 24.24 | 219 | 165 | 24.66 |

Source: Data collected from PAU

Appendix 1.5

(Referred to in paragraph 1.4.1.1)

Comments of funding agencies for not approving the proposed research projects

| Sr. No. | Name of the research project proposed | Name of the funding agency | Comments of the funding agency |
|---------|---|--|---|
| 1. | Development of web-based platform for the annotation of Transcriptome, Genome and Coding Sequence (ATGC) | Department of Biotechnology | Lacks novelty, objectives not clear and proof of concept not in alignment with the ATGC mission objectives. |
| 2. | Plant based liquid egg from extrusion and ultrasound modulated legume proteins | Science & Engineering Research Board | It is unlikely to be financially viable given the intensive recurring inputs required to develop the product. The labour-intensive process accompanied with wastage of seed material in extracting the protein from pulses appears pointless when pulses have been consumed as such in the country over centuries. Moreover, even in the event of success the acceptability of such a protein source over conventional pulses appears doubtful. |
| 3. | Characterisation of sperm membrane antigens with immune contraceptive potential in lesser bandicoot rat, <i>Bandicota bengalensis</i> | Science & Engineering Research Board | The proposed study is planned to delineate the sperm membrane proteins to evaluate their immune-contraceptive potential for management of this rodent pest of agriculture importance. It is impractical idea to catch rodents and immunise from the wild. Also, there is no novelty in science. |
| 4. | Indigenous development of a yeast encapsulated essential oil based biolarvicide formulation for the control of deadly dengue vector <i>Aedes aegypti</i> | Science & Engineering Research Board | This proposal does not have a basic scientific question. It is an applied project and lacks novelty. Does not merit consideration. |
| 5. | ABA-regulation of GABA (γ -amino butyric acid)-shunt under mixed salinity-alkalinity stress in rice (<i>Oryza sativa</i> L.) | Science & Engineering Research Board | Study lacks novelty. Methods are not convincing and publication record of the Principal Investigator is not impressive. |
| 6. | Biodiversity, geographical distribution and DNA barcoding of insect pests of pigeonpea from India | Ministry of Environment, Forest & Climate Change | The proposal does not fall under the thrust areas. |
| 7. | Marker assisted selection hybrid in citrus | Department of Biotechnology | No commercial outcomes are being anticipated. |
| 8. | Genomics assisted discovery of novel genetic variation in <i>T. durum</i> - <i>Aespeletoides</i> Chromosomal library and mobilisation of important genes/QTL to Hexaploid wheat | Department of Biotechnology | No variety deliverables, several projects are going on with Principal Investigator. |

| Sr. No. | Name of the research project proposed | Name of the funding agency | Comments of the funding agency |
|---------|--|--|--|
| 9. | Understanding the morphological, physiochemical and molecular basis of combined drought and heat tolerance in the introgression lines of Indian Mustard (<i>Brassica juncea</i> L. Czern & Coss.) | Science & Engineering Research Board | PI has proposed GWAS analysis, which will not be a good method in introgression lines with minimal genetic diversity. Methodology is not properly written. |
| 10. | Formulation of self-help groups for upliftment of SC community in Punjab. | Department of Science & Technology | No scientific merit, fit for sociology or similar subject areas. The proposal is more focused on societal issues and not scientific. No scientific contribution expected. |
| 11. | Developing CRISPR-Cas9 based genome editing system for pink bollworm, <i>Pectinophora</i> , <i>Gossypialla</i> | Science & Engineering Research Board | The scientific rationale for the project is not presented convincingly with strong preliminary evidence. Project lacks focus and scientific merit. |
| 12. | New insight in understanding genomic footprints of early seedling vigour under direct seeded rice cultivation system | Science & Engineering Research Board | Some questions like - how the phenotypic traits are going to measure, what is the depth of sowing, etc. need to be clearly mentioned. In the current form, it is not mentioned. Another reason is the project activities needs heavy financial support which is not possible under SPR. |
| 13. | Bio-hardening and growth acceleration in tissue culture raised strawberry plants | Department of Biotechnology | Routine proposal. Many private companies are doing this. |
| 14. | Genome based mapping and development of new inter/intra-specific citrus scion hybrids with economically important quality traits | Department of Biotechnology | Already similar project funded to PI. |
| 15. | Structural and functional characterisation of tachykinins and its receptor gene in <i>Bemisia tabaci</i> and identification of potential pseudopeptides for development of novel insecticides. | International Centre for Genetic Engineering and Biotechnology | The whole project relies on the assumption that receptor is essential but if this will not be the case, all the proposed work will lose its sense. CRISPR-Cas9 is also mentioned and foreseen for training, but no details are included in the actual proposal. The CV of the PI indicates that he spent his whole career in the same place and the publication record is not competitive. |

Source: PAU records

Appendix 1.6

(Referred to in paragraph 1.4.2.1(i))

List of patented technologies of the University as of November 2022

| Sr. No. | Name of the technology | Date of grant of Patent |
|---------|--|-------------------------|
| 1. | An improved field tensiometer for irrigation water management of crops | 11.10.2013 |
| 2. | A hybrid combine harvester | 28.02.2017 |
| 3. | A fermentation process for preparation of concentrated sugarcane vinegar | 22.01.2018 |
| 4. | An improved solar dryer using packed bed natural circulation | 23.01.2018 |
| 5. | An improved solar cooker | 18.06.2018 |
| 6. | A Process for dyeing textile using plant sources polygonum Bistorata and Cyprus rotundus | 06.09.2018 |
| 7. | Beneficiation of phosphate rock for segregation of phosphorous containing heavy metal free minerals | 19.09.2018 |
| 8. | Technology Development for production of non-alcoholic naturally carbonated beverage from fruit juice | 16.01.2019 |
| 9. | Nanofabrication of phosphorous on kaolin mineral receptacles | 24.07.2019 |
| 10. | An improved greenhouse type solar dryer | 14.08.2019 |
| 11. | Pressurised All-Glass Evacuated tube solar water heater | 22.10.2019 |
| 12. | Zinc in clay-mineral receptacles in Nano forms for their use as advance mineral including novel fertilizer | 26.12.2020 |
| 13. | Electric soil disinfectant | 18.02.2021 |
| 14. | Nanofabrication process involving clay minerals as receptacles for manufacturing advance Nano-minerals including novel fertilizers (Process) | 21.07.2021 |
| 15. | Fermentation process for enhanced glucose production from sweet sorghum bagasse using acid thermophilic fungal celluloses | 01.09.2021 |
| 16. | Heel pushed dual foot operated sugarcane bud chipping apparatus | 23.05.2022 |
| 17. | Method for water testing and water testing kit | 13.06.2022 |
| 18. | Improved water and nutrient perforation and recirculation system for pot-based substrate hydroponics | 28.10.2022 |

Source: Information provided by PAU

Note: Patent granted in respect of collaborative developed technologies at Sr. Nos. 4, 9, 12 & 14, in the name of ICAR.

Appendix 1.7

(Referred to in paragraph 1.4.2.1(i))

List of pending patent applications as of November 2022

| Sr. No. | Name of the Technology | Date of Application | Date of Publication | Status of the application |
|----------------|--|----------------------------|----------------------------|---|
| 1. | Process Technology for utilization of the Digested biogas slurry for cellulase production | 14.05.2013 | 13.05.2015 | Application in amended examination |
| 2. | Flour composition of gluten free food grain | 20.03.2015 | 30.09.2016 | Application in amended examination |
| 3. | A gluten free whole grain flour composition and food product | 31.03.2015 | 07.10.2016 | Application in amended examination |
| 4. | Pollen collector cum pollinator for research and commercial use in agriculture | 01.04.2015 | 07.10.2016 | Application in amended examination |
| 5. | Bioprocess for production and purification α -L-rhamnosidase to convert bitter rhamnose and pruning in citrus juice | 14.05.2015 | 18.11.2016 | In order for grant under section 43, awaiting NBA approval |
| 6. | A fungal consortium for degradation of lignin and or silica, process therefore and application thereof | 27.05.2015 | 02.12.2016 | In order for grant under section 43, awaiting NBA approval |
| 7. | Paddy straw bale combustor or gayer | 06.07.2015 | 13.01.2017 | Application in amended examination |
| 8. | Straw cutter cum spreader | 21.03.2017 | 28.09.2018 | Application in amended examination. Commercialised on 25.6.2018 |
| 9. | A novel spraying attachment for seed drill and /or multi crop planter | 04.05.2017 | 15.03.2019 | Application in amended examination |
| 10. | Bacteriological food testing kit (BFTK) for rapid and efficient detection of presence/absence of recurrent indicator and emerging pathogens in the food sample | 12.09.2017 | 15.03.2019 | Application in amended examination |
| 11. | Portable Maize Dryer | 18.09.2017 | 03.05.2019 | Application in amended examination |
| 12. | Biomass incorporators | 05.10.2018 | 10.04.2020 | Application in amended examination |
| 13. | Molasses based microbial fertilizer and method thereof | 23.10.2018 | 14.08.2020 | FER issued; reply awaited. |
| 14. | Conveyer belt type mechanical feeding system for axial flow (paddy thresher) | 07.12.2018 | 21.08.2020 | Application in amended examination |
| 15. | Magnetic field assisted freezing process for horticulture produce | 07.10.2019 | 03.09.2021 | Awaiting examination |
| 16. | A process for bioethanol production from industrial graded wheat grains using an alpha amylase | 10.10.2019 | 16.04.2021 | Application in amended examination |
| 17. | Ready to use zinc phosphide bait for rodent management and method of preparation thereof | 12.12.2019 | 18.06.2021 | Application in amended examination |
| 18. | Mobile thermoelectric refrigeration system | 26.03.2020 | 01.10.2021 | Awaiting request of examination |

| Sr. No. | Name of the Technology | Date of Application | Date of Publication | Status of the application |
|---------|--|---------------------|-------------------------------|----------------------------------|
| 19. | Tractor operated seeder for mat type paddy nursery | 28.04.2020 | 29.04.2022 | Awaiting request of examination |
| 20. | Process for preparing Red Bell Pepper Kulcha and product thereof | 05.06.2020 | 10.12.2021 | Awaiting request of examination |
| 21. | Fermentative bioprocess for kojic acid production from kinnow waste | 14.04.2021 | Application not yet published | Provisional specifications filed |
| 22. | An autonomous system for 2-wheel paddy transplanter | 27.04.2021 | Application not yet published | Complete specification filed |
| 23. | Sensor based optimal rate controller for foliar spray of nitrogenous fertilizer | 29.01.2022 | Application not yet published | Provisional specifications filed |
| 24. | Lacto-fermented functional metabiotic turmeric beverage and salad dressing from fermented powder | 19.04.2022 | Application not yet published | Complete specification filed |
| 25. | Liquid fertilizer injector | 06.07.2022 | Application not yet published | Provisional specifications filed |

Source: Website of Office of the Controller General of Patents, Designs and Trademarks, Ministry of Commerce and Industries, Gol

Appendix 1.8

(Referred to in paragraph 1.4.2.1(ii))

**List of plant varieties developed by PAU registered under
PPV&FR Act, 2001**

| Sr. No. | Denomination of the candidate variety | Name of the crop | Date of filling | Date of issue of certificate |
|----------------|--|-------------------------|------------------------|-------------------------------------|
| 1. | PAU-626 H | Diploid Cotton | 15.12.2008 | 30.09.2011 |
| 2. | F-1861 | Tetraploid Cotton | 15.12.2008 | 30.09.2011 |
| 3. | F-1378 | Tetraploid Cotton | 15.12.2008 | 21.10.2011 |
| 4. | GSC-5 | Rapeseed (Gobhi Sarson) | 08.03.2013 | 07.11.2013 |
| 5. | OCN-3 | Rapeseed (Gobhi Sarson) | 08.03.2013 | 07.11.2013 |
| 6. | ELM-079 | Indian Mustard | 01.04.2013 | 06.05.2014 |
| 7. | PBR-210 | Indian Mustard | 01.04.2013 | 12.08.2014 |
| 8. | PSH-569 | Sunflower | 23.04.2013 | 14.08.2014 |
| 9. | SML-832 | Green Gram | 08.01.2014 | 09.10.2014 |
| 10. | Mash-479 (KUG 479) | Black Gram | 22.01.2014 | 14.10.2014 |
| 11. | Punjab Naveen | Cucumber | 27.06.2016 | 29.05.2017 |
| 12. | Punjab Haldi-1 | Turmeric | 27.06.2016 | 29.05.2017 |
| 13. | Punjab Haldi-2 | Turmeric | 27.06.2016 | 29.05.2017 |
| 14. | LH-2076 | Tetraploid Cotton | 18.03.2009 | 29.05.2017 |
| 15. | Punjab Kareli-1 | Bitter Gourd | 27.06.2016 | 28.03.2018 |
| 16. | LL-931 | Lentil | 27.06.2016 | 28.03.2018 |
| 17. | Mash-391 (LU 391) | Black Gram | 27.06.2016 | 28.03.2018 |
| 18. | Mash-114 | Black Gram | 27.06.2016 | 28.03.2018 |
| 19. | GSC-7 (GSC 101) | Gobhi Sarson | 27.06.2016 | 28.03.2018 |
| 20. | PBW-550 | Wheat | 27.06.2016 | 28.03.2018 |
| 21. | PBW-502 | Wheat | 27.06.2016 | 28.03.2018 |
| 22. | PDW-291 | Durum Wheat | 27.06.2016 | 28.03.2018 |
| 23. | PBW-596 | Bread Wheat | 27.06.2016 | 28.03.2018 |
| 24. | PBW-590 | Bread Wheat | 27.06.2016 | 28.03.2018 |
| 25. | PBW-644 | Wheat | 27.06.2016 | 28.03.2018 |
| 26. | Punjab Samrat (WIR-4446) | Pumpkin | 27.06.2016 | 28.03.2018 |
| 27. | PBR-357 | Indian mustard (Sarson) | 27.06.2016 | 28.03.2018 |
| 28. | L-555 (GLK-26155) | Chickpea | 27.06.2016 | 28.03.2018 |
| 29. | PBG-7 (GL 26054) | Chickpea | 27.06.2016 | 28.03.2018 |

| Sr. No. | Denomination of the candidate variety | Name of the crop | Date of filling | Date of issue of certificate |
|----------------|--|-------------------------|------------------------|-------------------------------------|
| 30. | PSH-996 | Sunflower | 27.06.2016 | 28.03.2018 |
| 31. | PL-751 | Barley | 27.06.2016 | 28.03.2018 |
| 32. | Punjab Sugandh | Coriander | 27.06.2016 | 11.09.2018 |
| 33. | MASH-1008 | Black Gram | 27.06.2016 | 02.11.2021 |
| 34. | LD-694 | Diploid Cotton | 15.12.2008 | 28.03.2022 |
| 35. | PR-123 | Rice | 27.02.2015 | 23.06.2022 |
| 36. | PR-124 | Rice | 27.02.2015 | 23.06.2022 |

Source: Website of Protection of Plant Varieties and Farmers' Rights Authority, Ministry of Agriculture and Farmers' Welfare, GoI

Appendix 1.9

(Referred to in paragraph 1.4.2.2)

Details of collaborative plant varieties registered in the name of ICAR

| Sr. No. | Crop | Variety | Year of development |
|---------|-----------------|-------------------|---------------------|
| 1. | Sugarcane | CoPb-92 | 2017-18 |
| 2. | Oats | OL-1802 | 2017-18 |
| 3. | | OL-1769 | 2017-18 |
| 4. | | OL-1760 | 2017-18 |
| 5. | Pigeonpea | PAU-881 | 2017-18 |
| 6. | Maize | PMH-12 | 2017-18 |
| 7. | Wheat | PBW-752 | 2018-19 |
| 8. | | PBW-757 | 2018-19 |
| 9. | Chilli | CH-27 | 2018-19 |
| 10. | Pea | Matar Ageta-7 | 2018-19 |
| 11. | Brinjal | Punjab Raunak | 2018-19 |
| 12. | Lentil | LL-1373 | 2018-19 |
| 13. | Wheat | PBW-771 | 2019-20 |
| 14. | Barley | PL-891 | 2019-20 |
| 15. | Bajra Napier | PBN-351 | 2019-20 |
| 16. | Cotton | PAU-Bt 2 | 2019-20 |
| 17. | Cotton | PAU-Bt 3 | 2019-20 |
| 18. | Chickpea | GL-13001 | 2019-20 |
| 19. | Oats | OL-1861 | 2019-20 |
| 20. | | OL-1869-1 | 2019-20 |
| 21. | Rye grass | PBRG-2 | 2019-20 |
| 22. | Wheat | PBW-771 | 2020-21 |
| 23. | | PBW-757 | 2020-21 |
| 24. | Chickpea | GL-13001 (PBG 9) | 2020-21 |
| 25. | Oats | OL-1861 | 2020-21 |
| 26. | | OL-1869-I (OL 13) | 2020-21 |
| 27. | | OL-1874 | 2020-21 |
| 28. | | OL-1896 | 2020-21 |
| 29. | | OL-1876-2 | 2020-21 |
| 30. | Rye grass | Punjab Ryegrass 2 | 2020-21 |
| 31. | Sugarcane | CoPb-98 | 2020-21 |
| 32. | American cotton | PBH-115 | 2020-21 |
| 33. | | PBH-116 | 2020-21 |
| 34. | | F-2662 | 2020-21 |

Source: Information provided by PAU

Appendix 1.10*(Referred to in paragraph 1.4.2.3(iii))***List of plant varieties developed and released by the University during 2017-22**

| S. No. | Name of Crop | Name of Variety |
|----------------|-----------------------------------|--|
| 2017-18 | | |
| 1. | Wheat | Unnat PBW-343 |
| 2. | | Unnat PBW-550 |
| 3. | | PBW-1 Zn |
| 4. | Rice | PR-127 |
| 5. | Basmati rice | Pusa Basmati-1637 |
| 6. | Desi cotton | LD-1019 |
| 7. | Sugarcane | CoPb-92 |
| 8. | | CoPb-93 |
| 9. | | CoPb-94 |
| 10. | Oats | OL-11 |
| 11. | Berseem | BL-43 |
| 12. | Guava | Punjab Safeda |
| 13. | Carrot | <i>PC-161 (Commercialised)</i> |
| 14. | Sweet Orange | Early Gold |
| 15. | New rootstock for Kinnow mandarin | Carrizo |
| 16. | Pumpkin | PAU Magaz Kadoo-1 |
| 17. | Cucumber | <i>Punjab Kheera – 1 (Commercialised)</i> |
| 18. | Tinda | Punjab Tinda -1 |
| 19. | Tomato | Punjab Swarna |
| 20. | Brinjal | Punjab Raunak |
| 21. | Flowers | Punjab Shingar |
| 22. | | Punjab Mohini |
| 2018-19 | | |
| 23. | Summer mungbean | SML-1827 |
| 24. | Maize | PMH-11 |
| 25. | Napier Bajra | PBN-342 |
| 26. | Oats | OL-12 |
| 27. | Guava | Punjab Apple Guava |
| 28. | Tomato | PTH-2 |
| 29. | Capsicum | PSM-1 |
| 30. | Onion | <i>PRO-7 (Commercialised)</i> |
| 31. | | PWO-35 |
| 32. | | PYO-102 |
| 33. | Bitter gourd | <i>Punjab Karela-15 (Commercialised)</i> |
| 34. | Pumpkin | <i>Punjab Nawab (Commercialised)</i> |
| 35. | Flowers | Punjab Glad-3 |

| S. No. | Name of Crop | Name of Variety |
|----------------|--------------|--------------------------------|
| 2019-20 | | |
| 36. | Rice | PR-128 |
| 37. | | PR-129 |
| 38. | Wheat | PBW-752 |
| 39. | Barley | PL-891 |
| 40. | Maize | JC-12 |
| 41. | Urdbean | Mash-1137 |
| 42. | Raya | RCH-1 |
| 43. | | PHR-126 |
| 44. | Sunflower | PSH-2080 |
| 45. | Pearl Millet | PCB-165 |
| 46. | Fodder Maize | J-1007 |
| 47. | Onion | POH-1 |
| 48. | Brinjal | Punjab Bharpoor |
| 49. | Sponge Gourd | Punjab Nikhar |
| 50. | Carrot | Punjab Kiran |
| 2020-21 | | |
| 51. | Chilli | <i>CH-52 (Commercialised)</i> |
| 52. | Cucumber | PKH-11 |
| 53. | Muskmelon | Punjab Sarda |
| 54. | Carrot | PCP-2 |
| 55. | | PCY-2 |
| 56. | Antirrhinum | Punjab Antirrhinum-1 |
| 57. | | Punjab Antirrhinum-2 |
| 58. | | Punjab Antirrhinum -3 |
| 59. | | Punjab Antirrhinum-4 |
| 60. | Raya | RCH-1 |
| 61. | Gobhi Sarson | PGSH-1707 |
| 62. | Sunflower | PSH-2080 |
| 63. | Lentil | LL-1373 |
| 64. | Moong | ML-1808 |
| 65. | Chickpea | PBG-8 |
| 66. | Oat | OL-13 |
| 67. | | OL-14 |
| 68. | Ryegrass | Punjab Ryegrass 2 |
| 69. | Sugarcane | CoPb-95 |
| 70. | | CoPb-96 |
| 71. | | CoPb-98 |
| 72. | Maize | <i>PMH-13 (Commercialised)</i> |
| 73. | Wheat | Sunehri |
| 74. | | PBW-771 |
| 75. | | PBW-757 |
| 76. | | PBW-1 Chapati |
| 77. | Basmati rice | Punjab Basmati-7 |

| S. No. | Name of Crop | Name of Variety |
|----------------|--------------|--------------------|
| 78. | Wheat | PBW-869 |
| 79. | | PBW-824 |
| 80. | | PBW-803 |
| 81. | | Sunehri (PBW-766) |
| 82. | | PBW-1 Chapati |
| 83. | | DBW-222 |
| 84. | | DBW-187 |
| 85. | | HD-3226 |
| 86. | | PBW-771 |
| 87. | | PBW-757 |
| 88. | Oat | OL-15 |
| 89. | Berseem | BL-44 |
| 2021-22 | | |
| 90. | Rice | PR-130 |
| 91. | | PR-131 |
| 92. | Cotton | PAU Bt-2 |
| 93. | | PAU Bt-3 |
| 94. | Maize | Punjab Baby Corn-1 |
| 95. | Mash | Mash-883 |
| 96. | Sorghum | SL-45 |
| 97. | Bajra | PCB-166 |

Source: PAU records

Appendix 1.11*(Referred to in paragraphs 1.4.2.3 (iii))***List of technologies and varieties commercialised without IPR protection**

| S. No. | Name of the Technology/Variety | Year of Commercialisation |
|--------------------------------------|--|---------------------------|
| Technologies developed by PAU | | |
| 1. | Lucky seed drill technology | 2017 |
| 2. | Mushroom processing and its use in value addition | 2017 |
| 3. | Kadhu di chutney technology | 2017 |
| 4. | PAU cutter cum spreader | 2017 |
| 5. | Probiotic Beverage from black carrots | 2017 |
| 6. | Fermented Beverage from fruit and vegetable juices | 2017 |
| 7. | PAU Super SMS | 2017 |
| 8. | PAU Punjabi Mixed tadka technology | 2017 |
| 9. | PAU Quinoa Bars technology | 2017 |
| 10. | Bottling of Sugarcane juice technology | 2018 |
| 11. | Bacteriological water testing kit technology | 2018 |
| 12. | PAU Happy Seeder | 2018 |
| 13. | PAU leaf colour chart | 2018 |
| 14. | Apple Cider Vinegar | 2018 |
| 15. | Straw chopper cum spreader/mulchar technology | 2018 |
| 16. | Fruit Vinegar | 2018 |
| 17. | Brewed fruit vinegar | 2018 |
| 18. | Maize flour for rollable chappati | 2018 |
| 19. | Advanced domestic solar dryer technology | 2019 |
| 20. | Rooftop vegetable nutrition garden model using soilless media technology | 2019 |
| 21. | Fermentation of fruits and vegetables with lactic acid starter culture technology | 2019 |
| 22. | Evacuated tube collector solar dryer technology | 2019 |
| 23. | Frozen Potato and frozen vegetables technology | 2019 |
| 24. | PAU lacto fermented Functional Beverages and Pickles technology for turmeric and Indian gooseberry | 2020 |
| 25. | Mosquito Repellent cotton fabric technology | 2020 |
| 26. | Making and packing of saag technology | 2020 |
| 27. | Beetroot powder as natural colorant technology | 2020 |
| 28. | Agro industrial solar dryer technology | 2020 |
| 29. | Paddy straw based biogas plant made up of mild steel sheet (above the ground) | 2021 |
| 30. | Modified PAU fixed dome type janta model biogas plant having capacity from 25m ³ /day to 500m ³ /day | 2021 |
| 31. | PAU fixed dome type family size biogas plant having capacity from 1m ³ /day to 25m ³ /day | 2021 |
| 32. | Brewed vinegar production from sugarcane and fruits | 2021 |
| 33. | Vitamin-D enriched mushroom powder technology | 2021 |

| S. No. | Name of the Technology/Variety | Year of Commercialisation |
|---|--------------------------------|---------------------------|
| 34. | Canning technology of mushroom | 2021 |
| 35. | Mat type nursery Seeder | 2022 |
| 36. | PAU Smart Seeder | 2022 |
| Plant Varieties developed by PAU | | |
| 37. | Chilli Hybrid-27 | 2017 |
| 38. | Brinjal Hybrid PBHR-42 | 2017 |
| 39. | Pumpkin Hybrid PPH-1 | 2017 |
| 40. | Pumpkin Hybrid PPH-2 | 2017 |
| 41. | Maize Hybrid PMH-1 | 2018 |
| 42. | PSM-1 (Bell Paper variety) | 2018 |
| 43. | PRO-7 (Onion variety) | 2018 |
| 44. | Brinjal PBH-4 | 2018 |
| 45. | Maize Hybrid PMH-5 | 2018 |
| 46. | Punjab Kheera-1 | 2019 |
| 47. | Punjab Karela-15 | 2019 |
| 48. | Punjab Nawab (Pumpkin variety) | 2019 |
| 49. | PC-161 (Carrot variety) | 2020 |
| 50. | Chilli Hybrid CH-52 | 2021 |
| 51. | PAU Bt1 cotton seeds | 2021 |
| 52. | Maize Hybrid PMH-13 | 2021 |
| 53. | Mustard Hybrid PHR-126 | 2021 |

Source: PAU records

Appendix 1.12

(Referred to in paragraph 1.5.1)

Category/Branch-wise position of staff posted for extension activities during the period 2017-22

| Sr. No. | Name of the Branch | Sanctioned Strength (2017-22) | Year-wise men in position (Shortfall in percentage) | | | | |
|--------------|---|-------------------------------|---|------------------------|------------------------|------------------------|------------------------|
| | | | 2017-18 | 2018-19 | 2019-20 | 2020-21 | 2021-22 |
| 1. | KVKs & FASCs (Teaching) | 193 | 141 (26.94) | 140 (27.46) | 139 (27.98) | 139 (27.98) | 135 (30.05) |
| 2. | KVKs & FASCs (Non-teaching) | 224 | 142 (36.61) | 135 (39.73) | 125 (44.20) | 115 (48.66) | 109 (51.34) |
| 3. | Director Extension Education (Teaching) | 24 | 8 (66.67) | 8 (66.67) | 7 (70.83) | 7 (70.83) | 7 (70.83) |
| 4. | Director Extension Education (Non-teaching) | 109 | 13 (88.07) | 30 (72.48) | 40 (63.30) | 40 (63.30) | 35 (67.89) |
| 5. | Contractual | 26 | 6 (76.92) | 10 (61.54) | 5 (80.77) | 16 (38.46) | 12 (53.85) |
| Total | | 576 | 310 (46.18) | 323 (43.92) | 316 (45.14) | 317 (44.97) | 298 (48.26) |

Source: Information provided by PAU

Appendix 1.13
(Referred to in paragraph 1.5.2)

Details of landholdings with Krishi Vigyan Kendras (KVK)

| Sr. No. | Name of KVK | Date of MoU | Minimum land requirement as per MoU | Maximum cultivable land of KVK (2017-18 to 2021-22) (in acre) | Shortfall (in Acre) | Shortfall (in per cent) |
|---------|-----------------------------|-------------|-------------------------------------|---|---------------------|-------------------------|
| 1. | Fatehgarh Sahib | 20.09.2004 | 20 hectare or 49.42 acre | 13.68 | 35.74 | 72.32 |
| 2. | Rupnagar | 20.09.2004 | 20 hectare or 49.42 acre | 20.00 | 29.42 | 59.53 |
| 3. | Faridkot | 20.02.1995 | 20 hectare or 49.42 acre | 36.75 ³ | 12.67 | 25.64 |
| 4. | Moga | 03.02.2005 | 20 hectare or 49.42 acre | 21.50 | 27.92 | 56.50 |
| 5. | Kapurthala | 01.03.1991 | 25 hectare or 61.78 acre | 25.00 | 36.78 | 59.53 |
| 6. | Samrala (Ludhiana) | 09.08.2004 | 20 hectare or 49.42 acre | 22.00 | 27.42 | 55.48 |
| 7. | Mansa | 21.04.2006 | 21 acre | 15.00 | 6.00 | 28.57 |
| 8. | Kheri (Sangrur) | 20.02.1995 | 20 hectare or 49.42 acre | 23.00 | 26.42 | 53.46 |
| 9. | Ferozepur | 22.05.1990 | 12 hectare or 29.65 acre | 24.00 | 5.65 | 19.06 |
| 10. | Gurdaspur | 17.02.1982 | 08 hectare or 19.77 acre | 24.00 | Nil | --- |
| 11. | Nurmahal (Jalandhar) | 09.03.2006 | 25 acre | 20.00 | 5.00 | 20.00 |
| 12. | Amritsar | 20.02.2009 | 14.50 acre | 13.50 | 1.00 | 6.90 |
| 13. | Goniana (Sri Muktsar Sahib) | 09.08.2004 | 20 hectare or 49.42 acre | 43.80 | 5.62 | 11.37 |
| 14. | Bathinda | 01.03.1991 | 25 hectare or 61.78 acre | 14.00 | 47.78 | 77.34 |
| 15. | Hoshiarpur | 01.03.1991 | 25 hectare or 61.78 acre | 27.50 | 34.28 | 55.49 |
| 16. | Pathankot | 22.09.2016 | 25.88 acre (25 acre and 7 kanal) | 20.50 | 5.38 | 20.78 |
| 17. | Patiala | 01.03.1991 | 25 hectare or 61.78 acre | 25.00 | 36.78 | 59.53 |
| 18. | Langroya (SBS Nagar) | 20.02.1995 | 20 hectare or 49.42 acre | 30.00 | 19.42 | 39.30 |

Source: Information provided by PAU

³ Reduced to 9.625 acre in May 2021 due to expiry of lease deed in respect of 26 acre of land.

Appendix 1.14

(Referred to in paragraph 1.5.3)

Shortfall in achievement of targets in terms of number of courses in respect of six selected KVKs during the period 2017-22

| Period | Farmers | | Shortfall (in per cent) | Vocational Courses | | Shortfall (in per cent) | In-service trainings | | Shortfall (in per cent) | Total | | Shortfall (in per cent) |
|-----------------------------|------------|-------------|-------------------------------|--------------------|-------------|-------------------------------|----------------------|-------------|-------------------------------|------------|-------------|-------------------------------|
| | Target | Achievement | | Target | Achievement | | Target | Achievement | | Target | Achievement | |
| FARIDKOT | | | | | | | | | | | | |
| 2017-18 | 56 | 56 | 0 | 26 | 26 | 0 | 8 | 8 | 0 | 90 | 90 | 0 |
| 2018-19 | 60 | 60 | 0 | 27 | 27 | 0 | 10 | 10 | 0 | 97 | 97 | 0 |
| 2019-20 | 73 | 73 | 0 | 23 | 23 | 0 | 12 | 12 | 0 | 108 | 108 | 0 |
| 2020-21 | 73 | 54 | 26 | 22 | 19 | 14 | 7 | 5 | 29 | 102 | 78 | 24 |
| 2021-22 | 72 | 67 | 7 | 22 | 22 | 0 | 11 | 5 | 55 | 105 | 94 | 10 |
| Total | 334 | 310 | 7.19 | 120 | 117 | 2.50 | 48 | 40 | 16.67 | 502 | 467 | 6.97 |
| FEROZEPUR | | | | | | | | | | | | |
| 2017-18 | 61 | 78 | 0 | 10 | 10 | 0 | 12 | 6 | 50 | 83 | 94 | 0 |
| 2018-19 | 66 | 136 | 0 | 16 | 18 | 0 | 14 | 6 | 57 | 96 | 160 | 0 |
| 2019-20 | 64 | 88 | 0 | 10 | 10 | 0 | 14 | 5 | 64 | 88 | 103 | 0 |
| 2020-21 | 62 | 128 | 0 | 14 | 10 | 29 | 12 | 3 | 75 | 88 | 141 | 0 |
| 2021-22 | 65 | 72 | 0 | 16 | 17 | 0 | 14 | 5 | 64 | 95 | 94 | 1 |
| Total | 318 | 502 | 0 | 66 | 65 | 1.52 | 66 | 25 | 62.12 | 450 | 592 | 0 |
| LANGROYA (SBS NAGAR) | | | | | | | | | | | | |
| 2017-18 | 71 | 75 | 0 | 14 | 14 | 0 | 3 | 3 | 0 | 88 | 92 | 0 |
| 2018-19 | 75 | 71 | 5 | 15 | 15 | 0 | 3 | 3 | 0 | 93 | 89 | 4 |
| 2019-20 | 68 | 58 | 15 | 16 | 10 | 38 | 13 | 13 | 0 | 97 | 81 | 16 |
| 2020-21 | 74 | 65 | 12 | 6 | 2 | 67 | 11 | 11 | 0 | 91 | 78 | 14 |
| 2021-22 | 68 | 70 | 0 | 10 | 10 | 0 | 4 | 4 | 0 | 82 | 84 | 0 |
| Total | 356 | 339 | 4.78 | 61 | 51 | 16.39 | 34 | 34 | 0 | 451 | 424 | 5.99 |

| Period | Farmers | | Shortfall (in per cent) | Vocational Courses | | Shortfall (in per cent) | In-service trainings | | Shortfall (in per cent) | Total | | Shortfall (in per cent) |
|-----------------------------|------------|-------------|-------------------------------|--------------------|-------------|-------------------------------|----------------------|-------------|-------------------------------|------------|-------------|-------------------------------|
| | Target | Achievement | | Target | Achievement | | Target | Achievement | | Target | Achievement | |
| NURMAHAL (JALANDHAR) | | | | | | | | | | | | |
| 2017-18 | 56 | 70 | 0 | 20 | 11 | 45 | 13 | 4 | 69 | 89 | 85 | 4 |
| 2018-19 | 68 | 62 | 9 | 21 | 19 | 10 | 12 | 5 | 58 | 101 | 86 | 15 |
| 2019-20 | 72 | 57 | 21 | 20 | 16 | 20 | 14 | 1 | 93 | 106 | 74 | 30 |
| 2020-21 | 59 | 43 | 27 | 19 | 7 | 63 | 12 | 1 | 92 | 90 | 51 | 43 |
| 2021-22 | 70 | 79 | 0 | 20 | 20 | 0 | 12 | 3 | 75 | 102 | 102 | 0 |
| Total | 325 | 311 | 4.31 | 100 | 73 | 27 | 63 | 14 | 77.78 | 488 | 398 | 18.44 |
| RUPNAGAR | | | | | | | | | | | | |
| 2017-18 | 67 | 55 | 18 | 10 | 11 | 0 | 13 | 4 | 69 | 90 | 70 | 22 |
| 2018-19 | 60 | 63 | 0 | 20 | 16 | 20 | 10 | 10 | 0 | 90 | 89 | 1 |
| 2019-20 | 70 | 73 | 0 | 9 | 14 | 0 | 2 | 2 | 0 | 81 | 89 | 0 |
| 2020-21 | 70 | 62 | 11 | 19 | 16 | 16 | 15 | 2 | 87 | 104 | 80 | 23 |
| 2021-22 | 78 | 78 | 0 | 20 | 18 | 10 | 4 | 4 | 0 | 102 | 100 | 2 |
| Total | 345 | 331 | 4.06 | 78 | 75 | 3.85 | 44 | 22 | 50.00 | 467 | 428 | 8.35 |
| KHERI (SANGRUR) | | | | | | | | | | | | |
| 2017-18 | 51 | 43 | 16 | 18 | 19 | 0 | 8 | 5 | 38 | 77 | 67 | 13 |
| 2018-19 | 53 | 63 | 0 | 19 | 18 | 5 | 7 | 6 | 14 | 79 | 87 | 0 |
| 2019-20 | 59 | 55 | 7 | 22 | 20 | 9 | 8 | 6 | 25 | 89 | 81 | 9 |
| 2020-21 | 66 | 39 | 41 | 21 | 13 | 38 | 9 | 7 | 22 | 96 | 59 | 39 |
| 2021-22 | 60 | 40 | 33 | 16 | 11 | 31 | 12 | 7 | 42 | 88 | 58 | 34 |
| Total | 289 | 240 | 16.96 | 96 | 81 | 15.63 | 44 | 31 | 29.55 | 429 | 352 | 17.95 |

Source: Information provided by PAU

Appendix 1.15

(Referred to in paragraph 1.5.3)

Course-wise shortfall in achievement of targets in terms of number of participants in respect of six selected KVKs during the period 2017-22

| Period | Farmers | | Shortfall (in per cent) | Vocational Courses | | Shortfall (in per cent) | In-service trainings | | Shortfall (in per cent) | Total | | Shortfall (in per cent) |
|-----------------------------|--------------|---------------|-------------------------------|--------------------|--------------|-------------------------------|----------------------|-------------|-------------------------------|--------------|---------------|-------------------------------|
| | Target | Achievement | | Target | Achievement | | Target | Achievement | | Target | Achievement | |
| FARIDKOT | | | | | | | | | | | | |
| 2017-18 | 810 | 841 | 0 | 290 | 291 | 0 | 100 | 146 | 0 | 1,200 | 1,278 | 0 |
| 2018-19 | 900 | 912 | 0 | 380 | 291 | 23 | 100 | 179 | 0 | 1,380 | 1,382 | 0 |
| 2019-20 | 1,000 | 1,016 | 0 | 360 | 255 | 29 | 150 | 146 | 3 | 1,510 | 1,417 | 6 |
| 2020-21 | 1,000 | 570 | 43 | 330 | 200 | 39 | 100 | 61 | 39 | 1,430 | 831 | 42 |
| 2021-22 | 1,000 | 1,175 | 0 | 330 | 479 | 0 | 150 | 228 | 0 | 1,480 | 1,882 | 0 |
| Total | 4,710 | 4,514 | 4.16 | 1,690 | 1,516 | 10.30 | 600 | 760 | 0 | 7,000 | 6,790 | 3.00 |
| FEROZEPUR | | | | | | | | | | | | |
| 2017-18 | 1,256 | 1,588 | 0 | 320 | 113 | 65 | 226 | 102 | 55 | 1,802 | 1,803 | 0 |
| 2018-19 | 1,567 | 3,596 | 0 | 355 | 110 | 69 | 219 | 116 | 47 | 2,141 | 3,822 | 0 |
| 2019-20 | 1,540 | 1,905 | 0 | 360 | 174 | 52 | 230 | 88 | 62 | 2,130 | 2,167 | 0 |
| 2020-21 | 1,365 | 1,683 | 0 | 330 | 166 | 50 | 190 | 56 | 71 | 1,885 | 1,905 | 0 |
| 2021-22 | 1,410 | 1,832 | 0 | 360 | 138 | 62 | 230 | 94 | 59 | 2,000 | 2,064 | 0 |
| Total | 7,138 | 10,604 | 0 | 1,725 | 701 | 59.36 | 1,095 | 456 | 58.36 | 9,958 | 11,761 | 0 |
| LANGROYA (SBS NAGAR) | | | | | | | | | | | | |
| 2017-18 | 1,374 | 1,458 | 0 | 350 | 350 | 0 | 58 | 75 | 0 | 1,782 | 1,883 | 0 |
| 2018-19 | 1,712 | 1,620 | 5 | 385 | 385 | 0 | 56 | 59 | 0 | 2,153 | 2,064 | 4 |
| 2019-20 | 1,620 | 1,425 | 12 | 370 | 370 | 0 | 260 | 282 | 0 | 2,250 | 2,077 | 8 |
| 2020-21 | 1,455 | 750 | 48 | 148 | 132 | 11 | 212 | 36 | 83 | 1,815 | 918 | 49 |
| 2021-22 | 1,352 | 1,266 | 6 | 202 | 355 | 0 | 68 | 86 | 0 | 1,622 | 1,707 | 0 |
| Total | 7,513 | 6,519 | 13.23 | 1,455 | 1,592 | 0 | 654 | 538 | 17.74 | 9,622 | 8,649 | 10.11 |

| Period | Farmers | | Shortfall (in per cent) | Vocational Courses | | Shortfall (in per cent) | In-service trainings | | Shortfall (in per cent) | Total | | Shortfall (in per cent) |
|-----------------------------|--------------|--------------|-------------------------------|--------------------|--------------|-------------------------------|----------------------|-------------|-------------------------------|--------------|---------------|-------------------------------|
| | Target | Achievement | | Target | Achievement | | Target | Achievement | | Target | Achievement | |
| NURMAHAL (JALANDHAR) | | | | | | | | | | | | |
| 2017-18 | 1,360 | 1,467 | 0 | 300 | 318 | 0 | 195 | 139 | 29 | 1,855 | 1,924 | 0 |
| 2018-19 | 1,400 | 1,628 | 0 | 630 | 775 | 0 | 180 | 92 | 49 | 2,210 | 2,495 | 0 |
| 2019-20 | 1,481 | 1,936 | 0 | 300 | 367 | 0 | 150 | 20 | 87 | 1,931 | 2,323 | 0 |
| 2020-21 | 1,458 | 822 | 44 | 285 | 193 | 32 | 120 | 7 | 94 | 1,863 | 1,022 | 45 |
| 2021-22 | 1,400 | 1,264 | 10 | 300 | 477 | 0 | 120 | 116 | 3 | 1,820 | 1,857 | 0 |
| Total | 7,099 | 7,117 | 0 | 1,815 | 2,130 | 0 | 765 | 374 | 51.11 | 9,679 | 9,621 | 0.60 |
| RUPNAGAR | | | | | | | | | | | | |
| 2017-18 | 1,005 | 1,199 | 0 | 160 | 1,049 | 0 | 190 | 95 | 50 | 1,355 | 2,343 | 0 |
| 2018-19 | 1,200 | 1,491 | 0 | 500 | 1,217 | 0 | 100 | 123 | 0 | 1,800 | 2,831 | 0 |
| 2019-20 | 1,400 | 1,937 | 0 | 180 | 1,543 | 0 | 20 | 28 | 0 | 1,600 | 3,508 | 0 |
| 2020-21 | 1,240 | 1,493 | 0 | 135 | 1,079 | 0 | 10 | 28 | 0 | 1,385 | 2,600 | 0 |
| 2021-22 | 1,155 | 1,638 | 0 | 350 | 1,268 | 0 | 62 | 66 | 0 | 1,567 | 2,972 | 0 |
| Total | 6,000 | 7,758 | 0 | 1,325 | 6,156 | 0 | 382 | 340 | 10.99 | 7,707 | 14,254 | 0 |
| KHERI (SANGRUR) | | | | | | | | | | | | |
| 2017-18 | 1,020 | 1,302 | 0 | 450 | 550 | 0 | 120 | 96 | 20 | 1,590 | 1,948 | 0 |
| 2018-19 | 1,325 | 1,683 | 0 | 380 | 532 | 0 | 140 | 125 | 11 | 1,845 | 2,340 | 0 |
| 2019-20 | 1,180 | 1,317 | 0 | 660 | 674 | 0 | 120 | 95 | 21 | 1,960 | 2,086 | 0 |
| 2020-21 | 1,320 | 645 | 51 | 735 | 331 | 55 | 180 | 160 | 11 | 2,235 | 1,136 | 49 |
| 2021-22 | 1,500 | 947 | 37 | 560 | 297 | 47 | 240 | 95 | 60 | 2,300 | 1,339 | 42 |
| Total | 6,345 | 5,894 | 7.11 | 2,785 | 2,384 | 14.40 | 800 | 571 | 28.63 | 9,930 | 8,849 | 10.89 |

Source: Information provided by PAU

Appendix 2.1

(Referred to in Paragraph 2.3.2.1)

Statement showing assessment of solid waste generation taken by ULBs in various documents

| Sr. No. | Name of ULB | Population as per action plan | Year-wise assessment of waste generation (in Gram per capita per day) | | | | | | | | | | | | | | |
|---------|----------------|-------------------------------|---|----------------|-------|---------|----------------|-------|---------|----------------|-------|---------|----------------|-------|---------|----------------|-------|
| | | | 2017-18 | | | 2018-19 | | | 2019-20 | | | 2020-21 | | | 2021-22 | | |
| | | | MSWM | Annual Report* | APSWM | MSWM | Annual Report* | APSWM | MSWM | Annual Report* | APSWM | MSWM | Annual Report* | APSWM | MSWM | Annual Report* | APSWM |
| 1. | Amritsar (C) | 13,38,192 | 500 | 618 | NA | 500 | 356 | NA | 500 | 486 | 411 | 500 | 486 | NA | 500 | 310 | NA |
| 2. | Bathinda (C) | 3,35,800 | 325 | NA | NA | 325 | 385 | NA | 325 | 385 | 323 | 325 | NA | NA | 325 | NA | NA |
| 3. | Ludhiana (C) | 17,83,823 | 500 | 713 | NA | 500 | 713 | 585 | 500 | 713 | NA | 500 | 682 | NA | 500 | 682 | NA |
| 4. | Moga (C) | 1,62,320 | 250 | NA | NA | 250 | 400 | NA | 250 | NA | 578 | 250 | NA | NA | 250 | Not submitted | NA |
| 5. | SAS Nagar (C) | 1,95,000 | 250 | NA | NA | 250 | 421 | 423 | 250 | 421 | NA | 250 | 459 | NA | 250 | Not provided | NA |
| 6. | Adampur (MC) | 20,922 | 250 | 119 | NA | 250 | 149 | 177 | 250 | 149 | NA | 250 | 149 | NA | 250 | 149 | NA |
| 7. | Doraha (MC) | 30,893 | 250 | NA | NA | 250 | NA | 544 | 250 | 630 | NA | 250 | 472 | NA | 250 | Not submitted | NA |
| 8. | Ferozepur (MC) | 1,11,708 | 250 | 427 | NA | 250 | 427 | NA | 250 | 391 | 421 | 250 | 427 | NA | 250 | 336 | NA |
| 9. | Kartarpur (MC) | 26,616 | 250 | 273 | NA | 250 | 225 | 285 | 250 | 225 | NA | 250 | 259 | NA | 250 | 259 | NA |
| 10. | Mansa (MC) | 92,500 | 250 | NA | NA | 250 | 446 | 400 | 250 | NA | NA | 250 | NA | NA | 250 | Not submitted | NA |
| 11. | Qadian (MC) | 24,590 | 250 | NA | NA | 250 | NA | 183 | 250 | NA | NA | 250 | 159 | NA | 250 | 159 | NA |
| 12. | Rajpura (MC) | 1,00,000 | 250 | NA | NA | 250 | NA | 450 | 250 | 271 | NA | 250 | NA | NA | 250 | Not submitted | NA |
| 13. | Rupnagar (MC) | 64,180 | 250 | 178 | NA | 250 | 178 | 376 | 250 | 178 | NA | 250 | 232 | NA | 250 | 214 | NA |
| 14. | SBS Nagar (MC) | 53,700 | 250 | 261 | NA | 250 | 261 | 243 | 250 | 261 | NA | 250 | 326 | NA | 250 | 261 | NA |
| 15. | Sirhind (MC) | 64,500 | 250 | 207 | NA | 250 | 346 | 85 | 250 | 346 | NA | 250 | 276 | NA | 250 | 243 | NA |
| 16. | Bilga (NP) | 12,000 | 250 | NA | NA | 250 | 395 | 462 | 250 | 395 | NA | 250 | 395 | NA | 250 | 395 | NA |

| Sr. No. | Name of ULB | Population as per action plan | Year-wise assessment of waste generation (in Gram per capita per day) | | | | | | | | | | | | | | |
|---------|---------------------|-------------------------------|---|----------------|-------|---------|----------------|-------|---------|----------------|-------|---------|----------------|-------|---------|----------------|-------|
| | | | 2017-18 | | | 2018-19 | | | 2019-20 | | | 2020-21 | | | 2021-22 | | |
| | | | MSWM | Annual Report* | APSWM | MSWM | Annual Report* | APSWM | MSWM | Annual Report* | APSWM | MSWM | Annual Report* | APSWM | MSWM | Annual Report* | APSWM |
| 17. | Khamanon (NP) | 11,850 | 250 | 642 | NA | 250 | 444 | 12 | 250 | 395 | NA | 250 | 493 | NA | 250 | 448 | NA |
| 18. | Kiratpur Sahib (NP) | 7,680 | 250 | NA | NA | 250 | 133 | 130 | 250 | 133 | NA | 250 | 133 | NA | 250 | 133 | NA |
| 19. | Makhu (NP) | 16,130 | 250 | 327 | NA | 250 | 327 | 310 | 250 | 273 | NA | 250 | 273 | NA | 250 | 280 | NA |
| 20. | Mehraj (NP) | 18,462 | 250 | 60 | NA | 250 | 60 | 219 | 250 | 60 | NA | 250 | 60 | NA | 250 | 60 | NA |

Source: Data provided by ULB

C- Municipal Corporation; MC- Municipal Council and NP- Nagar Panchayat

NA- Not available

APSWM- Action Plan for Solid Waste Management, AR- Annual Reports, MSWM- Municipal Solid Waste Management

Note:* The data taken from Annual Report in respect of Population and Estimated Generation of waste for calculation of waste generation in gram. Formula to calculate waste generation is (Estimated Generation in TPD) X10,00,000/no. of population.

Appendix 2.2

(Referred to in Paragraph 2.3.5)

Statement showing integration of waste collectors and rag pickers incorporated in APSWM

| Sr. No. | Name of ULBs | Rag Pickers | Waste Collectors | Total |
|--------------|---------------------|-------------|------------------|--------------|
| 1. | Amritsar (C) | 148 | 240 | 388 |
| 2. | Bathinda (C) | 93 | 304 | 397 |
| 3. | Ludhiana (C) | 104 | 1,360 | 1,464 |
| 4. | Moga (C) | 95 | 95 | 190 |
| 5. | SAS Nagar (C) | 20 | 350 | 370 |
| 6. | Adampur (MC) | 3 | 10 | 13 |
| 7. | Doraha (MC) | 8 | 0 | 8 |
| 8. | Ferozepur (MC) | 20 | 72 | 92 |
| 9. | Kartarpur (MC) | 5 | 22 | 27 |
| 10. | Mansa (MC) | 45 | 30 | 75 |
| 11. | Qadian (MC) | 15 | 6 | 21 |
| 12. | Rajpura (MC) | 10 | 119 | 129 |
| 13. | Rupnagar (MC) | 48 | 15 | 63 |
| 14. | SBS Nagar (MC) | 26 | 28 | 54 |
| 15. | Sirhind (MC) | 50 | 18 | 68 |
| 16. | Bilga (NP) | 4 | 8 | 12 |
| 17. | Khamanon (NP) | 2 | 0 | 2 |
| 18. | Kiratpur Sahib (NP) | 3 | 0 | 3 |
| 19. | Makhu (NP) | 8 | 0 | 8 |
| 20. | Mehraj (NP) | 4 | 5 | 9 |
| Total | | 711 | 2,682 | 3,393 |

Source: Data provided by ULBs

APSWM- Action Plan for Solid Waste Management

Appendix 2.3

(Referred to in Paragraph 2.3.6)

Statement showing time schedule fixed for various activities to implement the MSWMP and its status during 2021-22

| Sr. No. | Name of ULBs | Door to Door Collection | | | | Segregation of waste at source | | | | Remediation of Dumpsite | | | Management of Refuse Derived Fuel | | Collection of User charges | | Management of Domestic Hazardous Waste | | Incinerator for sanitary waste | |
|---------|----------------|------------------------------|---------------------------------------|------------------------|--|--------------------------------|--|------------------------|------------------------------------|------------------------------|-------------------------|------------------------------------|-----------------------------------|--------|------------------------------|-----------------------------|--|--------|--------------------------------|--------|
| | | Time schedule fixed in APSWM | No. of HHs to be covered as per APSWM | Started | No. of HHs Actual covered as per Form IV | Time schedule fixed in APSWM | Target of 100% SS by No. of HHs as per APSWM | Started | No. of HHs doing SS as per Form IV | Time schedule fixed in APSWM | Started | Actual completed | Time schedule fixed in APSWM | Status | Time schedule fixed in APSWM | Status | Time schedule fixed in APSWM | Status | Whether planned in APSWM | Status |
| 1. | Amritsar (C) | June-2019 | 2,35,751 | 06.09.19 | 2,31,636 | 01.09.19 | 2,35,751 | 06.09.19 | 1,50,841 | June-2020 | 01.09.20 | Not completed | Not fixed | Y | Not fixed | Collected by concessionaire | Not fixed | N | Yes | N |
| 2. | Bathinda (C) | Already 100 % achieved | 53,093 | Already 100 % achieved | NA | Already 100 % achieved | 53,093 | Already 100 % achieved | NA | 2 years July 2021 | 04/2021 | Not completed | Not fixed | Y | Not fixed | Collected | Not fixed | N | Yes | Y |
| 3. | Ludhiana (C) | 31.03.19 | 3,82,000 | 04.02.19 | 3,15,017 | 30.06.19 | 3,82,000 | 04.02.19 | 1,57,509 | 30.06.20 | 03.08.22 | Not completed | Not fixed | Y | Not fixed | Not collected | Not fixed | N | No | N |
| 4. | Moga (C) | 31.12.19 | 32,464 | 17.12.19 | NA | 31.03.20 | 32,464 | 17.12.19 | NA | 2 years (12-2021) | NA | Not completed | 31.03.19 | N | Not fixed | Not collected | Not fixed | N | No | N |
| 5. | SAS Nagar (C) | Already 100 % achieved | 40,135 | Already 100 % achieved | NA | 30.04.19 | 40,135 | 01.02.19 | NA | 30.06.19 | 08.10.21 | Not completed | Not fixed | N | Not fixed | Not collected | Not fixed | Y | Yes | N |
| 6. | Adampur (MC) | Already 100 % achieved | 4,078 | Already 100 % achieved | 4,088 | Already 100 % achieved | 4,078 | Already 100 % achieved | 3,066 | Not mentioned in action plan | Log book not maintained | Not completed | Not fixed | N | Not fixed | Not collected | Not fixed | N | No | N |
| 7. | Doraha (MC) | 30.06.19 | 7,700 | 18.02.19 | NA | 30.06.19 | 7,700 | 18.02.19 | NA | Not mentioned in Action plan | 03.01.22 | Not completed | Not fixed | N | Not fixed | Collected | Not fixed | N | No | N |
| 8. | Ferozepur (MC) | 30.06.19 | 25,000 | 26.04.19 | 25,380 | 31.12.19 | 25,000 | 26.04.19 | 25,380 (achieved 100 %) | 31.12.20 | 01.12.20 | Completed, log book not maintained | Not fixed | N | Not fixed | Collected | Not fixed | N | No | Y |

Performance Audit Report on Solid Waste Management in Punjab by Urban Local Bodies

| Sr. No. | Name of ULBs | Door to Door Collection | | | | Segregation of waste at source | | | | Remediation of Dumpsite | | | Management of Refuse Derived Fuel | | Collection of User charges | | Management of Domestic Hazardous Waste | | Incinerator for sanitary waste | |
|---------|----------------|--------------------------------|---------------------------------------|--------------------------------|--|--------------------------------|--|----------|------------------------------------|------------------------------|-------------------------|-----------------------|-----------------------------------|--------|------------------------------|---------------|--|--------|--------------------------------|--------|
| | | Time schedule fixed in APSWM | No. of HHs to be covered as per APSWM | Started | No. of HHs Actual covered as per Form IV | Time schedule fixed in APSWM | Target of 100% SS by No. of HHs as per APSWM | Started | No. of HHs doing SS as per Form IV | Time schedule fixed in APSWM | Started | Actual completed | Time schedule fixed in APSWM | Status | Time schedule fixed in APSWM | Status | Time schedule fixed in APSWM | Status | Whether planned in APSWM | Status |
| 9. | Kartarpur (MC) | Already 100 % achieved | 5,810 | Already 100 % achieved | 5,650 | 30.04.19 | 5,810 | 28.01.19 | 1,130 | 30.09.19 | Log book not maintained | Not completed | Not fixed | N | 31.01.19 | Not collected | Not fixed | N | No | N |
| 10. | Mansa (MC) | 30.04.19 | 16,137 | 14.12.18 | NA | 30.04.19 | 16,137 | 14.12.18 | NA | 30.04.19 | 15.10.22 | Not completed | Not fixed | N | Not fixed | Not collected | Not fixed | N | Yes | N |
| 11. | Qadian (MC) | 30.04.19 | 4,912 | 21.01.19 | 4,889 | 30.04.19 | 4,912 | 21.01.19 | NA | Not mentioned in action plan | 01.12.20 | Completed | Not fixed | N | Not fixed | Collected | Not fixed | N | Yes | N |
| 12. | Rajpura (MC) | Shown as already 100% achieved | 22,000 | Shown as already 100% achieved | NA | 31.03.19 | 22,000 | 12.11.18 | NA | 31.03.19 | Log book not maintained | Not completed | Not fixed | N | Not fixed | Collected | Not fixed | N | No | N |
| 13. | Rupnagar (MC) | 31.08.19 | 16,045 | Jan.-19 | 15,039 | 31.08.19 | 16,045 | Jan.-19 | 13,535 | 31.12.19 | 02.03.21 | Completed on 30.12.22 | Not fixed | N | Not fixed | Not collected | Not fixed | N | No | N |
| 14. | SBS Nagar (MC) | Already 100 % achieved | 10,740 | Already 100 % achieved | 10,000 | 01.03.19 | 10,740 | 04.02.19 | NA | 04.02.20 | 01.03.21 | Not completed | Not fixed | N | Not fixed | Not collected | Not fixed | N | No | N |
| 15. | Sirhind (MC) | 30.04.19 | 13,022 | 16.08.18 | NA | 30.06.19 | 13,022 | 16.08.18 | NA | 31.12.19 | Log book not maintained | Not completed | Not fixed | N | Not fixed | Collected | Not fixed | N | Yes | Y |
| 16. | Bilga (NP) | Already 100 % achieved | 3,113 | Already 100 % achieved | 3,083 | 30.04.19 | 3,113 | 22.01.19 | 3,083 (achieved 100 %) | Not mentioned in action plan | Log book not maintained | Not completed | Not fixed | N | Not fixed | Not collected | Not fixed | N | No | N |
| 17. | Khmanon (NP) | Shown as already 100% achieved | 2,342 | Shown as already 100% achieved | 2,342 | Not mentioned | 2,342 | 20.03.19 | 2,342 | 30.09.19 | 17.02.21 | 21.10.22 | Not fixed | N | Not fixed | Collected | Not fixed | N | No | N |

| Sr. No. | Name of ULBs | Door to Door Collection | | | | Segregation of waste at source | | | | Remediation of Dumpsite | | | Management of Refuse Derived Fuel | | Collection of User charges | | Management of Domestic Hazardous Waste | | Incinerator for sanitary waste | |
|---------|---------------------|--------------------------------|---------------------------------------|--------------------------------|--|--------------------------------|--|--------------------------------|------------------------------------|------------------------------|-------------------------|---------------------------|-----------------------------------|--------|------------------------------|---------------|--|--------|--------------------------------|--------|
| | | Time schedule fixed in APSWM | No. of HHs to be covered as per APSWM | Started | No. of HHs Actual covered as per Form IV | Time schedule fixed in APSWM | Target of 100% SS by No. of HHs as per APSWM | Started | No. of HHs doing SS as per Form IV | Time schedule fixed in APSWM | Started | Actual completed | Time schedule fixed in APSWM | Status | Time schedule fixed in APSWM | Status | Time schedule fixed in APSWM | Status | Whether planned in APSWM | Status |
| 18. | Kiratpur Sahib (NP) | Shown as already 100% achieved | 1,732 | Shown as already 100% achieved | 1,732 | Shown as already 100% achieved | 1,732 | Shown as already 100% achieved | 1,645 | 15.02.21 | 01.11.21 | Completed as on Sep. 2022 | Not fixed | N | Not fixed | Not collected | Not fixed | N | No | Y |
| 19. | Makhu (NP) | Already 100 % achieved | 3,108 | Already 100 % achieved | 2,851 | 30.04.19 | 3,108 | 18.02.19 | 285 | 30.07.19 | 05.05.21 | Completed on 26.11.22 | 30.06.19 | N | 15.07.19 | Not collected | Not fixed | N | No | Y |
| 20. | Mehraj (NP) | 30.04.19 | 3,564 | 31.01.19 | 3,463 | 30.04.19 | 3,564 | 31.01.19 | 3,359 | Not mentioned in action plan | Log book not maintained | Completed | Not fixed | N | Not fixed | Not collected | Not fixed | N | Yes | Y |

Source: Data provided by ULBs

MSWMP- Municipal Solid Waste Management

Colour Code:

| | |
|---------------|---|
| Started |  |
| Not started |  |
| Installed |  |
| Not installed |  |

Appendix 2.4

(Referred to in paragraph 2.4.1.1 (ii), 2.4.1.2, 2.4.1.3 and 2.4.1.7)

Details of funds received and expenditure in test checked ULBs on SWM during the period from 2017-18 to 2021-22

(₹ in crore)

| Sr. No. | Name of the ULBs | 14th Finance Commission | | 15th Finance Commission | | | | SBM (SWM) | | | | Municipal Funds (SWM) | | | Total Exp. |
|---|---------------------|-------------------------|--------------|-------------------------|---------------|--------------|--------------|--------------|--------------|--------------|-------------|-----------------------|---------------|---------------|---------------|
| | | R | E | OB | R | E | CB | OB | R | E | CB | R | E | Short | |
| 1. | Amritsar (C) | 211.63 | 0.00 | 0.00 | 37.66 | 38.01 | -0.35 | 9.05 | 12.52 | 21.57 | 0.00 | 6.50 | 4.73 | 1.77 | 64.31 |
| 2. | Bathinda (C) | 46.65 | 0.00 | 0.00 | 5.66 | 0.00 | 5.66 | 1.10 | 5.30 | 6.30 | 0.10 | 24.45 | 30.22 | -5.77 | 36.52 |
| 3. | Ludhiana (C) | 214.15 | 14.31 | 0.00 | 52.00 | 8.55 | 43.45 | 0.00 | 3.47 | 2.51 | 0.96 | 305.80 | 75.20 | 230.60 | 100.57 |
| 4. | Moga (C) | 23.33 | 0.00 | 0.00 | 5.06 | 0.14 | 4.92 | 0.48 | 1.71 | 1.79 | 0.40 | 0.00 | 2.80 | -2.80 | 4.73 |
| 5. | SAS Nagar (C) | 38.52 | 6.62 | 0.00 | 4.60 | 4.85 | -0.25 | 0.00 | 2.23 | 1.14 | 1.09 | 89.00 | 77.70 | 11.30 | 90.31 |
| 6. | Adampur (MC) | 4.32 | 0.00 | 0.00 | 0.56 | 0.21 | 0.35 | 0.00 | 0.36 | 0.15 | 0.21 | 0.44 | 0.37 | 0.07 | 0.73 |
| 7. | Doraha (MC) | 3.89 | 0.00 | 0.00 | 1.57 | 0.00 | 1.57 | 0.00 | 0.64 | 0.16 | 0.48 | 2.25 | 0.88 | 1.37 | 1.04 |
| 8. | Ferozepur (MC) | 24.32 | 0.00 | 0.00 | 3.71 | 0.84 | 2.87 | 0.00 | 2.27 | 1.55 | 0.72 | 2.44 | 0.62 | 1.82 | 3.01 |
| 9. | Kartarpur (MC) | 5.61 | 0.00 | 0.00 | 0.70 | 0.00 | 0.70 | 0.00 | 0.32 | 0.29 | 0.03 | 0.39 | 0.10 | 0.29 | 0.39 |
| 10. | Mansa (MC) | 18.21 | 0.00 | 0.00 | 2.19 | 2.31 | -0.12 | 0.00 | 1.32 | 1.04 | 0.28 | 5.70 | 6.65 | -0.95 | 10.00 |
| 11. | Qadian (MC) | 4.90 | 0.03 | 0.00 | 0.62 | 0.56 | 0.06 | 0.00 | 0.32 | 0.18 | 0.14 | 0.37 | 0.03 | 0.34 | 0.80 |
| 12. | Rajpura (MC) | 12.20 | 0.00 | 0.00 | 1.96 | 0.41 | 1.55 | 0.00 | 2.10 | 1.65 | 0.45 | 0.75 | 1.26 | -0.51 | 3.32 |
| 13. | Rupnagar (MC) | 10.48 | 0.00 | 0.00 | 1.79 | 1.78 | 0.01 | 0.00 | 1.98 | 0.74 | 1.24 | 0.53 | 0.31 | 0.22 | 2.83 |
| 14. | SBS Nagar (MC) | 9.34 | 0.49 | 0.00 | 1.58 | 0.05 | 1.53 | 0.03 | 0.84 | 0.99 | -0.12 | 2.70 | 1.53 | 1.17 | 3.06 |
| 15. | Sirhind (MC) | 10.10 | 0.45 | 0.00 | 1.55 | 0.25 | 1.30 | 0.00 | 0.80 | 0.25 | 0.55 | 1.35 | 0.31 | 1.04 | 1.26 |
| 16. | Bilga (NP) | 0.64 | 0.00 | 0.00 | 0.25 | 0.00 | 0.25 | 0.00 | 0.53 | 0.19 | 0.34 | 0.39 | 0.11 | 0.28 | 0.30 |
| 17. | Khamanon (NP) | 1.73 | 0.05 | 0.00 | 0.28 | 0.28 | 0.00 | 0.00 | 0.30 | 0.29 | 0.01 | 1.12 | 0.79 | 0.33 | 1.41 |
| 18. | Kiratpur Sahib (NP) | 0.00 | 0.00 | 0.00 | 0.25 | 0.16 | 0.09 | 0.00 | 0.26 | 0.21 | 0.05 | 3.82 | 2.78 | 1.04 | 3.15 |
| 19. | Makhu (NP) | 2.75 | 0.00 | 0.00 | 0.40 | 0.16 | 0.24 | 0.00 | 0.37 | 0.34 | 0.03 | 0.23 | 0.08 | 0.15 | 0.58 |
| 20. | Mehraj (NP) | 2.54 | 0.00 | 0.00 | 0.49 | 0.23 | 0.26 | 0.00 | 0.27 | 0.27 | 0.00 | 0.50 | 0.00 | 0.50 | 0.50 |
| Total | | 645.31 | 21.95 | 0.00 | 122.88 | 58.79 | 64.09 | 10.66 | 37.91 | 41.61 | 6.96 | 448.73 | 206.47 | 242.26 | 328.82 |
| Total Expenditure of all schemes | | 328.82 | | | | | | | | | | | | | |

Source: Departmental data

O.N.: 1. No detail of expenditure incurred on SWM by the Municipal Corporation, Amritsar from grant received under 14th FC was made available by the Corporation.

2. Excess expenditure of ₹ 0.12 crore on SWM out of SBM funds was incurred by SBS Nagar.

3. Excess expenditure of ₹ 0.25 crore on SWM out of 15th FC funds was incurred from the interest earned from bank on deposit by SAS Nagar.

Appendix 2.5

(Referred to in paragraph 2.4.1.7)

Total projected user charges and collection their against by the test checked ULBs from 2017-18 to 2021-22

(₹ in crore)

| Sr No. | Name of ULBs | 2017-18 | | | 2018-19 | | | 2019-20 | | | 2020-21 | | | 2021-22 | | | G Total | | |
|--------------|---------------------|---------|------|------|---------|------|------|---------|------|-------|---------|------|-------|---------|------|-------|---------------|-------------|---------------|
| | | PR | RC | SC | PR | RC | SC | PR | RC | SC | PR | RC | SC | PR | RC | SC | PR | RC | SC |
| 1. | Amritsar (C) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2. | Bathinda (C) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.77 | 0.38 | 12.39 | 12.77 | 0.08 | 12.69 | 12.77 | 0.36 | 12.41 | 38.31 | 0.82 | 37.49 |
| 3. | Ludhiana (C) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 51.97 | 0.00 | 51.97 | 51.97 | 0.00 | 51.97 |
| 4. | Moga (C) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.28 | 0.00 | 7.28 | 7.28 | 0.00 | 7.28 | 7.28 | 0.00 | 7.28 | 21.84 | 0.00 | 21.84 |
| 5. | SAS Nagar (C) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.46 | 0.00 | 5.46 | 5.46 | 0.00 | 5.46 | 5.46 | 0.00 | 5.46 | 16.38 | 0.00 | 16.38 |
| 6. | Adampur (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.50 | 0.00 | 1.50 | 1.50 | 0.00 | 1.50 | 1.50 | 0.00 | 1.50 | 4.50 | 0.00 | 4.50 |
| 7. | Doraha (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.56 | 0.03 | 0.53 | 0.56 | 0.04 | 0.52 | 1.12 | 0.07 | 1.05 |
| 8. | Ferozepur (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.99 | 0.02 | 3.97 | 3.99 | 0.02 | 3.97 | 3.99 | 0.07 | 3.92 | 11.97 | 0.11 | 11.86 |
| 9. | Kartarpur (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.15 | 0.00 | 1.15 | 1.15 | 0.00 | 1.15 | 1.15 | 0.00 | 1.15 | 3.45 | 0.00 | 3.45 |
| 10. | Mansa (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.74 | 0.00 | 3.74 | 3.74 | 0.00 | 3.74 | 3.74 | 0.00 | 3.74 | 11.22 | 0.00 | 11.22 |
| 11. | Qadian (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.10 | 0.00 | 1.10 | 1.10 | 0.00 | 1.10 | 1.10 | 0.01 | 1.09 | 3.30 | 0.01 | 3.29 |
| 12. | Rajpura (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.11 | 0.00 | 4.11 | 4.11 | 0.01 | 4.11 | 4.11 | 0.03 | 4.07 | 12.33 | 0.04 | 12.29 |
| 13. | Rupnagar (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.99 | 0.00 | 2.99 | 2.99 | 0.00 | 2.99 | 2.99 | 0.00 | 2.99 | 8.97 | 0.00 | 8.97 |
| 14. | SBS Nagar (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.87 | 0.00 | 1.87 | 1.87 | 0.00 | 1.87 | 1.87 | 0.00 | 1.87 | 5.61 | 0.00 | 5.61 |
| 15. | Sirhind (MC) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.72 | 0.00 | 1.72 | 1.72 | 0.00 | 1.72 | 1.72 | 0.00 | 1.72 | 5.16 | 0.00 | 5.16 |
| 16. | Bilga (NP) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 | 0.00 | 0.36 | 0.36 | 0.00 | 0.36 | 0.36 | 0.00 | 0.36 | 1.08 | 0.00 | 1.08 |
| 17. | Khamanon (NP) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.31 | 0.00 | 0.31 | 0.54 | 0.01 | 0.53 | 0.85 | 0.01 | 0.84 |
| 18. | Kiratpur Sahib (NP) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.70 | 0.00 | 0.70 | 0.70 | 0.00 | 0.70 | 0.70 | 0.00 | 0.70 | 2.10 | 0.00 | 2.10 |
| 19. | Makhu (NP) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.27 | 0.00 | 1.27 | 1.27 | 0.00 | 1.27 | 1.27 | 0.00 | 1.27 | 3.81 | 0.00 | 3.81 |
| 20. | Mehraj (NP) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 | 0.00 | 0.29 | 0.29 | 0.00 | 0.29 | 0.29 | 0.00 | 0.29 | 0.87 | 0.00 | 0.87 |
| Total | | | | | | | | | | | | | | | | | 204.84 | 1.06 | 203.78 |

Source: APSWM/Byelaws and Departmental data

PR-Projected Revenue

RC-Revenue Collected

SC-Short Collection

Appendix 2.6

(Referred to in paragraph 2.4.1.7)

Statement showing cost recovery and resource gap of SWM in selected ULBs during 2017-22

(₹ in lakh)

| Sr. No. | Name of the ULB | Own revenue, expenditure and resource gap for SWM | | | | | | | | |
|--------------|---------------------|---|---------------------|-----------------|-----------------|------------------------|----------------------------|-----------------------------|-----------------------|-------------------------------------|
| | | Sale of RDF | Auction sale on SWM | Sale of Plastic | Sale of compost | Sale of other material | Collection of user charges | Receipt as fine & penalties | Total revenue receipt | Total expenditure on SWM (in crore) |
| 1. | Amritsar (C) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 64.31 |
| 2. | Bathinda (C) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 82.51000 | 0.00000 | 82.51000 | 36.52 |
| 3. | Ludhiana (C) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 7.76600 | 7.76600 | 100.57 |
| 4. | Moga (C) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 4.73 |
| 5. | SAS Nagar (C) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 90.31 |
| 6. | Adampur (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.73 |
| 7. | Doraha (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 7.52290 | 0.20300 | 7.72590 | 1.04 |
| 8. | Ferozepur (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 14.63000 | 0.00000 | 14.63000 | 3.01 |
| 9. | Kartarpur (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.39 |
| 10. | Mansa (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 10.00 |
| 11. | Qadian (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.58050 | 0.00000 | 0.58050 | 0.80 |
| 12. | Rajpura (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 3.90000 | 0.03900 | 3.93900 | 3.32 |
| 13. | Rupnagar (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 2.83 |
| 14. | SBS Nagar (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 3.06 |
| 15. | Sirhind (MC) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.31000 | 0.13050 | 0.44050 | 1.26 |
| 16. | Bilga (NP) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.30 |
| 17. | Khamanon (NP) | 0.00000 | 0.00000 | 0.00000 | 0.06000 | 0.00000 | 0.62000 | 1.32150 | 2.00150 | 1.41 |
| 18. | Kiratpur Sahib (NP) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 3.15 |
| 19. | Makhu (NP) | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00900 | 0.00900 | 0.58 |
| 20. | Mehraj (NP) | 0.00000 | 0.00000 | 0.01800 | 0.00000 | 0.00000 | 0.00000 | 0.00500 | 0.02300 | 0.50 |
| Total | | 0.00000 | 0.00000 | 0.01800 | 0.06000 | 0.00000 | 110.07340 | 9.47400 | 119.62540 | 328.82 |

Source: as per information provided by the ULBs

Total cost recovered = ₹ 1.20 crore which included: ₹ 0.10 crore as other recoveries; ₹ 1.10 crore as user charges (out of this ₹ 0.04 crore pertains to 2017-19 and ₹ 1.06 crore pertains to 2019-22).

Appendix 2.7

(Referred to in paragraph 2.4.2.1, 2.4.2.3 and 2.4.5.1)

Total waste collected and processed in test checked ULBs from 2017-18 to 2021-22

(Quantity in MT)

| Sr. No. | Name of the ULB | 2017-18 | | | | 2018-19 | | | | 2019-20 | | | |
|--------------|---------------------|-----------------|-----------------|-----------------|-----------|-----------------|-----------------|-----------------|-----------|-----------------|-----------------|-----------------|-----------|
| | | A | AC | P | % | A | AC | P | % | A | AC | P | % |
| 1. | Amritsar*(C) | 2,47,777 | 2,47,777 | 0 | 0 | 2,24,743 | 2,24,743 | 0 | 0 | 2,00,145 | 2,00,145 | 0 | 0 |
| 2. | Bathinda (C) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. | Ludhiana (C) | 4,07,426 | 4,07,426 | 2,19,000 | 54 | 4,01,213 | 4,01,213 | 2,19,000 | 55 | 4,65,576 | 4,65,576 | 3,65,000 | 78 |
| 4. | Moga (C) | 23,597 | 23,597 | 1,460 | 6 | 22,630 | 22,630 | 6,935 | 31 | 22,812 | 22,812 | 7,300 | 32 |
| 5. | SAS Nagar (C) | 45,625 | 45,625 | 0 | 0 | 45,625 | 45,625 | 0 | 0 | 45,625 | 45,625 | 0 | 0 |
| 6. | Adampur (MC) | 767 | 767 | 767 | 100 | 1,135 | 1,135 | 683 | 60 | 1,135 | 1,135 | 683 | 60 |
| 7. | Doraha (MC) | 6,004 | 6,004 | 0 | 0 | 6,388 | 6,388 | 0 | 0 | 4,402 | 4,402 | 0 | 0 |
| 8. | Ferozepur (MC) | 17,155 | 17,155 | 5,475 | 32 | 17,155 | 17,155 | 5,840 | 34 | 15,695 | 15,695 | 12,410 | 79 |
| 9. | Kartarpur (MC) | 2,555 | 2,555 | 0 | 0 | 2,190 | 2,190 | 0 | 0 | 2,190 | 2,190 | 0 | 0 |
| 10. | Mansa (MC) | 8,024 | 0 | 0 | 0 | 8,100 | 0 | 0 | 0 | 8,175 | 0 | 0 | 0 |
| 11. | Qadian (MC) | 1,170 | 1,170 | 0 | 0 | 1,260 | 1,260 | 0 | 0 | 1,170 | 1,170 | 0 | 0 |
| 12. | Rajpura (MC) | 8,430 | 8,430 | 0 | 0 | 8,767 | 8,767 | 4,380 | 50 | 9,862 | 9,862 | 4,928 | 50 |
| 13. | Rupnagar (MC) | 3,650 | 3,285 | 3,285 | 100 | 3,650 | 3,285 | 3,285 | 100 | 3,650 | 3,285 | 3,285 | 100 |
| 14. | SBS Nagar (MC) | 4,380 | 2,920 | 818 | 28 | 4,380 | 2,920 | 818 | 28 | 4,380 | 2,920 | 818 | 28 |
| 15. | Sirhind (MC) | 4,380 | 4,380 | 0 | 0 | 7,300 | 7,300 | 438 | 6 | 7,300 | 7,300 | 438 | 6 |
| 16. | Bilga (NP) | 1,460 | 1,460 | 1,460 | 100 | 1,460 | 1,460 | 1,460 | 100 | 1,460 | 1,460 | 730 | 50 |
| 17. | Khamanon (NP) | 1,825 | 1,825 | 0 | 0 | 1,643 | 1,643 | 0 | 0 | 1,095 | 1,095 | 0 | 0 |
| 18. | Kiratpur Sahib (NP) | 0 | 0 | 0 | 0 | 365 | 365 | 365 | 100 | 365 | 365 | 365 | 100 |
| 19. | Makhu (NP) | 1,752 | 1,752 | 398 | 23 | 1,752 | 1,752 | 398 | 23 | 1,460 | 1,460 | 1,091 | 75 |
| 20. | Mehraj (NP) | 365 | 365 | 0 | 0 | 365 | 365 | 0 | 0 | 365 | 365 | 0 | 0 |
| Total | | 7,86,341 | 7,76,492 | 2,32,663 | 30 | 7,60,121 | 7,50,196 | 2,43,602 | 32 | 7,96,862 | 7,86,862 | 3,97,048 | 50 |

Performance Audit Report on Solid Waste Management in Punjab by Urban Local Bodies

(Quantity in MT)

| Sr. No. | Name of the ULB | 2020-21 | | | | 2021-22 | | | | Total | | | |
|--------------|---------------------|-----------------|-----------------|-----------------|-----------|-----------------|-----------------|---------------|-----------|------------------|------------------|------------------|-----------|
| | | A | AC | P | % | A | AC | P | % | A | AC | P | % |
| 1. | Amritsar (C) | 1,94,236 | 1,94,236 | 24,334 | 13 | 1,98,292 | 198292 | 0 | 0 | 10,65,193 | 10,65,193 | 24,334 | 2 |
| 2. | Bathinda (C) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. | Ludhiana (C) | 3,17,580 | 3,17,580 | 1,82,500 | 57 | 3,66,927 | 3,66,927 | 0 | 0 | 19,58,722 | 19,58,722 | 9,85,500 | 50 |
| 4. | Moga (C) | 22,995 | 22,995 | 9,855 | 43 | 23,360 | 23,360 | 13,140 | 56 | 1,15,394 | 1,15,394 | 38,690 | 34 |
| 5. | SAS Nagar (C) | 33,580 | 33,580 | 31,229 | 93 | 33,580 | 33,580 | 31,230 | 93 | 2,04,035 | 2,04,035 | 62,460 | 31 |
| 6. | Adampur (MC) | 1,135 | 1,135 | 683 | 60 | 1,135 | 1,135 | 683 | 60 | 5,307 | 5,307 | 3,497 | 66 |
| 7. | Doraha (MC) | 6,260 | 6,260 | 2,184 | 35 | 6,260 | 6,260 | 2,184 | 35 | 29,313 | 29,313 | 4,368 | 15 |
| 8. | Ferozepur (MC) | 17,155 | 17,155 | 5,475 | 32 | 13,505 | 13,505 | 12,410 | 92 | 80,665 | 80,665 | 41,610 | 52 |
| 9. | Kartarpur (MC) | 2,190 | 2,190 | 435 | 20 | 2,555 | 2,555 | 882 | 35 | 11,680 | 11,680 | 1,317 | 11 |
| 10. | Mansa (MC) | 8,251 | 1,208 | 1,170 | 97 | 8,327 | 2,246 | 2,206 | 98 | 40,877 | 3,454 | 3,376 | 98 |
| 11. | Qadian (MC) | 1,369 | 1,369 | 23 | 2 | 1,369 | 1,369 | 62 | 5 | 6,338 | 6,338 | 85 | 1 |
| 12. | Rajpura (MC) | 10,651 | 10,651 | 5,325 | 50 | 10,950 | 10,950 | 5,475 | 50 | 48,660 | 48,660 | 20,108 | 41 |
| 13. | Rupnagar (MC) | 4,745 | 4,380 | 3,650 | 83 | 4,380 | 4,380 | 3,650 | 83 | 20,075 | 1,8615 | 17,155 | 92 |
| 14. | SBS Nagar (MC) | 5,475 | 2,920 | 818 | 28 | 4,380 | 2,920 | 2,627 | 90 | 22,995 | 14,600 | 5,899 | 40 |
| 15. | Sirhind (MC) | 5,840 | 5,840 | 913 | 16 | 5,840 | 5,840 | 5,840 | 100 | 30,660 | 30,660 | 7,629 | 25 |
| 16. | Bilga (NP) | 1,460 | 1,460 | 840 | 58 | 1,460 | 1,460 | 840 | 58 | 7,300 | 7,300 | 5,330 | 73 |
| 17. | Khamanon (NP) | 1,825 | 1,825 | 1,825 | 100 | 1,657 | 1,657 | 1,825 | 110 | 8,045 | 8,045 | 3,650 | 45 |
| 18. | Kiratpur Sahib (NP) | 365 | 365 | 365 | 100 | 365 | 365 | 365 | 100 | 1,460 | 1,460 | 1,460 | 100 |
| 19. | Makhu (NP) | 1,460 | 1,460 | 1,091 | 75 | 1,497 | 1,497 | 1,497 | 100 | 7,921 | 7,921 | 4,475 | 56 |
| 20. | Mehraj (NP) | 365 | 365 | 0 | 0 | 365 | 365 | 183 | 50 | 1,825 | 1,825 | 183 | 10 |
| Total | | 6,36,937 | 6,26,974 | 2,72,715 | 43 | 6,86,204 | 6,78,663 | 85,099 | 13 | 36,66,465 | 36,19,187 | 12,31,126 | 34 |

Source: Departmental data

A= Actual Waste Generated; AC= Actual Waste Collected; P= Processed.

% = Percentage of processing from collected waste.

Actual waste generated data not available in MC Bathinda from 2017-18 to 2019-20.

*In Amritsar out of total waste collection, 73000 MT waste was collected by the department for inner wall during 2017-22. Balance waste was collected by the concessioner for outer wall for which tipping fee was paid.

Appendix 2.8

(Referred to in paragraph 2.4.2.4)

List of ULBs having GVPs as in August 2022

| Municipal Corporation | |
|---|----|
| Bathinda | 22 |
| Batala | 17 |
| Hoshiarpur | 9 |
| Jalandhar | 91 |
| Phagwara | 11 |
| Kapurthala | 37 |
| Ludhiana | 41 |
| Moga | 3 |
| SAS Nagar | 13 |
| Pathankot | 8 |
| Patiala | 59 |
| Municipal Councils/Nagar Panchayat | |
| Ajnala | 4 |
| Jandiala Guru | 5 |
| Majitha | 4 |
| Ramdas | 2 |
| Rayya | 1 |
| Barnala | 1 |
| Bhai Roopa | 1 |
| Goniana | 1 |
| Raman | 1 |
| Talwandi Sabo | 1 |
| Faridkot | 11 |
| Jaito | 5 |
| Kotkapura | 5 |
| Amloh | 4 |
| Bassi Pathana | 1 |
| Khamanon | 1 |
| Mandi Gobindgarh | 2 |
| Sirhind | 4 |
| Arniwala | 3 |
| Fazilka | 8 |
| Jalalabad | 1 |
| Ferozepur | 1 |
| Guru Harsahai | 3 |
| Makhu | 1 |
| Mamdot | 3 |
| Mudki | 4 |
| Talwandi Bhai | 1 |
| Zira | 1 |
| Dhariwal | 2 |
| Dina Nagar | 2 |
| Fatehgarh Churian | 1 |
| Gurdaspur | 2 |
| Qadian | 3 |
| Begowal | 2 |
| Bholath | 2 |
| Dhilwan | 3 |
| Nadala | 1 |
| Sultanpur Lodhi | 8 |
| Doraha | 1 |

| | |
|--------------------|------------|
| Jagraon | 2 |
| Khanna | 5 |
| Machiwara | 1 |
| Maloud | 2 |
| Payal | 1 |
| Raikot | 1 |
| Sahnewal | 2 |
| Mansa | 2 |
| Dharamkot | 2 |
| Fatehgarh Panjtoor | 1 |
| Dera Bassi | 6 |
| Kharar | 6 |
| Zirakpur | 3 |
| Gidderbaha | 1 |
| Malout | 1 |
| Muktsar | 4 |
| Banga | 1 |
| Narot Jaimal Singh | 1 |
| Sujanpur | 2 |
| Bhadson | 1 |
| Ghagga | 1 |
| Nahba | 5 |
| Anandpur Sahib | 1 |
| Chamkaur Sahib | 1 |
| Kiratpur Sahib | 2 |
| Morinda | 2 |
| Nangal | 2 |
| Rupnagar | 2 |
| Dhuri | 2 |
| Lehragaga | 5 |
| Ahmedgarh | 1 |
| Amargarh | 1 |
| Malerkotla | 1 |
| Bhikhi Wind | 1 |
| Khemkaran | 1 |
| Patti | 1 |
| Tarn Taran | 2 |
| Total | 494 |

Source: Departmental data

| GVPs in selected 13 ULBs | |
|--------------------------|-----------|
| Bathinda | 22 |
| Ludhiana | 41 |
| Moga | 3 |
| SAS Nagar | 13 |
| Khamanon | 1 |
| Ferozepur | 1 |
| Makhu | 1 |
| Sirhind | 4 |
| Qadian | 3 |
| Doraha | 1 |
| Mansa | 2 |
| Kiratpur | 2 |
| Rupnagar | 2 |
| Total | 96 |

Appendix 2.9

(Referred to in paragraph 2.4.3.1)

Targets and achievement (SLB) in respect of segregation of waste in selected ULBs

| Sr. No. | Name of the ULB | Year | | | |
|---------|---------------------|---------|-------------|---------|-------------|
| | | 2017-18 | | 2018-19 | |
| | | Target | Achievement | Target | Achievement |
| 1. | Amritsar (C) | 100 | 20 | 40 | 10 |
| 2. | Bathinda (C) | 100 | 20 | 40 | 80 |
| 3. | Ludhiana (C) | 100 | 20 | 40 | 30 |
| 4. | Moga (C) | 10 | 20 | 40 | 40 |
| 5. | SAS Nagar (C) | 100 | 20 | 40 | 24 |
| 6. | Adampur (MC) | 90 | 0 | 0 | 0 |
| 7. | Doraha (MC) | 100 | 0 | 10 | 80 |
| 8. | Ferozepur (MC) | 100 | 0 | 10 | 10 |
| 9. | Kartarpur (MC) | 100 | 0 | 10 | 10 |
| 10. | Mansa (MC) | 100 | 0 | 10 | 37 |
| 11. | Qadian (MC) | 100 | 0 | 10 | 65 |
| 12. | Rajpura (MC) | 90 | 0 | 10 | 62 |
| 13. | Rupnagar (MC) | 95 | 0 | 10 | 85 |
| 14. | SBS Nagar (MC) | 100 | 0 | 10 | 10 |
| 15. | Sirhind (MC) | 40 | 0 | 10 | 10 |
| 16. | Bilga (NP) | 90 | 0 | 10 | 55 |
| 17. | Khamanon (NP) | 100 | 0 | 10 | 50 |
| 18. | Kiratpur Sahib (NP) | 90 | 0 | 10 | 100 |
| 19. | Makhu (NP) | 100 | 0 | 10 | 10 |
| 20. | Mehraj (NP) | 100 | 0 | 10 | 17 |

Source: Departmental data

Appendix 2.10

(Referred to in paragraph 2.4.3.1)

Details of Waste Collected and Segregated by the ULBs

(Qty. in Tons)

| Sr. No. | Name of ULB | 2017-18 | | | 2018-19 | | | 2019-20 | | | 2020-21 | | | 2021-22 | | | Total | | |
|---------|---------------------|-----------------|-----------------|-----------|-----------------|-----------------|-----------|-----------------|-----------------|-----------|-----------------|-----------------|-----------|-----------------|-----------------|-----------|------------------|------------------|-----------|
| | | AC | S | P | AC | S | P |
| 1. | Amritsar (C) | 2,47,777 | 0 | 0 | 2,24,743 | 0 | 0 | 2,00,145 | 0 | 0 | 1,94,236 | 0 | 0 | 1,98,292 | 1,28,890 | 65 | 10,65,193 | 1,28,890 | 12 |
| 2. | Bathinda (C) | 0 | 0 | 0 | 38,325 | 38,325 | 100 | 38,325 | 38,325 | 100 | 35,040 | 0 | 0 | 42,628 | 0 | 0 | 1,54,318 | 76,650 | 50 |
| 3. | Ludhiana (C) | 4,07,426 | 2,19,000 | 54 | 4,01,213 | 2,19,000 | 55 | 4,65,576 | 4,46,953 | 96 | 3,17,580 | 2,31,834 | 73 | 3,66,927 | 1,83,463 | 50 | 19,58,722 | 13,00,250 | 66 |
| 4. | Moga (C) | 23,597 | 9,052 | 38 | 22,630 | 11,315 | 50 | 22,812 | 11,132 | 49 | 22,995 | 13,250 | 58 | 23,360 | 16,615 | 71 | 1,15,394 | 61,364 | 53 |
| 5. | SAS Nagar (C) | 45,625 | 0 | 0 | 45,625 | 0 | 0 | 45,625 | 0 | 0 | 33,580 | 33,580 | 100 | 33,580 | 33,581 | 100 | 2,04,035 | 67,161 | 33 |
| 6. | Adampur (MC) | 767 | 767 | 100 | 1,135 | 795 | 70 | 1,135 | 829 | 73 | 1,135 | 851 | 75 | 1,135 | 851 | 75 | 5,307 | 4,092 | 77 |
| 7. | Doraha (MC) | 6,004 | 0 | 0 | 6,388 | 0 | 0 | 4,402 | 0 | 0 | 6,260 | 5,634 | 90 | 6,260 | 5,634 | 90 | 29,313 | 11,268 | 38 |
| 8. | Ferozepur(MC) | 17,155 | 0 | 0 | 17,155 | 0 | 0 | 15,695 | 12,556 | 80 | 17,155 | 0 | 0 | 13,505 | 13,505 | 100 | 80,665 | 26,061 | 32 |
| 9. | Kartarpur(MC) | 2,555 | 0 | 0 | 2,190 | 438 | 20 | 2,190 | 438 | 20 | 2,190 | 735 | 34 | 2,555 | 1,097 | 43 | 11,680 | 2,708 | 23 |
| 10. | Mansa (MC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,208 | 1,170 | 97 | 2,246 | 2,206 | 98 | 3,454 | 3,376 | 98 |
| 11. | Qadian (MC) | 1,170 | 880 | 75 | 1,260 | 760 | 60 | 1,170 | 880 | 75 | 1,369 | 0 | 0 | 1,369 | 0 | 0 | 6,338 | 2,520 | 40 |
| 12. | Rajpura (MC) | 8,430 | 8,395 | 100 | 8,767 | 7,890 | 90 | 9,862 | 8,876 | 90 | 10,651 | 9,586 | 90 | 10,950 | 9,855 | 90 | 48,660 | 44,602 | 92 |
| 13. | Rupnagar (MC) | 3,285 | 2,792 | 85 | 3,285 | 2,792 | 85 | 3,285 | 2,792 | 85 | 4,380 | 3,723 | 85 | 4,380 | 3,942 | 90 | 18,615 | 16,041 | 86 |
| 14. | SBS Nagar (MC) | 2,920 | 2,384 | 82 | 2,920 | 2,384 | 82 | 2,920 | 2,384 | 82 | 2,920 | 2,384 | 82 | 2,920 | 2,384 | 82 | 14,600 | 11,920 | 82 |
| 15. | Sirhind (MC) | 4,380 | 2,628 | 60 | 7,300 | 0 | 0 | 7,300 | 2,920 | 40 | 5,840 | 0 | 0 | 5,840 | 0 | 0 | 30,660 | 5,548 | 18 |
| 16. | Bilga (NP) | 1,460 | 1,241 | 85 | 1,460 | 1,241 | 85 | 1,460 | 1,314 | 90 | 1,460 | 1,460 | 100 | 1,460 | 1,460 | 100 | 7,300 | 6,716 | 92 |
| 17. | Khamanon (NP) | 1,825 | 0 | 0 | 1,643 | 0 | 0 | 1,095 | 0 | 0 | 1,825 | 1,825 | 100 | 1,657 | 1,657 | 100 | 8,045 | 3,482 | 43 |
| 18. | Kiratpur Sahib (NP) | 0 | 0 | 0 | 365 | 292 | 80 | 365 | 292 | 80 | 365 | 347 | 95 | 365 | 347 | 95 | 1,460 | 1,278 | 88 |
| 19. | Makhu (NP) | 1,752 | 368 | 21 | 1,752 | 368 | 21 | 1,460 | 307 | 21 | 1,460 | 321 | 22 | 1,497 | 150 | 10 | 7,921 | 1,514 | 19 |
| 20. | Mehraj (NP) | 365 | 0 | 0 | 365 | 0 | 0 | 365 | 0 | 0 | 365 | 354 | 97 | 365 | 354 | 97 | 1,825 | 708 | 39 |
| | Total | 7,76,492 | 2,47,507 | 32 | 7,88,521 | 2,85,600 | 36 | 8,25,187 | 5,29,997 | 64 | 6,62,014 | 3,07,054 | 46 | 7,21,291 | 4,05,991 | 56 | 37,73,505 | 17,76,149 | 47 |

Source: Departmental data

AC= Actual Waste Collected; S = Segregated; P = Percentage of segregation

Appendix 2.11

(Referred to in paragraph 2.4.3.3)

Availability of Material Recovery Facility in the selected ULBs

| Sr. No. | Name of ULBs | Total MRF required | Works allotted | Constructed | MRF in use | MRF not in use | Shortfall |
|--------------|---------------------|--------------------|----------------|-------------|------------|----------------|-----------|
| 1. | Amritsar (C) | 10 | 5 | 5 | 2 | 3 | 5 |
| 2. | Bathinda (C) | 1 | 1 | 1 | 1 | 0 | 0 |
| 3. | Ludhiana (C) | 54 | 18 | 12 | 4 | 8 | 42 |
| 4. | Moga (C) | 16 | 2 | 2 | 2 | 0 | 14 |
| 5. | SAS Nagar (C) | 20 | 14 | 14 | 14 | 0 | 6 |
| 6. | Adampur (MC) | 0 | 0 | 0 | 0 | 0 | 0 |
| 7. | Doraha (MC) | 3 | 1 | 1 | 1 | 0 | 2 |
| 8. | Ferozepur (MC) | 2 | 2 | 2 | 2 | 0 | 0 |
| 9. | Kartarpur (MC) | 1 | 1 | 1 | 1 | 0 | 0 |
| 10. | Mansa (MC) | 10 | 4 | 4 | 4 | 0 | 6 |
| 11. | Qadian (MC) | 1 | 1 | 1 | 1 | 0 | 0 |
| 12. | Rajpura (MC) | 4 | 4 | 4 | 4 | 0 | 0 |
| 13. | Rupnagar (MC) | 3 | 2 | 2 | 1 | 1 | 1 |
| 14. | SBS Nagar (MC) | 1 | 1 | 1 | 1 | 0 | 0 |
| 15. | Sirhind (MC) | 1 | 1 | 1 | 1 | 0 | 0 |
| 16. | Bilga (NP) | 2 | 1 | 1 | 1 | 0 | 1 |
| 17. | Khamanon (NP) | 1 | 1 | 1 | 1 | 0 | 0 |
| 18. | Kiratpur Sahib (NP) | 1 | 1 | 1 | 1 | 0 | 0 |
| 19. | Makhu (NP) | 1 | 1 | 1 | 1 | 0 | 0 |
| 20. | Mehraj (NP) | 1 | 1 | 1 | 0 | 1 | 0 |
| Total | | 133 | 62 | 56 | 43 | 13 | 77 |

Source: Departmental data

Appendix 2.12

(Referred to in paragraph 2.4.4.1 and 2.4.4.4)

Statement showing availability of various type of vehicle (as of March 2022) in the selected ULBs

| Name of ULBs | Owned by | Category of vehicles | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|----------------|----------------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------------|--------------|------------|-----------------|------------|------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|------------|------------------|----------|----------|-----------|-----------|------------|-----------|----------------------------|-----------|-----------|-----------|----------------|--------------|--------------|--------------------------|------------|------------|-------|----|-----|----|---|----|
| | | Tate ace | | | | Compactor | | | | Rikshaw Rehries | | | Tractor trolley | | | | JCB | | | | E-rikshaw* | | | Poclain machine* | | | Tipper | | | | Hook loader/ Dumper placer | | | | Total vehicles | | | Availability of vehicles | | | | | | | | |
| | | R | A | S | GPS | R | A | S | GPS | R | A | S | R | A | S | GPS | R | A | S | GPS | R | A | S | R | A | S | R | A | S | GPS | R | A | S | GPS | R | A | S | Total vehicles | Total | GPS | S-GPS | | | | | |
| Amritsar (C) | ULB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | -31 | 0 | 1 | 8 | -7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | -5 | 0 | 0 | 3 | -3 | 0 | 1 | 47 | -46 | 47 | 0 | 47 |
| | Concessionaire | 275 | 294 | -19 | 294 | 22 | 21 | 1 | 21 | 20 | 56 | -36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 320 | 374 | -54 | 318 | 318 | 0 | | | | |
| Bathinda (C) | ULB | 97 | 60 | 37 | 60 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 19 | 19 | 0 | 19 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 84 | 37 | 82 | 82 | 0 | | | | |
| Ludhiana (C) | ULB | 232 | 32 | 200 | 0 | 104 | 33 | 71 | 0 | 2,368 | 1,050 | 1,318 | 50 | 0 | 50 | 0 | 17 | 1 | 16 | 0 | 350 | 0 | 350 | 1 | 0 | 1 | 2 | 0 | 2 | 0 | 2 | 0 | 35 | 9 | 26 | 9 | 3,159 | 1,125 | 2,034 | 75 | 9 | 66 | | | | |
| | Concessionaire | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | -9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | -31 | 31 | 0 | 0 | 0 | 0 | 0 | 42 | -42 | 42 | 42 | 0 | | | | |
| Moga (C) | ULB | 0 | 10 | -10 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | -200 | 0 | 11 | -11 | 0 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 0 | 0 | 224 | -224 | 24 | 0 | 24 | | | | |
| SAS Nagar (C) | ULB | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 2 | 5 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 4 | 5 | 4 | 0 | 2 | -2 | 2 | 22 | 11 | 11 | 11 | 8 | 3 | | | | |
| Adampur (MC) | ULB | 0 | 5 | -5 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | -19 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | -26 | 7 | 0 | 7 | | | | |
| Doraha (MC) | ULB | 6 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 24 | -24 | 2 | 2 | 0 | 2 | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | 8 | 30 | -22 | 6 | 6 | 0 | | | | |
| Ferozpur (MC) | ULB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 | -150 | 0 | 10 | -10 | 0 | 0 | 1 | -1 | 1 | 0 | 10 | -10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | -171 | 21 | 1 | 20 | | | | |
| Kartarpur (MC) | ULB | 0 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 30 | 20 | 10 | 0 | 2 | -2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 23 | 7 | 3 | 0 | 3 | | | | |
| Mansa (MC) | ULB | 0 | 1 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | -52 | 0 | 4 | -4 | 0 | 1 | 0 | 1 | 0 | 0 | 5 | -5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 62 | -61 | 10 | 0 | 10 | | | | | | | |
| Qadian (MC) | ULB | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 40 | 20 | 20 | 3 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 25 | 20 | 5 | 3 | | | | | | | | |
| Rajpura (MC) | ULB | 0 | 0 | 0 | 0 | 19 | 0 | 19 | 0 | 115 | 270 | -155 | 5 | 7 | -2 | 7 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 0 | 141 | 280 | -139 | 10 | 9 | 1 | | | | |
| Rupnagar (MC) | ULB | 0 | 6 | -6 | 1 | 0 | 0 | 0 | 0 | 0 | 70 | -70 | 0 | 4 | -4 | 2 | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | -2 | 0 | 0 | 83 | -83 | 13 | 4 | 9 | | | | |
| SBS Nagar (MC) | ULB | 0 | 6 | -6 | 6 | 0 | 0 | 0 | 0 | 0 | 60 | -60 | 0 | 3 | -3 | 3 | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | -70 | 10 | 10 | 0 | | | | |
| Sirhind (MC) | ULB | 0 | 12 | -12 | 4 | 0 | 0 | 0 | 0 | 0 | 40 | -40 | 0 | 3 | -3 | 3 | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | -1 | 1 | 0 | 57 | -57 | 17 | 9 | 8 | | | | |
| Bilga (NP) | ULB | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 47 | 47 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 49 | 0 | 2 | 0 | | | | | | | | |
| Khamaon (NP) | ULB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | -16 | 0 | 2 | -2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | -3 | 3 | 0 | 0 | 0 | 0 | 21 | -21 | 5 | 5 | 0 | | | | | |
| Kiratpur Sahib (NP) | ULB | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | -7 | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | -9 | 2 | 2 | 0 | | | | | | | |
| Makhu (NP) | ULB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | -14 | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | -15 | 1 | 1 | 0 | | | | | | | |
| Mehraj (NP) | ULB | 0 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 0 | 34 | -34 | 0 | 2 | -2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | -37 | 3 | 2 | 1 | | | | | | | |
| Total | | 612 | 433 | 179 | 371 | 150 | 57 | 93 | 24 | 2,622 | 2,151 | 471 | 84 | 110 | -26 | 45 | 29 | 33 | -4 | 19 | 350 | 15 | 335 | 1 | 0 | 1 | 14 | 46 | -32 | 41 | 35 | 20 | 15 | 13 | 3,897 | 2,865 | 1,032 | 714 | 513 | 201 | | | | | | |

Source: Departmental data

R=Required, A=Available, NA= Not Assessed, GPS= GPS Installed, S= Shortage, S-GPS = Shortage in GPS.

*: In E-Rickshaw and poclain machine, no GPS was installed.

Appendix 2.13

(Referred to in paragraph 2.4.5.2)

Statement showing availability of compost pits to process the wet waste

| Sr. No. | Name of the ULBs | 2017-18 | | 2018-19 | | 2019-20 | | 2020-21 | | 2021-22 | | Grand Total | | |
|--------------|---------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|----------------------------|
| | | Pits required | Pits constructed | extra or short constructed |
| 1. | Amritsar (C) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 67 | 67 |
| 2. | Bathinda (C) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. | Ludhiana (C) | 0 | 0 | 400 | 0 | 400 | 0 | 400 | 0 | 400 | 0 | 400 | 0 | 400 |
| 4. | Moga (C) | 0 | 0 | 0 | 0 | 149 | 192 | 0 | 0 | 0 | 0 | 149 | 192 | 43 |
| 5. | SAS Nagar (C) | 0 | 0 | 0 | 0 | 1,150 | 200 | 0 | 0 | 0 | 0 | 1,150 | 200 | 950 |
| 6. | Adampur (MC) | 0 | 0 | 32 | 24** | 8 | 0 | 8 | 0 | 8 | 0 | 32 | 24 | 8 |
| 7. | Doraha (MC) | 0 | 0 | 39 | 0 | 39 | 39 | 0 | 0 | 0 | 0 | 39 | 39 | 0 |
| 8. | Ferozepur (MC) | 0 | 0 | 0 | 30 | 50 | 50 | 0 | 50 | 0 | 0 | 50 | 130 | 80 |
| 9. | Kartarpur (MC) | 0 | 0 | 39 | 0 | 39 | 39 | 0 | 0 | 0 | 0 | 39 | 39 | 0 |
| 10. | Mansa (MC) | 0 | 0 | 125 | 0 | 125 | 125 | 0 | 0 | 0 | 0 | 125 | 125 | 0 |
| 11. | Qadian (MC) | 0 | 0 | 32 | 0 | 32 | 36 | 0 | 10 | 0 | 0 | 32 | 46 | 14 |
| 12. | Rajpura (MC) | 0 | 0 | 250 | 0 | 250 | 150 | 100 | 0 | 100 | 0 | 250 | 150 | 100 |
| 13. | Rupnagar (MC) | 0 | 0 | 99 | 20 | 79 | 0 | 79 | 95 | 0 | 0 | 99 | 115 | 16 |
| 14. | SBS Nagar (MC) | 0 | 0 | 100 | 75 | 25 | 0 | 25 | 0 | 25 | 0 | 100 | 75 | 25 |
| 15. | Sirhind (NP) | 0 | 0 | 75 | 0 | 75 | 0 | 75 | 50 | 25 | 0 | 75 | 50 | 25 |
| 16. | Bilga (NP) | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 0 |
| 17. | Khamanon (NP) | 0 | 0 | 26 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 40 | 14 |
| 18. | Kiratpur Sahib (NP) | 0 | 0 | 10 | 0 | 10 | 10 | 0 | 4 | 0 | 0 | 10 | 14 | 4 |
| 19. | Makhu (NP) | 0 | 0 | 22 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 22 | 0 |
| 20. | Mehraj (NP) | 0 | 0 | 25 | 25 | 0 | 0 | 0 | 0 | 0 | 8 | 25 | 33 | 8 |
| Total | | | | | | | | | | | | 2,639* | 1,377* | |

Source: Departmental data

Note: - *2,639-it includes 400 compost pits of Ludhiana and in 1,377-it includes 67 compost pits of Amritsar.

** Already constructed in the year 2005.

| | |
|--|--|
| | This colour denotes shortage |
| | This colour denotes excess – the excess compost pits were being used by the ULBs as found during physical visit |

Appendix 2.14

(Referred to in paragraph 2.4.5.4 (ii) and 2.4.5.6 (i))

Status of construction of SLF and Bio-remediation of Legacy waste in test checked ULBs

| Sr. No | Name of the ULBs | Total waste generation per day (in MT) | Total legacy waste at dump site (in MT) | Processed legacy waste (in MT) as of 03/2022 | Period of processing | Position of legacy waste as of 10/2024 | SLF constructed | SLF used for inert waste | Remarks |
|--------|------------------|--|---|--|--------------------------|---|-----------------|--------------------------|--|
| 1. | Amritsar (C) | 450 | 12,35,000 | 4,96,988 | 01.09.2020 to 30.11.2022 | Total legacy waste 11,35,000 MT. No bio-remediation carried out after November 2022. | No | NA | - |
| 2. | Bathinda (C) | 110 | 2,90,000 | 16,116 | 04/2021 to 02/2022 | Out of 2,22,017 MT legacy waste (allotted for bio-remediation), 86 percent was processed. | Yes | Yes | - |
| 3. | Ludhiana (C) | 1,100 | 21,54,880 | 90,000 | 03.08.2022 to 20.02.2023 | Out of 25,00,000 MT legacy waste, 2.04 lakh MT was processed. | Yes | Not in use | The SLF was constructed by the concessionaire but due to arbitration case the SLF was not used for inert waste. |
| 4. | Moga (C) | 65 | 1,20,000 | 0 | NA | Out of 1,60,000 MT Legacy waste, 1,27,000 MT processed through contractor. | No | NA | Work order of bio-remediation issued in January 2023. |
| 5. | SAS Nagar (C) | 93 | 4,13,444 | 1,96,875 | 08.10.2021 to 13.06.2024 | Total 1,41,657 MT waste laying at dumpsite for which bio-remediation is under process. | Yes | Yes | Work of bio-remediation was being done by ULB itself. |
| 6. | Adampur (MC) | 3.11 | 590 | 155 | Logbook not maintained | All legacy waste bio-remediated. Approx 10,320 MT waste belonging to Air Force Station pending to be processed. | No | NA | SLF was under construction |
| 7. | Doraha (MC) | 12 | 13,000 | 10,400 | 03.01.2022 to 21.06.2022 | 19,723 MT legacy waste processed. Work order issued for processing of remaining 8,500 MT legacy waste. | No | NA | The processed waste was lying at dump site and final disposal awaited. |
| 8. | Ferozepur (MC) | 37 | 6,500 | 6,341 | 1.12.2020 to 17.6.2022 | All legacy waste processed upto June 2022. | Yes | Yes | The processed inert waste was deposited in the SLF. However, the specification i.e. layer of HDPE was not found at site which affected the ground water due to leachate. |
| 9. | Kartarpur (MC) | 7 | 4,320 | 86 | Logbook not maintained | All legacy waste processed at old dump site but no records maintained. | No | NA | - |

| Sr. No | Name of the ULBs | Total waste generation per day (in MT) | Total legacy waste at dump site (in MT) | Processed legacy waste (in MT) as of 03/2022 | Period of processing | Position of legacy waste as of 10/2024 | SLF constructed | SLF used for inert waste | Remarks |
|--------|---------------------|--|---|--|---|---|-----------------|--------------------------|--|
| 10. | Mansa (MC) | 37 | 81,203 | 1,163 (61 + 1102) | 15.10.2022 to 06.11.2022 & 07.11.2022 to 20.12.2022 | 1,057 MT legacy waste processed by ULB itself and out of total 80,000 MT legacy waste 63,000 MT processed through contractor. | No | NA | The processed waste along with inert waste was lying at dump site. |
| 11. | Qadian (MC) | 3.75 | NA | 794 | 01.12.2020 to 31.03.2022 | No bio-remediation carried out after 03/2022. | No | NA | As on 01/2023 all legacy waste was removed from dumpsite. |
| 12. | Rajpura (MC) | 25 | 74,000 | 54,000 | Logbook not maintained | Bio-remediation started. | Yes | Not in use | Inert waste was used in parks. |
| 13. | Rupnagar (MC) | 12 | 650 | 650 | 02.03.2021 to 30.12.2022 | Total 17,000 MT legacy waste at dumpsite. Tender floated for processing. | No | NA | - |
| 14. | SBS Nagar (MC) | 12 | 28,500 | 17,520 | Partially log book maintained from 01.03.2021 to 31.12.2022 | Bio-remediation under process. 6,000 MT legacy waste at dumpsite. | No | NA | SLF was under construction. |
| 15. | Sirhind (MC) | 16 | NA | NA | NA | Total 2,300 MT legacy waste processed. No records maintained. | No | NA | Data of legacy waste quantity was not available but legacy waste was found at dumpsite during physical visit. |
| 16. | Bilga (NP) | 4 | 1. 200 | 200 | One dumpsite (Out of Two) remediated but Logbook was not maintained | Efforts will be made to bio-remediated of waste. | No | NA | SLF was under construction. |
| | | | 2. NA | NA | | | | | |
| 17. | Khamanon (NP) | 4.54 | 410 | 410 | 17.02.2021 to 21.10.2022 | Total 410 MT legacy waste processed. | Yes | Not in use | The inert was spread over the dump site whereas it was required to be filled in the SLF which was under construction. |
| 18. | Kiratpur Sahib (NP) | 1 | 45 | 45 | 01.11.2021 to 09.09.2022 | Total 45 MT legacy waste processed. | Yes | Not in use | Due to non-testing of water table the SLF was filled with water due to increase in water table. The inert waste was spread over the dump site. |
| 19. | Makhu (NP) | 4.1 | 1,850 | 1,850 | 05.05.2021 to 26.11.2022 | All legacy waste remediated. | Yes | Not in use | Reason not available. |
| 20. | Mehraj (NP) | 1 | 100 | 100 | Logbook not maintained | All legacy waste remediated. | No | NA | - |

Source: Departmental data

Appendix 2.15

(Referred to in paragraph 2.4.5.5)

Statement showing Bio-remediation machineries lying idle in selected ULBs

(₹ in lakh)

| Sr. No. | Name of the ULBs | Mechanical Separator | | | | |
|--------------|---------------------|----------------------------|-------------------|--|--|--------------------------|
| | | Date of purchase | Cost of Machinery | Cost of machinery not in use (as on 03/2022) | Position as of 10/2024 | Cost of machinery in Use |
| 1. | Amritsar (C) | Not Required | | | | |
| 2. | Bathinda (C) | Not Required | | | | |
| 3. | Ludhiana (C) | Not Required | | | | |
| 4. | Moga (C) | July-2020 to December-2020 | 19.80 | 14.85 | Out of four, one machinery, transferred to ULB Batala and remaining lying idle. | 4.95 |
| 5. | SAS Nagar (C) | September-2021 | 41.00 | 0.00 | - | 41.00 |
| 6. | Adampur (MC) | November-2020 | 5.00 | 0.00 | - | 5.00 |
| 7. | Doraha (MC) | October-2020 | 5.00 | 5.00 | Machinery lying idle due to non-availability of staff. | 0.00 |
| 8. | Ferozpur (MC) | April-2021 | 29.10 | 0.00 | - | 29.10 |
| 9. | Kartarpur (MC) | September-2021 | 4.99 | 4.99 | The machinery will be utilised in future. | 0.00 |
| 10. | Mansa (MC) | November-2020 | 4.52 | 4.52 | The machineries were lying idle due to involvement of contractor for bio-remediation. | 0.00 |
| | | October-2021 | 29.72 | 29.72 | | 0.00 |
| 11. | Qadian (MC) | Not Purchased | Not Purchased | 0.00 | - | 0.00 |
| 12. | Rajpura (MC) | January-2021 | 8.00 | 8.00 | The machinery was lying idle till now. | 0.00 |
| 13. | Rupnagar (MC) | February-2021 | 4.93 | 0.00 | - | 4.93 |
| 14. | SBS Nagar (MC) | March-2021 | 4.98 | 0.00 | - | 4.98 |
| 15. | Sirhind (MC) | November-2020 | 4.31 | 4.31 | The machinery was used for processing of legacy waste but the record was not maintained. | 0.00 |
| 16. | Bilga (NP) | March-2021 | 4.98 | 0.00 | - | 4.98 |
| 17. | Khamanon (NP) | September-2020 | 4.15 | 0.00 | - | 4.15 |
| 18. | Kiratpur Sahib (NP) | October-2020 | 5.00 | 0.00 | - | 5.00 |
| 19. | Makhu (NP) | December-2020 | 5.00 | 0.00 | - | 5.00 |
| 20. | Mehraj (NP) | February-2021 | 4.92 | 0.00 | - | 4.92 |
| Total | | | 185.40 | 71.39 | | 114.01 |

Source: Departmental data

Not Required - concessionaire were engaged in SWM

Appendix 2.16

(Referred to in paragraph 2.4.5.6(ii))

Details showing compliance of provision in respect of Sanitary Landfill Facility

| Sr. No. | Name of the ULBs | 100 m away from river | 200 m away from pond | 200 m away from highways | 200 m away from habitations | 200 m away from public park | 200 m away from water supply wells | 20 km away from airport/air base | Buffer Zone declared | Volume of Waste (in TPD) | Whether site authorisation obtained |
|---------|---------------------|-----------------------|----------------------|--------------------------|-----------------------------|-----------------------------|------------------------------------|----------------------------------|----------------------|--------------------------|-------------------------------------|
| 1. | Bathinda (C) | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | 110 | Yes |
| 2. | Ludhiana (C) | Yes | Yes | Yes | No | Yes | Yes | No (10.5 KM)* | No | 1,005 | Expired |
| 3. | SAS Nagar (C) | Yes | Yes | Yes | Yes | Yes | Yes | No | No | 92 | No |
| 4. | Ferozepur (MC) | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | 37 | No |
| 5. | Rajpura (MC) | Yes | Yes | No | Yes | Yes | Yes | Yes | No | 30 | No |
| 6. | Khamanon (NP) | Yes | No | Yes | Yes | Yes | Yes | Yes | No | 4.54 | No |
| 7. | Kiratpur Sahib (NP) | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No*** | 1 | NR** |
| 8. | Makhu (NP) | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No*** | 4.10 | NR** |

Source: Departmental data

*Permission obtained from Airport authority

** Not Required

*** Buffer Zone at serial No. 5 and 6 was not required as per rule 11 (K) of SWM rules, 2016.

Appendix 2.17

(Referred to in paragraph 2.4.5.6(iii))

Basic facilities at Sanitary Landfill Sites

| Sr. No. | Name of the ULBs | fenced or hedged | Gated to prevent stray animals | Availability of internal roads | Availability of waste inspection facilities | Office facility for record keeping | Availability of pollution monitoring equipment | Availability of weighbridge | Firefighting equipment | Drinking water | Light Facilities | Health inspection facilities of workers |
|---------|---------------------|---|--------------------------------|--------------------------------|---|------------------------------------|--|-----------------------------|------------------------|----------------|------------------|---|
| 1. | Bathinda (C) | Concerned facilities were to be developed by the concessionaire but due to arbitration case the records were not produced to audit. | | | | | | | | | | |
| 2. | Ludhiana (C) | No | No | Yes | No | No | No | Yes | No | Yes | Yes | No |
| 3. | SAS Nagar (C) | Yes | Yes | Yes | No | No | No | No | No | Yes | Yes | No |
| 4. | Ferozepur (MC) | Yes | No | No | No | No | No | No | No | No | No | No |
| 5. | Rajpura (MC) | No | No | No | No | No | No | No | No | Yes | No | No |
| 6. | Khamanon (NP) | Yes | Yes | Yes | No | No | No | No | No | No | No | No |
| 7. | Kiratpur Sahib (NP) | Yes | Yes | No | No | No | No | No | No | No | Yes | No |
| 8. | Makhu (NP) | No | No | No | No | No | No | No | No | No | No | No |

Source: Departmental data

Appendix 2.18

(Referred to in paragraph 2.5.6)

Statement showing C&D machineries lying idle in selected ULBs

(₹ in lakh)

| Sr. No. | Name of the ULBs | C&D management machine | | |
|---------|---------------------|---|---------------|---------------|
| | | Date of purchase | Cost | Use or not |
| 1. | Amritsar (C) | Not required | | |
| 2. | Ludhiana (C) | Not required | | |
| 3. | Bathinda (C) | Machinery purchased but detail not made available | | |
| 4. | Moga (C) | Not purchased | Not purchased | Not purchased |
| 5. | SAS Nagar (C) | March-2021 | 4.13 | In use |
| 6. | Adampur (MC) | December-2020 | 2.00 | In use |
| 7. | Doraha (MC) | October-2020 | 1.50 | Not in use |
| 8. | Ferozepur (MC) | November-2020 | 1.99 | Not in use |
| 9. | Kartarpur (MC) | June -2021 | 2.00 | In use |
| 10. | Mansa (MC) | Not purchased | Not purchased | Not purchased |
| 11. | Qadian (MC) | Not purchased | Not purchased | Not purchased |
| 12. | Rajpura (MC) | January-2021 | 4.98 | Not in use |
| 13. | Rupnagar (MC) | October-2020 | 1.99 | In use |
| 14. | SBS Nagar (MC) | February-2021 | 1.99 | In use |
| 15. | Sirhind (MC) | December-2020 | 1.97 | In use |
| 16. | Bilga (NP) | March-2021 | 2.00 | In use |
| 17. | Khamanon (NP) | May-2021 | 1.35 | In use |
| 18. | Kiratpur Sahib (NP) | November-2020 | 1.99 | Not in use |
| 19. | Makhu (NP) | January-2021 | 3.55 | In use |
| 20. | Mehraj (NP) | January-2021 | 2.25 | In use |

Source: Departmental data

Appendix 2.19

(Referred to in paragraph 2.6.1 and 2.6.5.2)

Statement showing deficiency in the annual reports submitted to the PPCB

| Sr. No. | Name of ULBs | Year | Population | HHs | Generation (TPD) | Collection (TPD) | Processing (TPD) | Disposed at dumpsite/ landfill site |
|---------|----------------|---------|----------------------|----------|------------------|------------------|------------------|-------------------------------------|
| 1. | Amritsar (C) | 2017-18 | 11,32,383 | 2,31,636 | 700 | 700 | 0 | 600 |
| | | 2018-19 | 13,94,224 | 2,31,636 | 496 | 450 | 0 | 496 |
| | | 2019-20 | 11,32,383 | 2,31,636 | 550 | 550 | 0 | 550 |
| | | 2020-21 | 11,32,383 | 2,31,636 | 550 | 550 | 0 | 550 |
| | | 2021-22 | 14,52,603 | 2,31,636 | 450 | 450 | 0 | 450 |
| 2. | Bathinda (C) | 2017-18 | NA | NA | NA | NA | NA | NA |
| | | 2018-19 | 2,85,788 | 59,000 | 110 | 105 | 105 | 20-25 |
| | | 2019-20 | 2,85,788 | 59,000 | 110 | 105 | 105 | 25 |
| | | 2020-21 | NA | NA | NA | NA | NA | NA |
| | | 2021-22 | NA | NA | NA | NA | NA | NA |
| 3. | Ludhiana (C) | 2017-18 | 16,13,878 | 3,20,000 | 1,150 | 1,150 | 600 | 0 |
| | | 2018-19 | 16,13,878 | 3,20,000 | 1,150 | 1,150 | 600 | 0 |
| | | 2019-20 | 16,13,878 | 3,20,000 | 1,150 | 1,150 | 1,000 | 100 |
| | | 2020-21 | 16,13,878 | 3,20,000 | 1,100 | 1,100 | 500 | 600 |
| | | 2021-22 | 16,13,878 | 3,20,000 | 1,100 | 1,100 | 0 | 1,100 |
| 4. | Moga (C) | 2017-18 | report not submitted | | | | | |
| | | 2018-19 | 1,62,320 | 32,464 | 65 | 62 | 19 | 43 |
| | | 2019-20 | report not submitted | | | | | |
| | | 2020-21 | report not submitted | | | | | |
| | | 2021-22 | report not submitted | | | | | |
| 5. | SAS Nagar (C) | 2017-18 | NA | NA | NA | NA | NA | NA |
| | | 2018-19 | 1,96,000 | 40,289 | 82.50 | 82.50 | 5.80 | 54 |
| | | 2019-20 | 1,96,000 | 40,289 | 82.50 | 82.50 | 62.50 | 20 |
| | | 2020-21 | 2,02,820 | 40,289 | 93 | 93 | 73 | 20 |
| | | 2021-22 | NA | NA | NA | NA | NA | NA |
| 6. | Adampur (MC) | 2017-18 | 17,693 | 3,537 | 2.10 | 2.10 | 2.10 | 2.10 |
| | | 2018-19 | 20,922 | 4,078 | 3.11 | 3.11 | 1.87 | 1.87 |
| | | 2019-20 | 20,922 | 4,078 | 3.11 | 3.11 | 1.87 | 1.87 |
| | | 2020-21 | 20,922 | 4,078 | 3.11 | 3.11 | 1.87 | 1.87 |
| | | 2021-22 | 20,922 | 4,088 | 3.11 | 3.11 | 1.87 | 1.87 |
| 7. | Doraha (MC) | 2017-18 | NA | NA | NA | NA | NA | NA |
| | | 2018-19 | NA | NA | NA | NA | NA | NA |
| | | 2019-20 | 25,385 | 7,750 | 15-17 | 13-14 | NA | 13-14 |
| | | 2020-21 | 25,424 | 7,750 | 12 | 12 | 4 | 8 |
| | | 2021-22 | NA | NA | NA | NA | NA | NA |
| 8. | Ferozepur (MC) | 2017-18 | 1,10,091 | 24,662 | 47 | 47 | 15 | 22 |
| | | 2018-19 | 1,10,091 | 24,662 | 47 | 47 | 16 | 20 |
| | | 2019-20 | 1,10,091 | 24,662 | 43 | 43 | 34 | 9 |
| | | 2020-21 | 1,10,091 | 24,662 | 47 | 47 | 15 | 21 |
| | | 2021-22 | 1,10,091 | 25,380 | 37 | 37 | 34 | 4 |
| 9. | Kartarpur (MC) | 2017-18 | 25,670 | NA | 7 | 7 | 7 | NA |
| | | 2018-19 | 26,616 | 5,650 | 6 | 6 | 6 | NA |
| | | 2019-20 | 26,616 | 5,650 | 6 | 6 | 6 | 6 |

| Sr. No. | Name of ULBs | Year | Population | HHs | Generation (TPD) | Collection (TPD) | Processing (TPD) | Disposed at dumpsite/ landfill site | |
|---------|---------------------|---------|---|--------|------------------|------------------|------------------|-------------------------------------|--|
| | | 2020-21 | 27,000 | 5,650 | 7 | 7 | 7 | 7 | |
| | | 2021-22 | 27,000 | 5,650 | 7 | 7 | 7 | 7 | |
| 10. | Mansa (MC) | 2017-18 | NA | NA | NA | NA | NA | NA | |
| | | 2018-19 | 82,956 | 16,852 | 37 | 37 | 14 | 23 | |
| | | 2019-20 | NA | NA | NA | NA | NA | NA | |
| | | 2020-21 | NA | NA | NA | NA | NA | NA | |
| | | 2021-22 | NA | NA | NA | NA | NA | NA | |
| 11. | Qadian (MC) | 2017-18 | NA | NA | NA | NA | NA | NA | |
| | | 2018-19 | NA | NA | NA | NA | NA | NA | |
| | | 2019-20 | NA | NA | NA | NA | NA | NA | |
| | | 2020-21 | 23,630 | 4,889 | 3.75 | 3.75 | 2.55 | 1.23 | |
| | | 2021-22 | 23,630 | 4,889 | 3.75 | 3.75 | 2.55 | 1.23 | |
| 12. | Rajpura (MC) | 2017-18 | NA | NA | NA | NA | NA | NA | |
| | | 2018-19 | NA | NA | NA | NA | NA | NA | |
| | | 2019-20 | 92,283 | 22,000 | 25 | 25 | 25 | 3 | |
| | | 2020-21 | NA | NA | NA | NA | NA | NA | |
| | | 2021-22 | NA | NA | NA | NA | NA | NA | |
| 13. | Rupnagar (MC) | 2017-18 | 56,039 | 16,056 | 10 | 9 | 0 | 9 | |
| | | 2018-19 | 56,039 | 16,056 | 10 | 9 | 0 | 9 | |
| | | 2019-20 | 56,039 | 16,056 | 10 | 9 | 9 | 1.5 | |
| | | 2020-21 | 56,039 | 16,086 | 13 | 12 | 10 | 2 | |
| | | 2021-22 | 56,039 | 16,086 | 12 | 12 | 10 | 2 | |
| 14. | SBS Nagar (MC) | 2017-18 | 46,024 | 10,000 | 12 | 8 | 2.24 | NA | |
| | | 2018-19 | 46,024 | 10,000 | 12 | 8 | 2.24 | NA | |
| | | 2019-20 | 46,024 | 10,000 | 12 | 8 | 2.24 | NA | |
| | | 2020-21 | 46,024 | 10,000 | 15 | 8 | 2.24 | NA | |
| | | 2021-22 | 46,024 | 10,000 | 12 | 8 | 2.24 | NA | |
| 15. | Sirhind (MC) | 2017-18 | 57,874 | 11,020 | 12 | 12 | NA | NA | |
| | | 2018-19 | 57,874 | 13,022 | 20 | 20 | 1.20 | NA | |
| | | 2019-20 | 57,874 | 13,022 | 20 | 20 | 1.20 | 18.80 | |
| | | 2020-21 | 57,874 | 13,022 | 16 | 16 | 2.50 | 13.50 | |
| | | 2021-22 | 65,800 | 13,022 | 16 | 16 | 16 | 1.50 | |
| 16. | Bilga (NP) | 2017-18 | Form IV not prepared for the year 2017-18 | | | | | | |
| | | 2018-19 | 10,125 | 3,083 | 4 | 4 | 4 | 4 | |
| | | 2019-20 | 10,125 | 3,083 | 4 | 4 | 2 | 2 | |
| | | 2020-21 | 10,125 | 3,083 | 4 | 4 | 2.30 | 1.70 | |
| | | 2021-22 | 10,125 | 3,083 | 4 | 4 | 2.30 | 1.70 | |
| 17. | Khamanon (NP) | 2017-18 | 10,128 | 2,342 | 6.50 | 5 | 0 | 0 | |
| | | 2018-19 | 10,128 | 2,342 | 4.50 | 4 | 0 | 0 | |
| | | 2019-20 | 10,128 | 2,342 | 4.00 | 3 | 0 | 0 | |
| | | 2020-21 | 10,135 | 2,342 | 5 | 5 | 5 | 0 | |
| | | 2021-22 | 10,135 | 2,342 | 4.54 | 4.54 | 5 | 0 | |
| 18. | Kiratpur Sahib (NP) | 2017-18 | NA | NA | NA | NA | NA | NA | |
| | | 2018-19 | 7,545 | 1,582 | 1 | 1 | 0 | 1 | |
| | | 2019-20 | 7,545 | 1,732 | 1 | 1 | 1 | 1 | |
| | | 2020-21 | 7,545 | 1,732 | 1 | 1 | 1 | 0.57 | |

| Sr. No. | Name of ULBs | Year | Population | HHs | Generation (TPD) | Collection (TPD) | Processing (TPD) | Disposed at dumpsite/ landfill site |
|---------|--------------|---------|------------|-------|------------------|------------------|------------------|-------------------------------------|
| | | 2021-22 | 7,545 | 1,732 | 1 | 1 | 1 | 0.60 |
| 19. | Makhu (NP) | 2017-18 | 14,664 | 2,826 | 4.80 | 4.80 | 1.09 | 2.99 |
| | | 2018-19 | 14,664 | 2,826 | 4.80 | 4.80 | 1.09 | 2.99 |
| | | 2019-20 | 14,664 | 2,851 | 4 | 4 | 2.99 | 1.01 |
| | | 2020-21 | 14,664 | 2,851 | 4 | 4 | 2.99 | 1.01 |
| | | 2021-22 | 14,664 | 2,851 | 4.10 | 4.10 | 4.10 | 0.65 |
| 20. | Mehraj (NP) | 2017-18 | 16,783 | 3,564 | 1 | 1 | 0 | 0 |
| | | 2018-19 | 16,783 | 3,564 | 1 | 1 | 0 | 0 |
| | | 2019-20 | 16,783 | 3,564 | 1 | 1 | 0 | 0 |
| | | 2020-21 | 16,783 | 3,564 | 1 | 1 | 0 | 0 |
| | | 2021-22 | 16,783 | 3,564 | 1 | 1 | 0 | 0 |

Source: Annual Reports submitted to PPCB and higher authorities

NA: Not Available

Appendix 2.20

(Referred to in paragraph 2.6.2)

Statement showing Information, Education & Communication (IEC) Activities conducted during 2017-22

| Sr. No. | Name of ULBs | Plan prepared | Nature of activities | | | | | | | Total activities |
|---------|---------------------|---------------|----------------------|--------------------|---------------|-----------|-----------|--------|-----------------------------|------------------|
| | | | Video/audio | Mass communication | Wall painting | Hoardings | Pamphlets | School | Other mode of communication | |
| 1. | Amritsar (C) | No | 35 | 188 | 0 | 1 | 9 | 132 | 1,515 | 6 |
| 2. | Bathinda (C) | No | 2 | 2 | 21 | 17 | 0 | 0 | 3 | 5 |
| 3. | Ludhiana (C) | No | 425 | 2,651 | 89 | 917 | 64,800 | 200 | 2,008 | 7 |
| 4. | Moga (C) | No | 22 | 13 | 62 | 105 | 11 | 95 | 11 | 7 |
| 5. | SAS Nagar (C) | No | 94 | 865 | 37 | 292 | 33,000 | 550 | 400 | 7 |
| 6. | Adampur (MC) | No | 85 | 0 | 13 | 0 | 0 | 248 | 114 | 4 |
| 7. | Doraha (MC) | No | 0 | 0 | 0 | 0 | 0 | 0 | Yes | 1 |
| 8. | Ferozepur (MC) | No | 0 | Yes | 38 | 453 | 34,000 | Yes | 0 | 5 |
| 9. | Kartarpur (MC) | No | 1 | 49 | 15 | 0 | 1 | 11 | 45 | 6 |
| 10. | Mansa (MC) | No | 0 | Yes | Yes | 0 | 0 | 0 | 0 | 2 |
| 11. | Qadian (MC) | No | 10 | 155 | 22 | 5 | 1,700 | 56 | 2 | 7 |
| 12. | Rajpura (MC) | No | 1 | 8 | 21 | 0 | 0 | 56 | 0 | 4 |
| 13. | Rupnagar (MC) | No | 28 | 101 | 17 | 23 | 5 | 110 | 14 | 7 |
| 14. | SBS Nagar (MC) | No | 97 | 76 | 11 | 6 | 1 | 26 | 0 | 6 |
| 15. | Sirhind (MC) | No | Nil | 3 | 21 | 7 | 0 | 0 | 2 | 4 |
| 16. | Bilga (NP) | No | 3 | 20 | 2 | 3 | 4 | 20 | 0 | 6 |
| 17. | Khamanon (NP) | No | Nil | 292 | 32 | 12 | 3 | 12 | Nil | 5 |
| 18. | Kiratpur Sahib (NP) | No | 0 | 0 | 6 | 2 | 0 | 0 | 0 | 2 |
| 19. | Makhu (NP) | No | 3 | 77 | 93 | 59 | 118 | 61 | 0 | 6 |
| 20. | Mehraj (NP) | No | 30 | 162 | 50 | 12 | 61 | 30 | 8 | 7 |

Source: Departmental data

Appendix 2.21

(Referred to in paragraph 2.6.3)

Statement showing assessment of minutes of meeting of SLAB and its implementation.

| Sr. No. | Meeting 1 (5 September 2017) | Meeting 2 (14 February 2019) | Meeting 3 (14 August 2019) | Meeting 4 (18 March 2020) | Meeting 5 (17 September 2020) | Meeting 6 (17 March 2021) | Meeting 7 (23 September 2021) |
|---------|---|---|--|---|---|---|--|
| 1. | Duties to be performed by different agencies | Discussion on action taken reports on the decision taken in the 1 st meeting of State Level Advisory Body (SLAB) of SWM rules, 2016. | Confirmation of the minutes of the 2 nd meeting of State Level Advisory Body held on 14.02.2019. | Confirmation of the proceedings of the 3 rd meeting of State Level Advisory Body held on 14.08.2019. | Confirmation of the proceedings of 4 th meeting of State Level Advisory Body held on 18.03.2020 regarding management of legacy waste and ensuring of implementation of SWM Rules 2016. | Confirmation of the proceedings of 5 th meeting of State Level Advisory Body held on 17.09.2020 for the issues segregation, D2D collection, processing of waste, beautification of GVPs. | Confirmation of the proceedings of 6 th meeting of State Level Advisory Body held on 17.03.2021 and exploration the possibility for use of RDF. |
| 2. | Punjab State SWM policy | Submission of individual SWM action Plan and notification of bye laws. | Discussion on technological option for handling of legacy waste, utilisation of SCF and composting of wet waste. | Horticulture waste management in Park/green belts etc. | Door to door collections. | Setting-up a dedicated cell in all the ULBs to coordinate the compliance of SWM rules and reporting of collected data. | Review of action taken on the decisions taken in the 6 th meeting regarding source segregation, bailing, remediation of legacy waste, door-to-door collection, processing of waste, beautification of GVPs etc. |
| 3. | Land identification for processing facilities | Stopping entry of solid waste in water bodies/drain/ river etc. | -- | Collection of user fee officially to sustain the SWM. | -- | -- | -- |
| 4. | Adoption of decentralised SWM approach | Notification of Byelaws and prepare byelaws for managing the RDF. | -- | -- | -- | -- | Compliance of Rule 17 of SWM Rules 2016 by manufacturers or brand owners of disposable products and sanitary napkins and diapers. |
| 5. | Financial condition of ULBs – adequate separate fund provision in annual budget | Management of C&D waste. | -- | -- | Horticulture waste management in parks/ green belt/ lawns etc. | Horticulture waste management in parks/ green belt/ lawns etc. | -- |

| Sr. No. | Meeting 1 (5 September 2017) | Meeting 2 (14 February 2019) | Meeting 3 (14 August 2019) | Meeting 4 (18 March 2020) | Meeting 5 (17 September 2020) | Meeting 6 (17 March 2021) | Meeting 7 (23 September 2021) |
|---------|---|---|---|---|--|--|---|
| 6. | Creation of separate SWM Cadre | Remediation of existing dump site by planning of legacy waste. | -- | Compliance of SWM Rules by Vegetable/ Fruit/Grain Markets under the control of State Mandi Board. | Compliance by Bulk Waste Generators. | Compliance by Bulk Waste Generators. | C&D waste management. |
| 7. | Secondary collection points | Developing SWM model in the ULB having population more than 50000. | -- | -- | Compliance of SWM Rules by Vegetable/ Fruit/ Grain Markets under the control of State Mandi Board. | Compliance of SWM Rules by Vegetable/ Fruit/ Grain Markets under the control of State Mandi Board. | Measuring production of compost and elimination of GVPs and deployment of Nodal Officers ward wise. |
| 8. | Integration of informal sector | -- | -- | Rag Pickers should be identified by the ULBs and integrated into SWM by them. | -- | -- | -- |
| 9. | Source segregation of MSW | Source segregation of waste, Door to Door collection in segregated manner, Arrangements of composting of wet waste and MRF. | -- | -- | -- | -- | -- |
| 10. | Release of SBM grant | -- | -- | -- | -- | -- | -- |
| 11. | Bulk generators - exceeding 100 kg per day | In-situ composting by BWG. | -- | Compliance by BWGs. | -- | -- | -- |
| 12. | Education strategy to achieve goal of clean-green-pollution free Punjab | -- | The Punjab school Education Board has informed that the topic of waste management including sanitation has already been made part of Environmental studies subject from Class 1 to V. | -- | -- | -- | -- |
| 13. | Technologies for processing of waste | -- | -- | -- | -- | -- | -- |

Performance Audit Report on Solid Waste Management in Punjab by Urban Local Bodies

| Sr. No. | Meeting 1 (5 September 2017) | Meeting 2 (14 February 2019) | Meeting 3 (14 August 2019) | Meeting 4 (18 March 2020) | Meeting 5 (17 September 2020) | Meeting 6 (17 March 2021) | Meeting 7 (23 September 2021) |
|---------|---|---------------------------------|-------------------------------|------------------------------|----------------------------------|------------------------------|----------------------------------|
| 14. | Incentivize the Model Ward | -- | -- | -- | -- | -- | -- |
| 15. | Strategy to achieve the goal of SBM-U and guidelines for IEC and Capacity Building activities | -- | -- | -- | -- | -- | -- |

Source: Minutes of meetings of SLAB

Appendix 2.22

(Referred to in paragraph 2.6.4)

Statement showing shortfall in meetings to be conducted by the District Administration

| Sr. No. | Name of ULBs | 2017-18 | | | 2018-19 (Upto December 2018) | | | 2018-19 (January to March 2019) | | | 2019-20 | | | 2020-21 | | | 2021-22 | | | Total meetings conducted |
|--------------|---------------------|-----------|----------|------------------|------------------------------|----------|------------------|---------------------------------|----------|------------------|------------|-----------|------------------|------------|-----------|------------------|------------|-----------|------------------|--------------------------|
| | | QR | QC | SF (in per cent) | QR | QC | SF (in per cent) | MR | MC | SF (in per cent) | MR | MC | SF (in per cent) | MR | MC | SF (in per cent) | MR | MC | SF (in per cent) | |
| 1. | Amritsar (C) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 1 | 92 | 12 | 7 | 42 | 12 | 2 | 83 | 10 |
| 2. | Bathinda (C) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 1 | 92 | 1 |
| 3. | Ludhiana (C) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 0 |
| 4. | Moga (C) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 0 |
| 5. | SAS Nagar (C) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 2 | 83 | 12 | 0 | 100 | 2 |
| 6. | Adampur (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 0 |
| 7. | Doraha (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 5 | 58 | 12 | 9 | 25 | 12 | 7 | 42 | 21 |
| 8. | Ferozepur (MC) | 4 | 1 | 75 | 3 | 2 | 33 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 2 | 83 | 5 |
| 9. | Kartarpur (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 1 | 92 | 12 | 1 | 92 | 2 |
| 10. | Mansa (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 0 |
| 11. | Qadian (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 0 |
| 12. | Rajpura (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 0 |
| 13. | Rupnagar (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 1 | 92 | 12 | 1 | 92 | 12 | 0 | 100 | 2 |
| 14. | SBS Nagar (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 1 | 92 | 12 | 4 | 67 | 5 |
| 15. | Sirhind (MC) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 2 | 83 | 12 | 0 | 100 | 12 | 0 | 100 | 2 |
| 16. | Bilga (NP) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 0 |
| 17. | Khamanon (NP) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 1 | 92 | 12 | 1 | 92 | 12 | 1 | 92 | 3 |
| 18. | Kiratpur Sahib (NP) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 2 | 83 | 12 | 3 | 75 | 12 | 5 | 58 | 10 |
| 19. | Makhu (NP) | 4 | 1 | 75 | 3 | 2 | 33 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 0 | 100 | 12 | 2 | 83 | 5 |
| 20. | Mehraj (NP) | 4 | 0 | 100 | 3 | 0 | 100 | 3 | 0 | 100 | 12 | 0 | 100 | 12 | 2 | 83 | 12 | 2 | 83 | 4 |
| Total | | 80 | 2 | 98 | 60 | 4 | 93 | 60 | 0 | 100 | 240 | 12 | 95 | 240 | 27 | 89 | 240 | 27 | 89 | 72 |

Source: Records provided by ULB

QR-Quarterly Meetings Required; QC-Quarterly Meetings Conducted; MR- Monthly Meetings Required; MC-Monthly Meetings Conducted; and SF-Shortfall.

Appendix 2.23

(Referred to in paragraph 2.6.5.1)

Statement showing Status of Annual Report submitted to PPCB

| Sr. No. | Name of ULBs | Years | Due Date of submission | Submitted to PPCB/Dept. | Delay in submission to PPCB (in days) |
|---------|----------------|---------|------------------------|-------------------------|---------------------------------------|
| 1. | Amritsar (C) | 2017-18 | 30.06.2018 | 16.07.2018 | 16 |
| | | 2018-19 | 30.06.2019 | 29.08.2019 | 60 |
| | | 2019-20 | 30.06.2020 | 22.06.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | 06.09.2021 | 68 |
| | | 2021-22 | 30.06.2022 | 12.12.2022 | 165 |
| 2. | Bathinda (C) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | 26.06.2019 | No Delay |
| | | 2019-20 | 30.06.2020 | 28.06.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | Not submitted | NA |
| | | 2021-22 | 30.06.2022 | Not submitted | NA |
| 3. | Ludhiana (C) | 2017-18 | 30.06.2018 | 01.10.2018 | 93 |
| | | 2018-19 | 30.06.2019 | 08.07.2019 | 8 |
| | | 2019-20 | 30.06.2020 | 23.06.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | 30.06.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | 10.06.2022 | No Delay |
| 4. | Moga (C) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | 10.07.2019 | 10 |
| | | 2019-20 | 30.06.2020 | Not submitted | NA |
| | | 2020-21 | 30.06.2021 | Not submitted | NA |
| | | 2021-22 | 30.06.2022 | Not submitted | NA |
| 5. | SAS Nagar (C) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | 03.07.2019 | 3 |
| | | 2019-20 | 30.06.2020 | 30.06.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | 30.07.2021 | 30 |
| | | 2021-22 | 30.06.2022 | Not Submitted | NA |
| 6. | Adampur (MC) | 2017-18 | 30.06.2018 | 08.09.2022 | 1,530 |
| | | 2018-19 | 30.06.2019 | 08.09.2022 | 1,165 |
| | | 2019-20 | 30.06.2020 | 08.09.2022 | 800 |
| | | 2020-21 | 30.06.2021 | 08.09.2022 | 435 |
| | | 2021-22 | 30.06.2022 | 08.09.2022 | 70 |
| 7. | Doraha (MC) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | Not submitted | NA |
| | | 2019-20 | 30.06.2020 | 07.01.2020 | 1 |
| | | 2020-21 | 30.06.2021 | 29.06.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | Not submitted | NA |
| 8. | Ferozepur (MC) | 2017-18 | 30.06.2018 | 21.06.2018 | No Delay |
| | | 2018-19 | 30.06.2019 | 16.07.2019 | 16 |
| | | 2019-20 | 30.06.2020 | 27.07.2020 | 27 |
| | | 2020-21 | 30.06.2021 | 16.06.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | 23.07.2022 | 23 |

| Sr. No. | Name of ULBs | Years | Due Date of submission | Submitted to PPCB/Dept. | Delay in submission to PPCB (in days) |
|---------|---------------------|---------|------------------------|-------------------------|---------------------------------------|
| 9. | Kartarpur (MC) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | 17.07.2019 | 17 |
| | | 2019-20 | 30.06.2020 | 07.07.2020 | 7 |
| | | 2020-21 | 30.06.2021 | 01.07.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | 23.09.2022 | 85 |
| 10. | Mansa (MC) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | 19.07.2019 | 19 |
| | | 2019-20 | 30.06.2020 | Not submitted | NA |
| | | 2020-21 | 30.06.2021 | Not submitted | NA |
| | | 2021-22 | 30.06.2022 | Not submitted | NA |
| 11. | Qadian (MC) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | Not submitted | NA |
| | | 2019-20 | 30.06.2020 | Not submitted | NA |
| | | 2020-21 | 30.06.2021 | 01.05.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | 30.04.2022 | No Delay |
| 12. | Rajpura (MC) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | Not submitted | NA |
| | | 2019-20 | 30.06.2020 | 22.07.2020 | 22 |
| | | 2020-21 | 30.06.2021 | Not submitted | NA |
| | | 2021-22 | 30.06.2022 | Not submitted | NA |
| 13. | Rupnagar (MC) | 2017-18 | 30.06.2018 | 01.07.2018 | 1 |
| | | 2018-19 | 30.06.2019 | 11.07.2019 | 11 |
| | | 2019-20 | 30.06.2020 | 26.06.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | 25.07.2021 | 25 |
| | | 2021-22 | 30.06.2022 | 19.07.2022 | 19 |
| 14. | SBS Nagar (MC) | 2017-18 | 30.06.2018 | 23.05.2018 | No Delay |
| | | 2018-19 | 30.06.2019 | 23.05.2019 | No Delay |
| | | 2019-20 | 30.06.2020 | 23.05.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | 29.07.2021 | 29 |
| | | 2021-22 | 30.06.2022 | 27.05.2022 | No Delay |
| 15. | Sirhind (MC) | 2017-18 | 30.06.2018 | 20.07.2018 | 20 |
| | | 2018-19 | 30.06.2019 | 03.06.2019 | No Delay |
| | | 2019-20 | 30.06.2020 | 30.06.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | 31.05.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | 27.05.2022 | No Delay |
| 16. | Bilga (NP) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | 16.05.2019 | No Delay |
| | | 2019-20 | 30.06.2020 | 10.07.2020 | 10 |
| | | 2020-21 | 30.06.2021 | 03.08.2021 | 34 |
| | | 2021-22 | 30.06.2022 | 05.09.2022 | 67 |
| 17. | Khamanon (NP) | 2017-18 | 30.06.2018 | 29.07.2018 | 29 |
| | | 2018-19 | 30.06.2019 | 11.07.2019 | 11 |
| | | 2019-20 | 30.06.2020 | 02.07.2020 | 2 |
| | | 2020-21 | 30.06.2021 | 17.05.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | 27.05.2022 | No Delay |
| 18. | Kiratpur Sahib (NP) | 2017-18 | 30.06.2018 | Not submitted | NA |
| | | 2018-19 | 30.06.2019 | 29.03.2019 | No Delay |
| | | 2019-20 | 30.06.2020 | 27.07.2020 | 27 |
| | | 2020-21 | 30.06.2021 | 22.06.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | 18.07.2022 | 18 |

| Sr. No. | Name of ULBs | Years | Due Date of submission | Submitted to PPCB/Dept. | Delay in submission to PPCB (in days) |
|----------------|---------------------|--------------|-------------------------------|--------------------------------|--|
| 19. | Makhu (NP) | 2017-18 | 30.06.2018 | 11.05.2018 | No Delay |
| | | 2018-19 | 30.06.2019 | 24.05.2019 | No Delay |
| | | 2019-20 | 30.06.2020 | 29.06.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | 02.08.2021 | 33 |
| | | 2021-22 | 30.06.2022 | 22.07.2022 | 22 |
| 20. | Mehraj (NP) | 2017-18 | 30.06.2018 | 29.06.2018 | No Delay |
| | | 2018-19 | 30.06.2019 | 01.07.2019 | 1 |
| | | 2019-20 | 30.06.2020 | 29.06.2020 | No Delay |
| | | 2020-21 | 30.06.2021 | 22.06.2021 | No Delay |
| | | 2021-22 | 30.06.2022 | 22.06.2022 | No Delay |

Source: Departmental data

NA: Not Available

Appendix 2.24

(Referred to in paragraph 2.6.6)

Statement showing comparison of data taken in MIS with information provided by ULBs

| Sr. No. | Name of ULBs | Year | HHs | | Collection | | Processing | | SLF | | User charges (₹) | | Operating cost (₹) | |
|--------------|---------------------|---------|----------|----------|------------|-----------|------------|-----------|-----------|--------------------|---------------------|------------------|---------------------|---------------------|
| | | | MIS | Actual * | MIS | Actual ** | MIS | Actual ** | MIS | Actual | MIS | Actual | MIS | Actual |
| 1. | Amritsar (C) | 2021-22 | 1,62,477 | 2,31,636 | 1,63,838 | 1,98,292 | 3,60,181 | 0 | 1 | 0 | 5,77,54,146 | 0 | 20,90,72,724 | 20,91,88,364 |
| 2. | Bathinda (C) | 2021-22 | 52,465 | 78,777 | 42,059 | 42,628 | 42,755 | 33,899 | 1 | 0 | 80,20,229 | 36,14,000 | 7,06,22,579 | 10,35,00,000 |
| 3. | Ludhiana (C) | 2021-22 | 3,65,153 | 3,20,000 | 3,66,932 | 3,66,927 | 0 | 0 | 1 | 1 | 1,84,200 | 0 | 13,44,86,382 | 14,41,02,309 |
| 4. | Moga (C) | 2021-22 | 35,055 | 32,464 | 14,794 | 23,360 | 18,624 | 13,140 | 1 | 0 | 12,54,86,874 | 0 | 44,87,510 | 43,59,000 |
| 5. | SAS Nagar (C) | 2021-22 | 40,289 | 40,289 | 34,656 | 33,580 | 85,513 | 31,230 | 1 | 1 | 0 | 0 | 88,52,000 | 8,22,36,000 |
| 6. | Adampur (MC) | 2021-22 | 4,078 | 4,078 | 1,073 | 1,135 | 1,080 | 683 | 0 | 0 | 2,78,900 | 0 | 34,65,996 | 44,03,252 |
| 7. | Doraha (MC) | 2021-22 | 7,520 | 7,750 | 2,773 | 6,260 | 2,778 | 2,184 | 0 | 0 | 5,14,400 | 4,06,340 | 25,00,000 | 1,55,27,388 |
| 8. | Ferozepur (MC) | 2021-22 | 23,878 | 25,380 | 11,408 | 13,505 | 14,743 | 12,410 | 1 | 1 | 91,05,000 | 7,05,000 | 77,43,000 | 48,11,000 |
| 9. | Kartarpur (MC) | 2021-22 | 7,620 | 5,650 | 2,345 | 2,555 | 2,080 | 882 | 0 | 0 | 30,95,932 | 0 | 2,60,500 | 92,95,171 |
| 10. | Mansa (MC) | 2021-22 | 3,371 | 16,852 | 4,679 | 2,246 | 2,774 | 2,206 | 1 | 0 | 76,72,106 | 0 | 4,32,00,000 | 15,65,600 |
| 11. | Qadian (MC) | 2021-22 | 4,921 | 4,889 | 1,244 | 1,369 | 1,203 | 62 | 0 | 0 | 1,64,550 | 51,450 | 25,79,664 | 37,93,000 |
| 12. | Rajpura (MC) | 2021-22 | 21,185 | 23,100 | 9,429 | 10,950 | 9,409 | 5,475 | 1 | 1 | 82,82,200 | 3,05,000 | 29,65,000 | 83,59,000 |
| 13. | Rupnagar (MC) | 2021-22 | 17,386 | 16,086 | 4,830 | 4,380 | 3,249 | 3,650 | 1 | 0 | 15,38,000 | 0 | 43,00,000 | 1,67,00,000 |
| 14. | SBS Nagar (MC) | 2021-22 | 8,400 | 10,000 | 4,231 | 2,920 | 4,991 | 2,627 | 1 | under construction | 1,92,43,200 | 0 | 26,15,000 | 46,52,000 |
| 15. | Sirhind (MC) | 2021-22 | 23,008 | 13,022 | 4,996 | 5,840 | 4,576 | 5,840 | 1 | 0 | 4,48,350 | 30,000 | 1,97,96,500 | 21,36,000 |
| 16. | Bilga (NP) | 2021-22 | 3,083 | 3,083 | 1,379 | 1,460 | 1,472 | 840 | 1 | under construction | 11,63,607 | 0 | 17,99,441 | 47,99,161 |
| 17. | Khamanon (NP) | 2021-22 | 4,590 | 2,342 | 1,800 | 1,657 | 1,630 | 1,825 | 0 | under construction | 1,51,960 | 62,000 | 70,71,500 | 59,61,000 |
| 18. | Kiratpur Sahib (NP) | 2021-22 | 1,732 | 1,732 | 349 | 365 | 349 | 365 | 1 | 1 | 10,00,700 | 0 | 96,00,000 | 45,21,000 |
| 19. | Makhu (NP) | 2021-22 | 2,851 | 2,851 | 1,439 | 1,497 | 1,443 | 1,497 | 1 | 1 | 9,80,964 | 0 | 43,79,000 | 22,76,289 |
| 20. | Mehraj (NP) | 2021-22 | 2,861 | 3,564 | 302 | 365 | 302 | 183 | 0 | under construction | 8,30,000 | 0 | 1,30,000 | 50,28,000 |
| Total | | | | | | | | | 14 | 6 | 24,59,15,318 | 51,73,790 | 53,99,26,796 | 63,72,13,534 |

Source: MIS reports and data/information provided by ULBs

* Annexure-1B

** Annexure-1A