

UNICEF WATER AND SANITATION, DP Phase X

Subproject 1: Urban Environmental Sanitation

6- Training / Personnel Development / Capacity Building

Code	Description	Quantity	Unit of measurement
03-03-00001	Desk-top Computer. Pentium III vectra VL 600, 733 MHZ hard drive, 64mb RAM, floppy disk, 16 Bit audio card, 52x CD ROM, 15" SVGA color monitor-pre-loaded with English/Arabic windows 98 & ms office professional win 98 style English keyboard, mouse and pad, external speakers. ref 45016317	19	Each
03-03-00002	HP LaserJet 2100 with 4 MB RAM printer, or equivalent, A3 & A4., with 1 extra toner cartridge ref 45016317	18	Each
03-03-00003	Canon NP 6045 photocopier, A4 & A3 cassettes, with voltage stabilizer, supplied complete with manufacturers recommended service and spare parts for two years operation, operation, service and parts manuals in English. ref : 45014069	8	Each
03-03-00004	Toyota Hi-Lux 4WD double cab pick up. 2700cc petrol engine, LHD, 4-door, model code: RZN169L-PRMDUV, 5 speed manual floor shift, 6 seater, white color.optional items required as standard: power steering, owners, workshop repair, parts manuals in English and spare parts kit. With Air-conditioning system. Ref PO 45015283	1	Each
03-03-00005	Toyota 2 WD HI-Lux pick up double cabin, 4 door, LHD, Model code RZN 147 L-PRMDSV, 2000 cc, petrol engine. Ref: PO 45015283	12	Each
03-03-00006	Builders level, automatic, in carry case, NI 50 with 400 degree /7001135.9800.0005 33 tripod with screw/707234.000.000 141 leveling rod/707626.0000.000 supplied in carrying case with operation instructions & necessary accessories. ref PO 45018048. unit is set	3	Each
03-03-00007	Electronic Theodolite with stand & other accessories, ETH 50, ref. CCX 982897 unit is set	3	Each
03-03-00008	Toyota Land Cruiser,type FZ J105L-GCMRK(LHD), 5 speed manual floor shift, color- white, with standard UN and export specifications for Iraq including air conditioner, front and rear seat belts, fire extinguisher and manufacturer recommended spare parts for two years operation.REF: PO 45015284	2	Each
03-03-00009	Spare parts for Photocopier type SHARP SF-2025. Ref: Parts Catalogue: Sharp parts guide (code: 00Z SF2030PG-M):Drum (OPC Drum), Part No. SF-230 DM	2	Each
03-03-00010	Same as above but: Developer (Black) part No. SF-230 DVI	2	Each
03-03-00011	Same as above but: Toner (Black) part No. SF-230 TI	10	
03-03-00012	Same as above but: 80 K Maintenance Kit part No. SF-240 KA	1	Each
03-03-00013	Same as above but: Heater lamp, part No. RLMPU 0574 FCZZ	1	Each
03-03-00014	Same as above but: Thermister part No. RDTCT 0122FCZZ	1	Each

03-03-00015	Same as above but:Thermostat, part No. RTHM-0014FCZZ	1	Each
03-03-00016	Portable pipe cutting machine	2	Each
03-03-00017	Engineering drawing board, Hydraulic type.Ref: PO 45002701	6	Each
03-03-00018	HP DesignJet plotter 750 C plus A0 size with floor stand and accessories or equivalent. HP color, with terminal switch primax with cable and accessories (T-switch) with 5 additional cartridges for the plotter with additional HP coated paper for the plotter.	2	Each
03-03-00019	DeskJet Printer, 890 HP color. Ref: NCX98 0816.	2	Each
03-03-00020	Tachometer, type Wild RDS	1	Each
03-03-00021	Theomat, Type D1Wild 2000, with tripod, suitable reflectors, batteries, battery cables, data terminals, adapter.	1	Each
03-03-00022	Printing machine for Maps, type DYZO with spare parts for two years operation and accessories	2	Each
03-03-00023	Voltage Stabilize, type GT2107, Ref: CLTA 9842	10	Each
03-03-00024	UPS, for disk top computer	13	Each
03-03-00025	Scanner A3, type 600 DPI	6	Each
03-03-00026	Water Tanker Type Volvo Capacity 9,000 liters, complete with all accessories, Water pump and spare parts for two years operation.Ref: 45018278	1	Each
03-03-00027	Lap top computer Toshiba Satellite. With carrying bag. Ref: CCX98 4278	1	Each
03-03-00028	Optical Theodolite suitable for working W/ ELDI 4.Ref: PO 45018348	1	Each
03-03-00029	Measuring wheel up to 10,000 meter type A0101005.Ref: ccx 972358	2	Each
03-03-00030	Automatic builder leveling machine BIC with operation manual, stand and all accessories for the set, type SOKKISHA CO. LTD. Keio Yoyogi building 1-1 Tomigaya 1- chome shibuya - KU Tokuo 151 Japan	2	Each
03-03-00031	Automatic builder leveling machine B2A with operation manual, stand and all accessories for the set, type SOKKISHA CO. LTD. Keio Yoyogi building 1-1 Tomigaya 1- chome shibuya - KU Tokuo 151 Japan	2	Each
03-03-00032	Theodolite GP1-2 GYROSTATHON with stand & other accessories type SOKKISHA CO. LTD. Keio Yoyogi building 1-1 Tomigaya 1- chome shibuya -KU Tokuo 151 Japan	2	Each

Subproject 1: Urban Household Water Security
2- Rehabilitation/Maintenance of Water Supply Systems

Code	Description	Quantity	Unit of Measurement
03-03-00033	Unicef commodity code: 432287 Submersible pump with direct coupled electrical motor and with non-return valve, control panel, 150 m three core cable, electrode to avoid dry running and cable termination kit , MS 6000 380 V, 50 Hz, 3 Ph. TO BE INSTALLED ON NEW BORE WELLS. ALL CABLES TO BE PACKED SEPARATELY WITH EACH PUMP, Qmin.=7M3/H, Hmax= 260M. To be from Grundfos company.	1	Each

03-03-00034	Ditto but, Qmin.= 12M3/H, Hmax= 160M. MS 6000	3	Each
03-03-00035	Ditto but, Qmin= 12M3/H, Hmax= 360M. MS 6000	3	Each
03-03-00036	Ditto but, Qmin= 8M3/H, Hmax= 260M. MS6000	3	Each
03-03-00037	Ditto but, Qmin=22M3/H, Hmax=215M. MS 6000	4	Each
03-03-00038	Dittobut, Qmain= 14M3/H, H=370M. MS 4000	4	Each
03-03-00039	Ditto but, Qmin= 14M3/H, Hmax= 280M. MS 6000	7	Each
03-03-00040	Ditto but, Qmin= 8M3/H, Hmax=380M. MS 6000	1	Each
03-03-00041	Ditto but, Qmin= 14M3/H, Hmax=300M	2	Each
03-03-00042	Ditto but, Qmin=20M3/H, Hmax=270M. MS 6000	9	Each
03-03-00043	Ditto but, Qmin=22M3/H, Hmax=290M	8	Each
03-03-00044	Solar powered submersible pump Q= 180m3/day, Head =200	3	Each
03-03-00045	Unicef commodity Code: 432287 Motor set for Grundfos submersible pump with tail cable and cable joint and control panel, 400V, 50HZ, 3PH, capacity 5.5KW.	5	Each
03-03-00046	Ditto but capacity 7.5KW.	4	Each
03-03-00047	Ditto but capacity 11.0KW	4	Each
03-03-00048	Ditto but capacity 15.0KW	4	Each
03-03-00049	Ditto but capacity 18.5KW	4	Each
03-03-00050	Ditto but capacity 22.0KW	4	Each
03-03-00051	Ditto but capacity 30.0KW	4	Each
03-03-00052	Ditto but capacity 37.0KW "	2	Each
03-03-00053	Unicef Commodity Code: 462380 Flexible electrical power cable for deep well submersible motors size 4x16 mm2	2000	ML
03-03-00054	Ditto but size 4x10 mm 2	1500	Each
03-03-00055	Ditto but size 4x25 mm2	2000	Each
03-03-00056	Ditto but size 4x4 mm2	500	Each
03-03-00057	Unicef Commodity Code: 432287 Control panel for submersible 11.00 KW Grundfos motor with main switch circuit breaker phase failure relay, timer relay, over load relay, ammeter, and voltmeter, 380 Volt, 50 Hz, 3 PH, auto-transformer starter. Ref.: CCX 98 14 63	6	Each
03-03-00058	Ditto but capacity Grundfos motor 18.5KW	1	Each
03-03-00059	Ditto but capacity motor 22.0 KW	1	Each
03-03-00060	Ditto but capacity Grundfos motor 30.0 KW	1	Each
03-03-00061	Ditto but capacity Grundfos motor 37.0 KW	1	Each

03-03-00062	Deep well turbine pump capacity Q=14cum/hr(min), head=160M (max), preferably BP27-16 type or equivalent from Grundfos. Complete with bowl assembly, pump head and discharge flange with 3 inch BSP thread, electric motor 3x380/660V, 50Hz, with housing guard direct coupled with pump head, top column pipe 3 inch length 0.485M threaded with 8 threads per inch, complete with 3/4 inch line shaft, mechanical shaft seal and coupling, intermediate column pipe 3 inch line shaft, column bearing and liner, suction pipe 3 inch, length 1.64M with 3 inch spring loaded foot-valve with strainer 50M cable 4x6MM2 and 4 PCS cable gland, spare parts for two years operation, O&M manual in English with appropriate packing.	3	Each
03-03-00063	Ditto but, Q=22cum/hr (min), H=165m (max), (BP 45-16), or equivalent	1	Each
03-03-00064	Ditto but, Q=14cum/hr), H=95m (max), (BP 45-15)	1	Each
03-03-00065	Ditto but, Q=22cum/hr (min), H=155m (max), (BP 45-13)	1	Each
03-03-00066	Diesel engine for operating vertical turbine pump, capacity 45 HP, 2900 rpm, complete set with centrifugal clutch, 50 degrees Celcius max; and 1,200m max altitude	1	Each
03-03-00067	Right angle gear for Grundfos vertical turbine pump,type 2GS25/3GS26, 20HP complete set	1	Each
03-03-00068	Ditto but type 2GS45/3GS46 for 45HP, complete set	1	Each
03-03-00069	Column bearing with vulcanized rubber outer sleeve and rubber linings with bushes of synthetic material for Grundfos vertical turbine pumps, size 3 x 1/2 inch Ref.: CCX 98 28 47	80	Each
03-03-00070	Ditto but size 3 x 5/8 inch Ref.: CCX 98 17 57	70	Each
03-03-00071	Ditto but size 3 x 3/4 inch Ref.: CCX 98 17 57	70	Each
03-03-00072	Ditto but size 4 x 3/4 inch Ref.: CCX 98 17 57	50	Each
03-03-00073	Ditto but size 4 x 7/8 inch Ref.: CCX 98 17 57	70	Each
03-03-00074	Ditto but size 5 x 7/8 inch Ref.: CCX 98 17 57	80	Each
03-03-00075	Sealing set for shaft seal for Grundfos vertical turbine pumps size 5/8 inch Ref.: CCX 98 17 57	30	Each
03-03-00076	Ditto but size 3/4 inch	30	Each
03-03-00077	Ditto but size 7/8 inch	30	Each
03-03-00078	Ditto but size 1 inch	20	Each
03-03-00079	Shaft coupling for Grundfos vertical turbine pumps size 5/8 inch Ref.: CCX 98 17 57	50	Each
03-03-00080	Ditto but size 3/4 inch	50	Each
03-03-00081	Ditto but size 7/8 inch	30	Each
03-03-00082	Driver for Grundfos vertical turbine pump type BP 16/27/45 size 3/4 inch Ref.: CCX 98 17 57	30	Each
03-03-00083	Ditto but size 5/8 inch	50	Each
03-03-00084	Ditto but size 7/8 inch	30	Each

03-03-00085	Pump discharge head, complete set consisting of pump head, gasket, bolt & nut, stay bolts, nuts, pipe plug for BP 27-15, BP 27-12 , size 3.0 inch	20	Each
03-03-00086	Ditto but size 4.0 inch	20	Each
03-03-00087	Line shaft with shaft with coupling for Grundfos vertical turbine pumps, size 5/8 inch x 1.8 m Ref.: CCX 98 17 57	20	Each
03-03-00088	Ditto but size 3/4 inch x1.8m	20	Each
03-03-00089	Ditto but size 7/8 inch x1.8m	20	Each
03-03-00090	Column pipes for Grundfos vertical turbine pumps, size 4.0 inch x 1.8 m	20	Each
03-03-00091	Bottom column pipe complete with shaft, coupling and bearing with thread in bottom end, size 3 x 5/8 inch	20	Each
03-03-00092	Ditto but size 3 x 3/4 inch	20	Each
03-03-00093	Ditto but size 4 x 3/4 inch	20	Each
03-03-00094	Ditto but size 4 x 7/8 inch	20	Each
03-03-00095	Diesel engine for operating vertical turbine pump complete set with clutch, MWM D-3011; max altitude 1,200m. RPM 2900	2	Each
03-03-00096	Gland packing for ingersoll dresser pumps type 10 UZD	70	ML
03-03-00097	Gland packing size 1/2 inch; pH 5-8.5 RPM = 2440 H = 80m	150	ML
03-03-00098	Gland packing size 3/4 inch pH 5-8.5 RPM = 2440 H = 150m	90	ML
03-03-00099	Gland packing size 3/8 inch pH 5-8.5. RPM = 2900, 20 bar	90	ML
03-03-00100	Gland packing size 5/8 inch pH 5-8.5 RPM = 2440 H = 40m	90	ML
03-03-00101	Centrifugal booster pump for pumping treated water from Ingersoll Dresser Pump(IDP) . Q=100 cum/hr, H= 60m Coupled with electrical driven motor with soft starter and automatic circuit breaker connection and with control panel. 380V, 50Hz, 3 phase, 1450 RPM. Max altitude 1,000m. With spare parts for 2 years operation, spare parts/operation manual in English, and necessary valves, non-return valves, flanges, elbows, reducers FOR NEW INSTALLATION. CABLES TO BE PACKED SEPARATELY WITH EACH SET.	1	Each
03-03-00102	Centrifugal booster pump for pumping treated water from Ingersoll Dresser Pump(IDP) . Q=200 cum/hr, H= 100m Coupled with electrical driven motor with soft starter and automatic circuit breaker connection and with control panel. 380V, 50Hz, 3 phase, 1450 RPM. Max altitude 1,000m. With spare parts for 2 years operation, spare parts/operation manual in English, and necessary valves, non-return valves, flanges, elbows, reducers FOR NEW INSTALLATION. CABLES TO BE PACKED SEPARATELY WITH EACH SET.	1	Each
03-03-00103	Ditto but: Q=60 cum/hr, H=60m	1	Each
03-03-00104	Ditto but: Q=50 cum/hr, H=80m	1	Each
03-03-00105	Ditto but: Q=100 cum/hr, H=100m	1	Each

03-03-00106	Ditto but: Q=150 cum/hr, H=120m	1	Each
03-03-00107	Ditto but: Q=82 cum/hr, H=380m	2	Each
03-03-00108	Ditto but: Q=200 cum/hr, H=100m	1	Each
03-03-00109	Ditto but: Q=200 cum/hr, H=200m	1	Each
03-03-00110	Ball bearing 7317	50	Each
03-03-00111	Ball bearing type SKF 6312, 2RS	20	Each
03-03-00112	Ball bearing type 7309	40	Each
03-03-00113	Ball bearing type 6218 C3/SKF	20	Each
03-03-00114	Ball bearing type SKF 6311, 2RS	20	Each
03-03-00115	Ball bearing type 6322	10	Each
03-03-00116	Ball bearing type 6328C3	20	Each
03-03-00117	Ball bearing type 2317	50	Each
03-03-00118	Ball bearing type 7317 BG	20	Each
03-03-00119	Ball bearing type 6322C3	50	Each
03-03-00120	Ball bearing type 7216	10	Each
03-03-00121	Ball bearing type 6310	50	Each
03-03-00122	Ball bearing type 6309	50	Each
03-03-00123	Ball bearing type 6320 C3	15	Each
03-03-00124	Ball bearing type SKF 7310, 2RS	40	Each
03-03-00125	Ball bearing type 7314	100	Each
03-03-00126	Ball bearing type 6217 C3/SKF 5217 C3	15	Each
03-03-00127	Ball bearing type 6319 C3	50	Each
03-03-00128	Ball bearing type 6316 C3	50	Each
03-03-00129	Ball bearing type 6316	50	Each
03-03-00130	Star-Delta Electrical Motor with control panel for booster pump. P=185 KW at 2960 RPM, V=400V, 50 HZ, 3P, mounting position	2	Each
03-03-00131	Star-Delta Electrical Motor with control panel for high lift pump. P=320 KW at 1450 RPM, V=400V, 50 HZ, 3P, mounting position: IM 1001 (IM B3), IP23/1C01	2	Each
03-03-00132	Electrical motor 570KW, 1491 min, cos=0.86, A= 957 company LEORY SOMER with pair coupling for motor and pump, type of pump = 10UZD1 (No. CO 17 203) with control panel soft starter and copper cable size 240mm single core flexible cable 500 ml and spare parts for 2 years operation including spares for control panel.	1	Each
03-03-00133	Control panel for Grundfos submersible motor with main switch, circuit breaker, illuminated selector switch, contactor, phase failure relay, timing relay, overload relay, sequence and asymmetry relay, fuse holder, auto transformer, ammeter and voltmeter, 380V, 50Hz, 3Ph. in addition to that single phase to neutral (220 V, 50Hz) must also be available for the control panel components such as ammeter, voltmeter, etc. Capacity 22 Kw, pump type Sp (30-26)	2	Each
03-03-00134	Ditto but capacity 37 Kw, Grundfos SP(30-43) Franklin 6"	2	Each
03-03-00135	Control panel for star-delta motor with main switch, circuit breaker, illuminated selector switch, contactor, phase failure relay, timing relay, overload relay, fuse holder, auto transformer, ammeter and voltmeter, 380V, 50Hz, 3Ph. Capacity 55 Kw, 83 Ampere, RPM 2900	2	Each

03-03-00136	Ditto but capacity 75 Kw, 137 A, 2960 RPM, induction motor	2	Each
03-03-00137	Ditto but capacity 110 Kw, 267 A, 1480 RPM , WEG 500 D250 M, CFA 6743/1	2	Each
03-03-00138	Automatic air-circuit breaker, MCCB, 500V, 50Hz & 3P. Capacity 80-120 amps.	250	Each
03-03-00139	Ditto but capacity 50-63 amps.Ref: CCX 980356	200	Each
03-03-00140	Flexible electrical power cable for 400V, size 4*35 mm2	500	ML
03-03-00141	Electric contactors, 500V, 50 Hz, coil voltage 380V, Telemecanic,France made, 60 Amper	40	Each
03-03-00142	Ditto but, 80 Ampere	20	Each
03-03-00143	Ditto but, 100 Ampere	20	Each
03-03-00144	Spare parts for vertical turbine pumps type HATZ, recommended by the manufacture for two years operation.Ref: PO 45013411	10	Set
03-03-00145	Phase failure, three phase asymmetry and sequence relay, 380 V, 50 Hz. E. Dold u. Sohne KG Type BA 9041 Ref.: CCX 98 2005	100	Each
03-03-00146	Electric cable, high tension, 3.3KV, size 3 x 95mm2	100	ML
03-03-00147	UNICEF Commodity Code: 412713 GI pipe for drinking Water supply, to be of mild steel, medium series, standard, longitudinally welded, (high induction frequency welding), hot dipped galvanized and passivated. Each pipe to be hydro tested or tested as per current method. To be manufactured as per ISO 65-1981. Both ends male threaded ISO 7, socked one end (female threaded socket), duly galvanized and chamfered, and the other end protected with a HDPE threaded protector, covering entire thread of pipe, male threads to be protected with anti-rust zinc aluminum paste, socket threads to be protected with anti-rust varnish Pipe/socket to adequately zinc coated to satisfy copper sulfate test as prescribed in appendix A of BS 1387 / 67 or equivalent ISO standard. Steel, zinc, anti-rust paste and varnish to be made from food grade material. Pipe length (excluding socket length): 5.8 meters. PN 25, Nominal diameter: ND 2.0 inch. Ref.: PO no. POE/TURA/00/317-0	3750	Each
03-03-00148	UNICEF Commodity Code: 412713 Ditto but, PN 25, size 1.5 inch	500	Each
03-03-00149	UNICEF Commodity Code: 412713 Ditto but, PN 25, size 3.0 inch	11000	Each
03-03-00150	UNICEF Commodity Code: 412713 Ditto but, PN 25, size 4.0 inch	10000	Each
03-03-00151	UNICEF Commodity Code: 412713 Ditto but, PN 25, size 6.0 inch	5700	Each
03-03-00152	Bronze heavy type gate valve set with hand wheel, clockwise closing, FxF, threaded to BS21 (ISO R7), size 2.0 inch, PN 25. Food quality.	100	Each
03-03-00153	Ditto but, PN 25, size 3.0 inch, PN 25	210	Each
03-03-00154	Ditto but, size 4.0 inch, PN 25	210	Each
03-03-00155	Ditto but, PN 25, size 6.0 inch, PN 25	100	Each

03-03-00156	Unicef Commodity code 432417 Brass non-return valve set, FxF, threaded to BS21 (ISO R7), PN 25, size 2.0 inch. Food quality.	30	Each
03-03-00157	Unicef Commodity code 432417 Ditto but, size 3.0 inch, PN 25	80	Each
03-03-00158	Unicef Commodity code 432417 Ditto but, size 4.0 inch, PN 25	100	Each
03-03-00159	Unicef Commodity Code: 412837 Malleable cast iron, hot dip galvanized equal elbows for drinking water supply conforming to ISO R49 and threaded to BS21 (ISO R7), 90 degree, FxF, size 2.0 inch, PN 25. Food quality. 2"*2" Ref.: CCX 982538	115	Each
03-03-00160	Unicef Commodity Code: 412837 Ditto but, size 3.0 inch, PN 25	250	Each
03-03-00161	Unicef Commodity Code: 412837 Ditto but, size 4.0 inch, PN 25	200	Each
03-03-00162	Unicef Commodity Code: 412837 Ditto but, size 6.0 inch, PN 25	155	Each
03-03-00163	Unicef Commodity Code: 412837 Malleable cast iron, hot dip galvanized equal Tee-joints for drinking water supply conforming to ISO R49 and threaded to BS21 (ISO R7), FxFxF, size 2.0 inch, PN 25. 2"*2"*2" Ref.: CCX 982046	90	Each
03-03-00164	Unicef Commodity Code: 412837 Ditto but, size 3.0 inch, PN 25	250	Each
03-03-00165	Unicef Commodity Code: 412837 Ditto but, size 4.0 inch, PN 25	230	Each
03-03-00166	Unicef Commodity Code: 412837 Ditto but, size 6.0 inch, PN 25	95	Each
03-03-00167	Unicef Commodity Code: 412837 Malleable cast iron, hot dip galvanized equal unions for drinking water supply conforming to ISO R49 and threaded to BS21 (ISO R7), FxF, size 2.0 inch, PN 25. 2"*2" Ref.: CCX 982046	50	Each
03-03-00168	Unicef Commodity Code: 412837 Ditto but, size 3.0 inch, PN 25	250	Each
03-03-00169	Unicef Commodity Code: 412837 Ditto but, size 6.0 inch, PN 25	85	Each
03-03-00170	Unicef Commodity Code: 412837 Ditto but, size 4.0 inch, PN 25 Ref.: CCX 982156	170	Each
03-03-00171	Unicef Commodity Code: 412837 Malleable cast iron, hot dip galvanized reducer joints for drinking water supply conforming to ISO R49 and threaded to BS21 (ISO R7), FxF, size 6.0 x 4.0 inch, PN 25 Ref.: CCX 971707	100	Each
03-03-00172	Unicef Commodity Code: 412837 Ditto but, size 6.0 x 3.0 inch. Ref.: CCX 982046	110	Each
03-03-00173	Unicef Commodity Code: 412837 Ditto but, size 6.0 x 2.0 inch.	30	Each

03-03-00174	Unicef Commodity Code: 412837 Ditto but, size 4.0 x 3.0 inch.	160	Each
03-03-00175	Unicef Commodity Code: 412837 Ditto but, size 4.0 x 2.0 inch	60	Each
03-03-00176	Unicef Commodity Code: 412837 Ditto but, size 3.0 x 2.0 inch	60	Each
03-03-00177	Unicef Commodity Code: 412835 Viking Johnson coupling for 90 mm, PN 25, Standard length pipe Ref.: CCX 981902	600	Each
03-03-00178	Unicef Commodity Code: 412835 Ditto but for 110 mm pipe.	600	Each
03-03-00179	Unicef Commodity Code: 412835 Ditto but for 160 mm pipe.	200	Each
03-03-00180	V. J. Easy clamps for 90 mm, PN 25, Standard length pipe	600	Each
03-03-00181	Ditto but for 110 mm pipe.	600	Each
03-03-00182	Ditto but for 160 mm pipe.	200	Each
03-03-00183	Ditto but for 220 mm pipe.	100	Each
03-03-00184	Unicef Commodity Code: 412834 Stainless steel repair clamps, quality A131304 with waffled rubber seal according to DIN 3535. Double section for 80 mm pipe. PN 24. Required length is (30-40) cm Ref.: PO. 45018457	50	Each
03-03-00185	Unicef Commodity Code: 412834 Ditto but for 100mm pipe.	50	Each
03-03-00186	Unicef Commodity Code: 412834 Ditto but for 150mm pipe.	50	Each
03-03-00187	Unicef Commodity Code: 412834 Ditto but for 200mm pipe.	20	Each
03-03-00188	Unicef Commodity Code: 412834 Ditto but for 250mm pipe.	20	Each
03-03-00189	Unicef Commodity Code: 412834 Ditto but for 300mm pipe.	20	Each
03-03-00190	Unicef Commodity Code: 412712 Ductile iron pipe with rubber gasket joints (Tighten joints) with rubber gaskets, 6 meters nominal length, 3 inch diameter. PN 25 Ref.: CCX 981903	10000	Each
03-03-00191	Unicef Commodity Code: 412712 Ditto but 4 inch dia.	11500	Each
03-03-00192	Unicef Commodity Code: 412712 Ditto but 6 inch dia.	7800	Each
03-03-00193	Unicef Commodity Code: 412712 Ditto but 8 inch dia.	3400	Each
03-03-00194	Unicef Commodity Code: 412712 Ditto but 10 inch dia.	2250	Each
03-03-00195	Unicef Commodity Code: 412712 Ditto but 12 inch dia.	1000	Each
03-03-00196	Unicef Commodity Code: 412835 Equal elbows for ductile pipes with rubber gasket joints, bolts & spigot, 90 degree, FxF, 3 inch dia, PN 25. Ref.: CCX 98/2137	210	Each

03-03-00197	Unicef Commodity Code: 412712 Ditto but 4 inch dia.	260	Each
03-03-00198	Unicef Commodity Code: 412712 Flanged equal elbow size 6", 90 degree with socket, spigot, bolts and rubber.	180	Each
03-03-00199	Unicef Commodity Code: 412712 Ditto but 8 inch dia.	100	Each
03-03-00200	Unicef Commodity Code: 412712 Ditto but 10 inch dia.	60	Each
03-03-00201	Unicef Commodity Code: 412712 Ditto but 12 inch dia.	30	Each
03-03-00202	Unicef Commodity Code: 412835 Equal elbows for ductile pipes with rubber gasket joints, bolts, spigot & rubber, 45 degree, FxF, 3 inch diam, PN 25. 3"*3" Ref.: CCX 98/2137	135	Each
03-03-00203	Unicef Commodity Code: 412835 Ditto but 4 inch diam	220	Each
03-03-00204	Unicef Commodity Code: 412835 Flanged equal elbow size 6"*6", 45 degree with socket, spigot, and rubber.	110	Each
03-03-00205	Unicef Commodity Code: 412835 Ditto but 8 inch diam	70	Each
03-03-00206	Unicef Commodity Code: 412835 Ditto but 10 inch diam	30	Each
03-03-00207	Unicef Commodity Code: 412835 Ditto but 12 inch diam	10	Each
03-03-00208	Unicef Commodity Code: 412835 Equal Tees for ductile pipes with rubber gasket joints, bolts & spigot, FxFxF, 3 inch diam, PN 25.3"*3"*3" Ref.: CCX 982126	170	Each
03-03-00209	Unicef Commodity Code: 412835 Ditto but 4 inch diam	240	Each
03-03-00210	Unicef Commodity Code: 412835 Ditto but 6 inch diam	105	Each
03-03-00211	Unicef Commodity Code: 412835 Ditto but 8 inch diam	30	Each
03-03-00212	Unicef Commodity Code: 412835 Ditto but 10 inch diam	18	Each
03-03-00213	Unicef Commodity Code: 412835 Ditto but 12 inch diam	5	Each
03-03-00214	Unicef Commodity Code: 412835 Ductile Socket with rubber, bolts & spigot 3x3 inch dia, PN 25. Ref.: CCX 98 2137	140	Each
03-03-00215	Unicef Commodity Code: 412835 Ditto but 4x4 inch dia	150	Each
03-03-00216	Unicef Commodity Code: 412835 Ditto but 4x3 inch dia	140	Each
03-03-00217	Unicef Commodity Code: 412835 Ductile Socket with rubber, bolts & spigot 3x3 inch dia, PN 25. Ref.: CCX 98 2137	130	Each
03-03-00218	Unicef Commodity Code: 412835 Ditto but 6x3 inch dia	105	Each

03-03-00219	Unicef Commodity Code: 412835 Ditto but 6x6 inch dia	35	Each
03-03-00220	Unicef Commodity Code: 412835 Ditto but 8x8 inch dia	23	Each
03-03-00221	Unicef Commodity Code: 412835 Ductile reducer size 8x6 inch dia	13	Each
03-03-00222	Unicef Commodity Code: 412835 Ditto but 8x4 inch dia	23	Each
03-03-00223	Unicef Commodity Code: 412835 Ditto but 8x3 inch dia	23	Each
03-03-00224	Unicef Commodity Code: 412835 Ditto but 10x4 inch dia	8	Each
03-03-00225	Unicef Commodity Code: 412835 Ditto but 10x6 inch dia	8	Each
03-03-00226	Unicef Commodity Code: 412835 Ditto but 10*8 inch dia	5	Each
03-03-00227	Unicef Commodity Code: 412835 Ductile equal socket size 10x10 inch dia	5	Each
03-03-00228	Unicef Commodity Code: 412835 Ditto but 12x12 inch dia	5	Each
03-03-00229	Unicef Commodity Code: 412835 Flanged Parallel reducers for ductile pipes with rubber gasket joints, bolts & spigot FxF, 12x10 inch dia, PN 25. Ref.: CCX 972291	4	Each
03-03-00230	Unicef Commodity Code: 412835 Ditto but 12 x 8 inch dia	6	Each
03-03-00231	Unicef Commodity Code: 412835 Ditto but 12 x 6 inch	6	Each
03-03-00232	Unicef Commodity Code: 412835 Ditto but 10 x 8 inch dia	5	Each
03-03-00233	Unicef Commodity Code: 412835 Ditto but 10 x 6 inch dia	6	Each
03-03-00234	Unicef Commodity Code: 412835 Ditto but 10 x 4 inch dia	4	Each
03-03-00235	Unicef Commodity Code: 412835 Ditto but 8 x 6 inch dia Ref.: CCX 972290	16	Each
03-03-00236	Unicef Commodity Code: 412835 Ditto but 8 x 4 inch dia	19	Each
03-03-00237	Unicef Commodity Code: 412835 Ditto but 6 x 4 inch dia	44	Each
03-03-00238	Unicef Commodity Code: 412835 Ditto but 6 x 3 inch dia	46	Each
03-03-00239	Unicef Commodity Code: 412835 Ditto but 4 x 3 inch dia	80	Each
03-03-00240	Unicef Commodity Code: 412835 Ductile Equal push in sockets for ductile pipes with rubber gasket joints, FxF, 4 inch dia, PN 25. Ref.: CCX 98 2126	20	Each
03-03-00241	Unicef Commodity Code: 412835 Ditto but 6 inch dia, flanged with bolts, nuts & spigot	20	Each
03-03-00242	Unicef Commodity Code: 412835 Ditto but 8 inch dia	8	Each
03-03-00243	Unicef Commodity Code: 412835 Ditto but 10 inch dia	2	Each

03-03-00244	Unicef Commodity Code: 412835 Ditto but 12 inch dia	2	Each
03-03-00245	Unicef Commodity Code: 412835 Standard socket & spigot joints for ductile pipes with rubber gasket joints, FxM, 3 inch dia, PN 25. Ref.: CCX 98 2137	260	Each
03-03-00246	Unicef Commodity Code: 412835 Ditto but 4 inch dia	270	Each
03-03-00247	Unicef Commodity Code: 412835 Ditto but 6 inch dia	155	Each
03-03-00248	Unicef Commodity Code: 412835 Ditto but 8 inch dia	105	Each
03-03-00249	Unicef Commodity Code: 412835 Ditto but 10 inch dia	50	Each
03-03-00250	Unicef Commodity Code: 412835 Ditto but 12 inch dia	5	Each
03-03-00251	Ductile Iron Adapters from socket unit rubber joint to , PN 25 flanged end, 3 inch dia	120	Each
03-03-00252	Ditto but, 4 inch dia	120	Each
03-03-00253	Ditto but, 6 inch dia	100	Each
03-03-00254	Ditto but, 8 inch dia	56	Each
03-03-00255	Ditto but, 10 inch dia	20	Each
03-03-00256	Ditto but, 12 inch dia	5	Each
03-03-00257	Unicef Commodity Code: 412835 Bolted flanged spigot joint for ductile pipes, with bolts, nuts & gaskets, 3 inch dia, PN 25, ISO flanges Ref.: CCX 98 2126	110	Each
03-03-00258	Unicef Commodity Code: 412835 Ditto but 4 inch dia	120	Each
03-03-00259	Unicef Commodity Code: 412835 Ditto but 6 inch dia	60	Each
03-03-00260	Unicef Commodity Code: 412835 Ditto but 8 inch dia	15	Each
03-03-00261	Unicef Commodity Code: 412835 Ditto but 10 inch dia	10	Each
03-03-00262	Unicef Commodity Code: 412835 Ditto but 12 inch dia	2	Each
03-03-00263	Unicef Commodity Code: 412835 Gate valves for ductile pipes with bolts, nuts & gaskets, 3 inch dia, PN 25, ISO flanges Ref.: CCX 98 2092	120	Each
03-03-00264	Unicef Commodity Code: 412835 Ditto but 4 inch dia	150	Each
03-03-00265	Unicef Commodity Code: 412835 Ditto but 6 inch dia	60	Each
03-03-00266	Unicef Commodity Code: 412835 Ditto but 8 inch dia	30	Each
03-03-00267	Unicef Commodity Code: 412835 Ditto but 10 inch dia	15	Each
03-03-00268	Unicef Commodity Code: 412835 Ditto but 12 inch dia	7	Each
03-03-00269	Unicef Commodity Code: 432417 Flanged non-return valves for ductile pipes with bolts, nuts & gaskets, 3 inch dia, PN 25, ISO flanges Ref.: CCX 98 2110	30	Each

03-03-00270	Unicef Commodity Code: 432417 Ditto but 4 inch dia	60	Each
03-03-00271	Unicef Commodity Code: 432417 Ditto but 6 inch dia	20	Each
03-03-00272	Unicef Commodity Code: 432417 Ditto but 8 inch dia	15	Each
03-03-00273	Unicef Commodity Code: 432417 Ditto but 10 inch dia	7	Each
03-03-00274	Unicef Commodity Code: 432417 Flanged air valves for ductile pipes with bolts, nuts & gaskets, 3 inch dia, PN 25, ISO flanges Ref.: CCX 98 2093	20	Each
03-03-00275	Unicef Commodity Code: 432417 Flanged foot valves with strainers 4 inch dia Ref.: CCX 98 2112	20	Each
03-03-00276	Unicef Commodity Code: 432417 Ditto but 6 inch dia	5	Each
03-03-00277	Unicef Commodity Code: 432417 Ditto but 8 inch dia	5	Each
03-03-00278	Unicef Commodity Code: 432417 Ditto but 10 inch dia	2	Each
03-03-00279	Unicef Commodity Code: 432417 Ditto but 12 inch dia	0	Each
03-03-00280	Unicef Commodity Code: 413835 Surface box for roadways Ref.: CCX 98 2137	0	Each
03-03-00281	Unicef Commodity Code: 413835 Blank flanges for 100 mm dia ductile pipes Ref.: CCX 98 2137	100	Each
03-03-00282	Unicef Commodity Code: 413835 Ditto but for 150 mm dia ductile pipes.	70	Each
03-03-00283	Unicef Commodity Code: 413835 Ditto but 200 mm dia ductile pipes.	5	Each
03-03-00284	UNICEF Commodity Code: 432512 Casing pipe, mild steel, commercial grade st-37 as per DIN 17100, food grade, for lining of water bore hole One end male threaded, heavy duty female socket on the other end , To be produced according to DIN 4922 in lengths of 6 m, outer diameter 8 5/8 inch. Ref.: CCX 983912	350	Each
03-03-00285	UNICEF Commodity Code: 432512 Ditto but pipe with slots of 2.3 mm width, length of 6 m, outer diameter 8 5/8 inch	130	Each
03-03-00286	Ball bearing type 6314	20	Each
03-03-00287	Ball bearing type 7314	20	Each
03-03-00288	Gate valves for ductile pipes with bolts, nuts & gaskets, 4 inch dia, PN 38, ISO flanges	50	Each
03-03-00289	Gate valves for ductile pipes with bolts, nuts & gaskets, 6 inch dia, PN 38, ISO flanges	50	Each
03-03-00290	Flanged non-return valves for ductile pipes with bolts, nuts & gaskets, 4 inch dia, PN 38, ISO flanges	45	Each

03-03-00291	Flanged non-return valves for ductile pipes with bolts, nuts & gaskets, 6 inch dia, PN 38, ISO flanges	50	Each
03-03-00292	Deep well turbine pump capacity Q=14cum/hr(min), head=160M (max), preferably BP27-16 type from Grundfos. Complete with bowl assembly, pump head and discharge flange with 3 inch BSP thread, electric motor 3x380/660V, 50Hz, with housing guard direct coupled with pump head, top column pipe 3 inch length 0.485M threaded with 8 threads per inch, complete with 3/4 inch line shaft, mechanical shaft seal and coupling, intermediate column pipe 3 inch line shaft, column bearing and liner, suction pipe 3 inch, length 1.64M with 3 inch spring loaded foot-valve with strainer 50M cable 4x6MM2 and 4 PCS cable gland, spare parts for two years operation, O&M manual in English with appropriate packing.Ref: CCX 982121	2	Set
03-03-00293	Ditto but, Q=22cum/hr (min), H=165m (max), (BP 45-16). CCX 982121	5	Set
03-03-00294	Ditto but, Q=14cum/hr (min), H=95m (max), (BP 27-10).Ref: 982831	2	Set
03-03-00295	Spare part for Ingersoll -Dresser pump Q=300m ³ /hr , H=220m ,V= 380v ,50Hz,1460 RPM No. 1720027-08/02 Drawing No. 1973563 year 1998/SP pump type 152 NM61 .Shaft Sleeve =4No.Drawing No. 2450 Space sleeve =4 No. Drawing No. 2460-02 Space sleeve for bearing =2 no. Drawing No. 2461 Inner race centering sleeve with collar =2 No. Drawing No. (2472-01) Innerrace centering Sleeve with color =2 no. drawing no. (2472-02) Gasket = 2no. drawing no. 45490 pump shaft (with keys)=1 no. drawing no. 2110 Sleeve =2 set Drawing no.2420 Radial flow impeller shrouded =2 set drawing no. 2250. wear ring =2 set drawing no. 1500-01 Radial flow impeller Shrouded =2 set drawing no. 1500-02. flower =4 no. drawing no. 4131. lock washer =4 no. drawing no. 6541.	4	Set

03-03-00296	Spare part for Ingersoll -Dresser pump Q=720 m ³ /hr , H=200m, No.SP 17200027-02/01 year 1998 pump type 10UZD-1 Oil- constant level =1 Impeller ring =4 no. Ring casing =4 no. Sleeve distance =2No. Sleeve shaft =2 No. Diaphragm =1 no. Impeller =2 no. Gasket =2 No. Gasket = 2no.Gasket = 2no. Gasket = 2no. Nut shaft sleeve =2 No. Bearing nut =2 no. Nut shaft = 2 no. Key =2 no.	4	Each
03-03-00297	Over load SEMSNES company range about (18-28) A	100	Each
03-03-00298	Ditto but (28-35) A	100	Each
03-03-00299	Ditto but (30-40) A	100	Each
03-03-00300	Ditto but (40-50) A	100	Each
03-03-00301	Ditto but (50-63) A	100	Each
03-03-00302	UNICEF commodity code 461200 electrical transformer (out door type) according to IEC 76 standard 1250 KVA 33/0.4 KV oil impressed distribution transformer furnished with conservation & off-load tap changer including the following accessories :Dial type thermometer with two contacts ,wheel silica gel breather magnetic oil level gauge.	1	Each
03-03-00303	Change over switch 3 ph ,400V, 50A for generator & main electrical power	100	Each
03-03-00304	Ditto but 63 A	60	Each
03-03-00305	Ditto but 100 A	200	Each
03-03-00306	Ditto but 125 A	100	Each
03-03-00307	Ditto but 150 A	100	Each
03-03-00308	Ball bearing type 62142 RS	10	Each
03-03-00309	Ball bearing type 51216	10	Each
03-03-00310	Ball bearing type 6015	20	Each
03-03-00311	Ball bearing type 5205 Z	10	Each
03-03-00312	Ball bearing type 6302	6	Each
03-03-00313	Ball bearing type N 1306	6	Each
03-03-00314	Ball bearing type MJ 1.1/4	10	Each
03-03-00315	Ball bearing type 6305	6	Each
03-03-00316	Ball bearing type 7312	6	Each
03-03-00317	Ball bearing type MJ 1.3/8	6	Each
03-03-00318	Ball bearing type 2312	10	Each
03-03-00319	Ball bearing type 62082 Z	6	Each
03-03-00320	Ball bearing type 62072 Z	6	Each
03-03-00321	Ball bearing type 7307	6	Each
03-03-00322	Ball bearing type RMS 12 MS 13	4	Each
03-03-00323	Impeller for Grundfose pump size 4"*7/8	100	Each
03-03-00324	Samr as item above size 5"*7/8	50	Each
03-03-00325	Same as item above size 3"*3/4	50	Each
03-03-00326	Same as item above size 4"*3/4	50	Each
03-03-00327	Timer relay (delay by off) 0.1 to 35, with 1 NO & 1 NC contact, type LA3 DRO made by Schneider MGTE	50	Each

03-03-00328	Grundfos submersible pump with direct coupled electrical motor and with non-return valve, control panel, 150 m three core cable, electrode to avoid dry running and cable termination kit type KM, Qmin= 14M3/H,Hmax=135M , MS 6000 380 V, 50 Hz, 3 Ph. TO BE INSTALLED ON NEW BORE WELLS. ALL CABLES TO BE PACKED SEPARATELY WITH EACH PUMP.	4	Set
03-03-00329	Ditto, but:Qmin=10M3/h, Hmax=180M, Ms 6000	2	Set
03-03-00330	Ditto but:Qmin=10M3/H, Hmax=260M,Ms 6000	1	Set
03-03-00331	Ditto but:Qmin=12M3/H, Hmax=220M, Ms 6000	4	Set
03-03-00332	Grundfos submersible drainage pump, Q=75, H=20 meter, 400 V, 50 HZ, with control panel and 50 meter cable	2	Set
03-03-00333	Ditto but, Q= 100, H=20	2	Set
03-03-00334	Ditto but, Q= 150, H=20	2	Set
03-03-00335	Plastic pressure pipe with rubber ring joint, 6 meters nominal length, 3 inch diameter. PN 10	1500	Each
03-03-00336	Plastic pressure pipe with rubber ring joint, 6 meters nominal length, 4 inch diameter. PN 10	2000	Each
03-03-00337	Equal elbows for Plastic pressure pipes with accessories, 3 inch dia, 90 degree, PN 10	60	Each
03-03-00338	Equal elbows for Plastic pressure pipes with accessories, 3 inch dia, 45 degree, PN 10	50	Each
03-03-00339	Equal elbows for Plastic pressure pipes with accessories, 4 inch dia, 90 degree, PN 10	20	Each
03-03-00340	Equal elbows for Plastic pressure pipes with accessories, 4 inch dia, 45 degree, PN 10	20	Each
03-03-00341	Equal Tees for plastic pressure pipes with accessories F*F*F, 3 inch diam, PN 10	50	Each
03-03-00342	Equal Tees for plastic pressure pipes with accessories F*F*F,4 inch diam, PN 10	100	Each
03-03-00343	Parallel reducers for Plastic pressure pipes FxF, 4x3 inch dia, PN 10	25	Each
03-03-00344	Gate valves for Plastic pressure pipes with accessoriests 3 inch dia, PN 10	20	Each
03-03-00345	Gate valves for Plastic pressure pipes with accessoriests 4 inch dia, PN 10	20	Each

Subproject 1: Urban Household Water Security

3- Water Quality and Pollution Prevension

Code	Description	Quantity	Unit of measurement
03-03-00346	UNICEF Commodity Code: 356451 Calcium hypo chlorite in granular from having minimum 65-70 % chlorine packed in 45 or 50 Kg plastic container/ drums of export quality. (Hypocal = Registered brand (HTH) of OLIN. Ref.: CCX 98 18 02	152,000	Kg

03-03-00347	Chlorine gas (purity 99.7%) in one ton cylinder (empty cylinders will be provided by the Iraqi government) including repairing of old chlorine cylinders before refilling. Ref.: CCX 972881	120	Ton
03-03-00348	Chlorine gas (purity 99.7%) in 65 Kg cylinder (empty cylinders will be provided by the Iraqi government) including repairing of old chlorine cylinders before refilling. Ref.: CCX 972881	70	Ton
03-03-00349	Aluminum sulfate for purifying water, AL ₂ O ₃ =16.5% Min, FE ₂ O ₃ =0.02% Max, PB=Nil, AS=1ppm Max, insoluble in water = 0.3% Max, pH (1% solution) = 1.7, solubility in water = 70 gm in 100 cc at 100 degree centigrade, granule size less than 1.19 mm = 3%, packed in export quality polyethylene bags of 50 Kg each. Ref.: CCX 981814	310	Ton
03-03-00350	Unicef commodity code: 439411 Chlorine solution dosing pump, type ALLDOS, KM 220-1 or equivalent, capacity 24Lit/hr, Back pressure = 10 Bar, Strokes (No Load) = 120, single phase, 240 V, 50 Hz, 1,500 RPM. With O&M manuals and spare parts catalogue in Arabic/English, and spare parts for two years operation to be included as well as section line with none return valve including cleaning system for flushing.	210	Set
03-03-00351	UNICEF Commodity Code: 439411 V-notch, full vacuum chlorinator, wall mounted, single cylinder operation for open application, including 10 M of 6.5mm vacuum tube, 16 M of 19 mm solution hose, hose clips, bottle of leach detector, instruction manual and spare parts for two years operation. Capacity = 250 g/hr, water gauge = 150 psi, gas gauge = 200 psi, operating pressure 15M, back pressure = 0 with injector set. With O&M manuals and spare parts catalogue in Arabic/English HOSE/PIPE TO BE SUPPLIED SEPARATELY FOR EACH UNIT. From ALLDOS. Ref.: CCX 981591	4	Set
03-03-00352	UNICEF Commodity Code: 439411 Ditto but, capacity = 500 g/hr	4	Set
03-03-00353	UNICEF Commodity Code: 439411 Ditto but, capacity = 1,000 g/hr	2	Set
03-03-00354	UNICEF Commodity Code: 439411 ditto but, floor mounted, capacity = 2,000 g/hr	2	Set
03-03-00355	UNICEF Commodity Code: 439400 Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 form Wallace and Tiernan Valve Body - Part No.JPXN 83388 Ref.: CCX 971509	10	Each
03-03-00356	UNICEF Commodity Code: 439411 Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 form Wallace and Tiernan Valve Cover RPVC - Part No: JPXN 82822 Ref.: CCX 971509	10	Each

03-03-00357	UNICEF Commodity Code: 439411 Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 form Wallace and Tiernan Valve Seat RPVC - Part No: JPNX 82821 Ref.: CCX 971509	10	Each
03-03-00358	UNICEF Commodity Code: 439411 Spare parts are for G20 Chlorine Dosing Pump serial No: X15593 form Wallace and Tiernan Ball, Pyrex - Part No. NPXA 150 Ref.: CCX 971509	10	Each
03-03-00359	UNICEF Commodity Code: 439411 Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Diaphragm - Part No. 10-2257-401 Ref.: CCX 971509	10	Each
03-03-00360	UNICEF Commodity Code: 439411 Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Oil Gauge Window - Part No. 10.147	10	Each
03-03-00361	UNICEF Commodity Code: 439411 Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Double Ball Valve - Part No. 10.137-41	10	Each
03-03-00362	UNICEF Commodity Code: 439411 Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Ball Cage - Part No. 10.786-41	10	Each
03-03-00363	UNICEF Commodity Code: 439411 Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Ball - Part No. 10.139	10	Each
03-03-00364	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Cover for discharge (Non-return) Valve	10	Each
03-03-00365	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Pressure Spring, Part No. 10.890	10	Each
03-03-00366	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Adjusting Spindle, Part No 10.2081-4	10	Each
03-03-00367	Spare parts are for KM 220-1 Chlorine Dosing Pump, Serial No: CO13977 from T.M. Products Cup Nut, Part No. 50.208	10	Each
03-03-00368	Aluminum Sulfate Diaphragm dosing pump with variable manual stroke control mechanism with 2.5 meter suction hose and 3.5 meter discharge hose and relief valve for pump protection against over pressure Q=500 l/hr, H=2 bar 240v, 50 HZ, single phase with all accessories required for installation and spare parts for 2 years operation and O&M manual in English/ Arabic with parts catalogue. Ref.: CCX 97 15 10	9	Set
03-03-00369	Vertical Multistage booster pump for chlorination purpose. Q=4 cum/hr, H=120 m with electrical drive motor and control panel, 380V, 50Hz, 3 phase with spare parts for two years of operation.	14	Set

03-03-00370	Unicef commodity code: 367221 HDPE flexible pipe, heavy duty for chlorination purpose, diameter 1 inch, with joints, (12-16) Ref.: CCX 981409	600	ML
03-03-00371	Unicef commodity code: 367221 HDPE flexible pipe, heavy duty for chlorination purpose, diameter 3/4 inch, with joints, (12-16) bar Ref.: CCX 981409	600	ML
03-03-00372	Base for mounting 65 Kg chlorine gas cylinders vertically with a (0-150) kg balance for monitoring of chlorine weight.	5	Each
03-03-00373	Spare parts for powder chlorinator type G020 from Dosapro Milton Roy - Pump Series GTM Model A Filter for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	10	Each
03-03-00374	Valve Seat for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	10	Each
03-03-00375	Valve Housing for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	10	Each
03-03-00376	Ball for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	10	Each
03-03-00377	Ball Seat for foot valve. See Instruction Manual, page I-4, Fig 1.4a, A.	10	Each
03-03-00378	4-Function Valve. See Instruction Manual, page I-4, Fig 1.4a, B.	10	Each
03-03-00379	Valve Housing for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	10	Each
03-03-00380	Spring for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	10	Each
03-03-00381	Ball for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	10	Each
03-03-00382	Ball Seat for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	10	Each
03-03-00383	Valve Body Seat for Injection Nozzle. See Instruction Manual, page I-4, Fig 1.4a, C.	10	Each
03-03-00384	Stroke Adjustment Knob for Mechanical assembly. See Dosapro Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00385	O-Ring for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00386	Stroke Adjustment Screw for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00387	Crosshead for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00388	Male Eccentric Piece for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00389	Stroke Locking Device for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00390	Half stop ring for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00391	Tangential Wheel for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00392	Stop Bearing for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each
03-03-00393	Cover Seal for Mechanical assembly. See Instruction Manual, page I-1, Fig 1.2a	10	Each

03-03-00394	Liquid End Mounting Assembly. See Instruction Manual, page I-1, Fig 1.2a	20	Each
03-03-00395	Liquid End. See Instruction Manual, page I-1, Fig 1.2a	20	Each
03-03-00396	Ball bearings for powder chlorinator, size SKF 6200	10	Each
03-03-00397	Ball bearings for powder chlorinator, size SKF 6201	10	Each
03-03-00398	Ball bearings for powder chlorinator, size SKF 6202	10	Each
03-03-00399	Ball bearings for powder chlorinator, size SKF 6203	10	Each
03-03-00400	Unicef Commodity Code: 369737 Gas masks/breathing apparatus for protection from chlorine gas used in water treatment facilities Ref.: CCX 98 2230	115	Each
03-03-00401	Spare parts for V-notch chlorinator type V-50 BM25-164 from WALLACE AND TERNAN, England.	20	Each
03-03-00402	Spare parts for V-notch chlorinator type V-50 BM25-164 from WALLACE AND TERNAN, England: flexible connection part	20	Each
03-03-00403	Ditto but Hose clamp, part number U. 553 (19.5MM)	20	Each
03-03-00404	Ditto but, Hose clamp, part number U.553 (25 MM)	20	Each
03-03-00405	Ditto but Hose adapter, part number P. 40112	20	Each
03-03-00406	Ditto but Auxiliary cylinder valve, part number U. 12 43 B	20	Each
03-03-00407	Ditto but Lead gasket, part number P.2476 B	20	Each
03-03-00408	Ditto but Lead gasket, part number P.2619	20	Each
03-03-00409	Ditto but, Solution discharge line, part number RK811-4305	50	Each
03-03-00410	Ditto but, Strainer 3/4inch, part number U. 810	50	Each
03-03-00411	Ditto but, Wreck, part number P.5822	50	Each
03-03-00412	Aluminum Sulfate Diaphragm dosing pump with variable manual stroke control mechanism with 2.5 meter suction hose and 3.5 meter discharge hose and relief valve for pump protection against over pressure Q=500 l/hr, H=2 bar 240v, 50 HZ, single phase with all accessories required for installation and spare parts for 2 years operation and O&M manual in English/ Arabic with parts catalogue. Ref.: CCX 97 15 10	6	Set

Subproject 1: Urban Environmental Sanitation

4- Waste Management (Liquid and Solid)

Code	Description	Quantity	Unit of measurement
03-03-00413	Unicef commodity code: 491800 Dumper with half cubic meter bucket, 15hp, with two years spare parts. ref. PO 45013412	20	Each
03-03-00414	Unicef commodity code: 491800 Tractor and trailer C/W, 2 years spare parts, operators, maintenance & parts manuals in English ref: PO 45018275	28	Each

03-03-00415	Unicef commodity code: 491800 Garbage collector truck , ISUZU, capacity 11 cum, 4 ton, type forward control with left hand drive, wheel base 4300mm, 6 cyl. in line 4-stroke, liquid cooled direct injection diesel engine with exhaust driven turbocharger and intercooler, color-white, including garbage collector body with export specifications for Iraq with manufacturer recommended first service and fast moving spare parts kit, with manual in English, spare parts catalogue and spare parts for two years operation Ref: P.O 45004914	3	Each
03-03-00416	Unicef commodity code: 491800 Same as Item No.3 but Capacity 2.5 MTN, 6 CUM. Ref: PO 45017612	16	Each
03-03-00417	Unicef commodity code: 491800 Caterpillar grader type 120 H, Company Caterpillar Tractor CO.USA. with spare parts for two years operation ref: PO 45017615	1	Each
03-03-00418	Unicef commodity code: 491800 Tip truck with damper storage plan, Capacity 12 MT with spare parts for two years operation.Ref: PO 45018278	4	Each
03-03-00419	Unicef commodity code 491800, Kawasaki wheel loader model: 80 ZIV-2. general purpose bucket with straight edge teeth engine: Nissan NE6T04 diesel engine flywheel horse power: : gross 185 hp at 2200 rpm - tyer: 20.5-22-16 pr (13) tubeless tyers Ref:PO 45018041	1	Each
03-03-00420	Unicef commodity code: 491800 Mobile workshop, for maintaining and repairing sanitation vehicles, complete with repairing tools and spare parts for two years operation ref: 45018140	2	Each
03-03-00421	Unicef commodity code: 51245 Diesel operated air compressor type (AIR MAN rotary PDR-370 ser.no. 13-8201), HOKUTE INDUSTRIES CO> LMTD, complete set with spare parts for two years operation. Ref: PO 45004676 Comm code 51245	1	Each
03-03-00422	Water Tanker type Volvo, Capacity 9,000 Liters, Complete with all accessories with Water pump and spare parts for two years operation Ref: PO. 45018278	1	Each
03-03-00423	Bulldozer type Komatsu, D65 E-12 Bulldozer/Tractor, with spare parts for two years operation and manual of parts catalogue.Ref: PO 45018016	1	Each
03-03-00424	Loader Crawler Shovel type Komatsu D65A, with spare parts for two years operation and O&M catalouge in English	1	Each
03-03-00425	Water pump for Scania garbage collector truck type 94G, 18CUM, 12MTN, complete.Part No. 1314406	2	Each
03-03-00426	Injection pump for Scania truck type 94G.Part No. 348987	5	Each
03-03-00427	Turbo charger for Scania truck type 94G.Part No. 1322999	5	Each
03-03-00428	Electronically control for Garbage body which made by CALABRESE for Scania garbage collector, type 94G, part no. P/N 7380470-24VDC.	5	Each

03-03-00429	spare parts for Caterpillar Grader Model 120H: Piston part No. 107-7563	12	Each
03-03-00430	Ring Piston(Top)Part No. 107-7787	12	Each
03-03-00431	Ring piston (Intermediate) Part No. 7E-5786	12	Each
03-03-00432	Ring Piston (Oil) part No. 7C-5232	12	Each
03-03-00433	Connecting rod bearing Part No. 7W- 9415	2	Set
03-03-00434	Crank shaft bearing Part No. 107-7708	2	Set
03-03-00435	Crank Shaft Assy Part No. 1051- 1725	2	Each
03-03-00436	Cylinder Head Gasket Part No.107-7832	2	Each
03-03-00437	Cylinder Head Assy part No.119-3065	2	Each
03-03-00438	Cam shaft Part No. 134-5276	2	Each
03-03-00439	Thrust Washer 107-7602	2	Set
03-03-00440	Starter Motor 111-4275	2	Each
03-03-00441	Air compressor 1046-6046	2	Each
03-03-00442	Cylinder Head cover 119-2960	2	Each
03-03-00443	Cylinder Block 100-4948	1	Each
03-03-00444	Turbo charger 115-5853	2	Each
03-03-00445	Water pump Part No. 7E-7398	2	Each
03-03-00446	Oil Pump 119-2924	2	Each
03-03-00447	Oil Filter 2P-2717	50	Each
03-03-00448	Radiator 7C-2099	2	Each
03-03-00449	Fuel Filter 1R-0751	50	Each
03-03-00450	Air filter primary 6I-2499	10	Each
03-03-00451	Air Filter secondary 6I-2500	10	Each
03-03-00452	injector Part No. 107-7733	12	Each
03-03-00453	Control Gp-system electronic. Part No. 149-6082.	2	Each
03-03-00454	Gp-Planetary Part No. 9w- 5128	1	Each
03-03-00455	Alternator 6N-9294	2	Each
03-03-00456	Transmission 149-6082	1	Each
03-03-00457	Spare parts for Scania Garbage collector P94GB, piston part No.1332749	12	Set
03-03-00458	Ring piston (Top) 371993	12	Set
03-03-00459	Ring set (Medium) 22995	12	Set
03-03-00460	Ring set (bottom) 245486	12	Set
03-03-00461	Connecting rod bearing Part No. 346879	12	Set
03-03-00462	Crank shaft bearing STD 279609	12	Set
03-03-00463	Crank shaft Assy Part No.357780	12	Each
03-03-00464	Cylinder Head Assy part No.1321236	12	Each
03-03-00465	Washer thrust Part No. 255573	12	Set
03-03-00466	Starter Motor Part No. 349575	0	Each
03-03-00467	Alternator Part No. 1377400	12	Each
03-03-00468	Turbo charger 1395244	12	Each
03-03-00469	Cylinder Block Part No. 350859	2	Each
03-03-00470	Clutch release bearing 1407430	12	Each
03-03-00471	Clutch friction disc Part No. 1335282	12	Each
03-03-00472	Clutch cover Part No. 1335281	12	Each
03-03-00473	Spare Parts for valmet Valtra Tractor 700, chassis No. K47507, Engine No. K17457, Ref: PO 45016834: Air compressor Part No. 29-01/46	10	
03-03-00474	Same as item above but: Crank shaft part No. 21-15/1	3	Each
03-03-00475	Same as item above but: Piston Part No. 21-15/3	30	Each
03-03-00476	Same as item above but: Ring set Part No. 21-15/6	30	Each
03-03-00477	Same as item above but: Big end bearing Part No. 21-15/11	10	Set
03-03-00478	Same as item above but: Main bearing Part No.21-15/12	10	Set

03-03-00479	Same as item above but: Thrust Washer Part No. 21-15/13	10	Set
03-03-00480	Same as item above but: Connecting rod Part No. 21-15/7	2	Set
03-03-00481	Same as item above but: Inlet Valve Part No. 21-11/18	10	Set
03-03-00482	Same as item above but: Exhaust valve No. 21-11/19	10	Set
03-03-00483	Same as item above but: Cylinder Liner Part No. 21-01/8	10	Set
03-03-00484	Same as item above but: Cylinder Block Part No. 21-01/1	2	Each
03-03-00485	Same as item above but: Liner Gasket Part No. 21-01/9	10	Set
03-03-00486	Same as item above but: Liner Gasket Part No. 21-01/10	10	Set
03-03-00487	Same as item above but: Cylinder head part No. 21-7/1	10	Each
03-03-00488	Same as item above but: Cylinder head gasket Part No. 21-07/5	20	Each
03-03-00489	Same as item above but: Oil Pump case Part No. 21-21/11	10	Each
03-03-00490	Same as item above but: Oil pump gear Part No. 21-21/14	10	Each
03-03-00491	Same as item above but: Oil pump gear Part No. 21-21/16	10	Each
03-03-00492	Same as item above but: Oil Pump cover Part No. 21-21/18	10	Each
03-03-00493	Same as item above but: Turbo charger Part No. 21-29/1	10	Each
03-03-00494	Same as item above but: Injection Pump Part No. 22-13/1	10	Each
03-03-00495	Same as item above but: Injector Part No. 22-13/18	3	Set
03-03-00496	Same as item above but: Nozzle Part No. 22-13/19	10	Set
03-03-00497	Same as item above but: Radiator part No. 23-01/1	6	Each
03-03-00498	Same as item above but: Air compressor Part No. 29-01/46	10	Each
03-03-00499	Spare parts for Valtra Valmet Tractors Ref: PO 45018275: Front tiresize 12.4R24 with inner tube	50	Each
03-03-00500	Same as item above but: Rear tire size 16.9R30 with inner tube	50	Each
03-03-00501	Same as item above but: Trailer tires size 400/60-15.5 with inner tube	50	Each
03-03-00502	Spare parts for Excavator type POCLAIN 788, REF: PO. 45018591: Gland bearing STD part No. A77405	4	Set
03-03-00503	Cylinder liner Part No. J904166	12	Each
03-03-00504	Pistons Part No. A77730	12	Each
03-03-00505	Ring set part No. A77729	4	Set
03-03-00506	Big end bearing Part No. STD A77465	4	Set
03-03-00507	Main bearing Part No STD A77896	4	Set
03-03-00508	Crank Shaft Part No. J918323	4	Each
03-03-00509	Turbo charger Part No. J802798	4	Each
03-03-00510	Gasket cylinder head Part No. J283338	8	Each

Subproject 1: Urban Household Water Security

6- Training / Personnel Development / Capacity Building

Code	Description	Quantity	Unit of measurement
03-03-00511	Toyota 4 WD HI-Lux pick up double cabin, 4 door, LHD, Model code RZN 147 L-PRMDSV, 2000 cc, petrol engine. Ref: PO 45015283 with airconditioning, radio & tape recorder.	1	Each

03-03-00512	Desk-top Computer. Pentium III vectra VL 600, 733 MHZ hard drive, 64mb RAM, floppy disk, 16 Bit audio card, 52x CD ROM, 15" SVGA color monitor-pre-loaded with English/Arabic windows 98 & ms office professional win 98 style English keyboard, mouse and pad, external speakers. ref 45016317	6	Each
03-03-00513	HP LaserJet 2100 with 4 MB RAM printer, or equivalent, A3 & A4., with 1 extra toner cartridge ref 45016317	3	Each
03-03-00514	Canon NP 6045 photocopier, A4 & A3 cassettes, with voltage stabilizer, supplied complete with manufacturers recommended service and spare parts for two years operation, operation, service and parts manuals in English. ref : 45014069	1	Each
03-03-00515	Toyota 2 WD HI-Lux pick up double cabin, 4 door, LHD, Model code RZN 147 L-PRMDSV, 2000 cc, petrol engine. Ref: PO 45015283	4	Each
03-03-00516	Builders level, automatic, in carry case, NI 50 with 400 degree /7001135.9800.0005 33 tripod with screw/707234.000.000 141 leveling rod/707626.0000.000 supplied in carrying case with operation instructions & necessary accessories. ref PO 45018048. unit is set	1	Each
03-03-00517	Service truck with rear cab crane 8.5MTN capacity & fixed body type VOLVO FM10 (6X4) with spare parts for two years operation ref: PO. 45017638. Comm 710122	1	Each
03-03-00518	Spare parts for Photocopier type SHARP SF-2025. Ref: Parts Catalogue: Sharp parts guide (code: 00Z SF2030PG-M):Drum (OPC Drum), Part No. SF-230 DM	2	Each
03-03-00519	Same as above but: Dveloper (Black) part No. SF-230 DVI	2	Each
03-03-00520	Same as above but: Toner (Black) part No. SF-230 TI	10	
03-03-00521	Same as above but: 80 K Maintenance Kit part No. SF-240 KA	1	Each
03-03-00522	Same as above but: Heater lamp, part No. RLMPU 0574 FCZZ	1	Each
03-03-00523	Same as above but: Thermister part No. RDTCT 0122FCZZ	1	Each
03-03-00524	Same as above but:Thermostat, part No. RTHM-0014FCZZ	1	Each
03-03-00525	Altimeter range 0 - 6000	5	Each
03-03-00526	Portable pipe cutting machine	2	Each
03-03-00527	Engineering drawing board, Hydraulic type.Ref: PO 45002701	1	Each
03-03-00528	HP DesignJet plotter 750 C plus A0 size with floor stand and accessories or equivalent. HP color, with terminal switch primax with cable and accessories (T-switch) with 5 additional cartridges for the plotter with additional HP coated paper for the plotter.	1	Each
03-03-00529	DeskJet Printer, 890 HP color. Ref: NCX98 0816.	1	Each
03-03-00530	Tachometer, type Wild RDS	2	Each
03-03-00531	Theomat, Type D1Wild 2000, with tripod, suitable reflectors, batteries, battery cables, data terminals, adapter.	1	Each
03-03-00532	Printing machine for Maps, type DYZO with spare parts for two years operation and accessories	1	Each

03-03-00533	UPS, for disk top computer	9	Each
03-03-00534	Scanner A3, type 600 DPI	4	Each
03-03-00535	Water Tanker Type Volvo Capacity 9,000 liters, complete with all accessories, Water pump and spare parts for two years operation.Ref: 45018278	1	Each
03-03-00536	Ultra Sonic Portable flow meter/Fuji Electric type FLC(De'bitme'tre) FLD or equivalent (Capte'urs) Bertin Industries/Nantes Cre'atie, Sardu'perry. 2rue Robert L'eRicolais. CP 10 436. 44304 Nantes Ce'der 03 Tel 02 40 49 7774 FAX 02 40 49 78 15. The unit is used for quick measurement of water flow in different types and diameter of pipes.	1	Each
03-03-00537	Service truck with rear cab crane 8.5MTN capacity & fixed body type VOLVO FM10 (6X4) with spare parts for two years operation ref: PO. 45017638. Comm 710122	1	Each
03-03-00538	Fork lift capacity 3MTN , Ref: CCX972073.	5	Each
03-03-00539	Lap top computer Toshiba Satellite. With carrying bag. Ref: CCX98 4278	1	Each
03-03-00540	Optical Theodolite suitable for working W/ ELDI 4.Ref: PO 45018348	1	Each
03-03-00541	Electro- Optical distance meter.Ref: PO 45018356	1	Set
03-03-00542	Measuring wheel up to 10,000 meter type A0101005.Ref: ccx 972358	6	Each
03-03-00543	Automatic builder leveling machine BIC with operation manual, stand and all accessories for the set, type SOKKISHA CO. LTD. Keio Yoyogi building 1-1 Tomigaya 1- chome shibuya - KU Tokuo 151 Japan	1	Each
03-03-00544	Automatic builder leveling machine B2A with operation manual, stand and all accessories for the set, type SOKKISHA CO. LTD. Keio Yoyogi building 1-1 Tomigaya 1- chome shibuya - KU Tokuo 151 Japan	1	Each
03-03-00545	Theodolite GP1-2 GYROSTATHON with stand & other accessories type SOKKISHA CO. LTD. Keio Yoyogi building 1-1 Tomigaya 1- chome shibuya -KU Tokuo 151 Japan	1	Each
03-03-00546	Fork lift capacity 3MTN , Ref: CCX972073.	5	Each
03-03-00547	UNICEF commodity code 471131 Video camera model 9500 Panasonic NV-M9500E, complete set with all accessories. Ref: PO. 98085.	1	Each
03-03-00548	Mobile caravan of length 5M & width 2.6M, High 2.1M installed on four wheel, the front wheel is flexible & to be pulled by any heavy truck. Content six beds, washing basin, office table & three flexible chairs with air-conditioning 2 TON.	1	Each
03-03-00549	LEICA T1800 theodolite two K-bourds. One piece GE 77 plug in battery 12V/ 0.6 Ahm. One piece GKL 22, charger 230V, EU standard. One piece GST20 , tripod , Letescopic. According to DIN 18723. Ref: PO 45008920	1	Each
03-03-00550	Overhead projector PROXIMA DP5800, with all accesoories other spcifications as per supplier officer with 10 spare lamps. REF: JDNE-1301.	1	Each

Subproject 1: Urban Household Water Security

1- Construction of Water Supply Systems

Code	Description	Quantity	Unit of measurement
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03-03-00551	Up gradation of Soran water project in Erbil governorate for which the detailed supply list will be prepared after preparing the feasibility study.	1	Each
03-03-00552	Construction of Dukan water project in Suleimaniyah governorate for which the detailed supply list will be prepared after preparing the feasibility study.	1	Each
03-03-00553	Construction of Chwarta water project in Suleimaniyah governorate for which the detailed supply list will be prepared after preparing the feasibility study.	1	Each